Major Project Report

On

Design of Castellated Beams and comparision with solid web Sections

Under

The Guidance of Dr. Nirendra Dev

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Department of Civil Engineering

Master of Technology

(With Specialization in Structures)

By

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Date: 24th Nov, 2015

CANDIDATE'S DECLARATION

I hereby declare that the work which is being presented by me in this thesis entitled "Design and Comparison of Castellated Beams from solid web Sections" ,in partial fulfilment of the requirement for the award of the degree of Master of Technology in Civil Engineering with specialization in "Structures", submitted to the Department of Civil Engineering, Delhi Technological university, New Delhi, is an authentic record of my own work under the supervision of Dr. Nirendra Dev, Department of Civil Engineering, DTU, New Delhi. The matter embodied in this thesis work has not been submitted by me for the award of any other degree.

Date: 24.11.2015

Place: New Delhi

Shikha Mishra

CERTIFICATE

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

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Finally, I would like to thank God almighty for giving me strength and blessings that had guided me in the right direction.

ABSTRACT

A study on the cost effective design of structure with the help of “Open Web Beams/Castellated beams”

Both Plastic and Elastic method of analysis are utilized to predict the failure, deflection and behaviour of beams.

Interaction diagrams predicting formation of plastic mechanism yielding of the elastic buckling analysis using the finite element method are co-related with a number of experimental test results done with the help of Ansys software.

Castellation is the better option for Multi-storey structures and structure having electrical/Mechanical requirements like Duct work, cooling Pipe work etc. These additional requirements needs to be hanging from top member and it books 300 to 500 mm height of floor (increase 300 mm height per floor) .But in Open Web beams these spaces compensated by beam itself and we save 300 to 500mm spaces per floor. It means if we opt G+10 floor structure it will becomes G+11 (300 mm X 10 floors = Floor of 3 m height at 11th floor) in same budget.

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CHAPTER 1

WEB-EXPANDED BEAMS IN GENERAL

1.1. INTRODUCTION TO WEB-EXPANDED BEAMS

Structural engineers have always tried to find new ways to improve the practices in the design and construction of steel and composite buildings so that the overall cost can be decreased. Beams with web openings and open web expanded steel beams are some of these ways. Web openings with different geometrical properties have been used for many years to pass duct work or utilities through the web holes in order to decrease floor height and constructional cost of large scale buildings. This is because; decrease in story height reduces interior volume and exterior surface of building and these results in cost saving. Furthermore, in comparison with solid web beams, web expanded beams can easily increase the shear capacities, vertical bending stiffness and capacities of structure.

Steel I-beam sections can be modified to intensify their strength by creating an open-web expanded section from an original solid beam. This is achieved by cutting the web of a solid beam in a certain pattern and then re-welding the two parts to each other. As a result of these cutting and re-welding processes, the overall beam depth increases which in return causes increase in the capacity of the original section. There are two common types of open web expanded beams: with hexagonal openings, also called castellated beams and beams with 2 circular openings referred to as cellular beams. Castellated and cellular beams have been used in various types of constructions for many years. The most common structure types built using these beams are office buildings, car parks, shopping centers and any structure with a suspended floor. Web-expanded beams provide a very economical solution for producing tapered members, which have been used extensively in big sports stadiums.

1.2. CASTELLATED BEAMS

Castellated beams are steel sections with hexagonal openings that are made by cutting a saw tooth pattern along its centre line in the web of a rolled I-beam section along the length of its span. The

two parts of original beam are then welded together to produce a beam of greater depth with halves of hexagonal holes in the steel section as shown above in Figure 1.1.

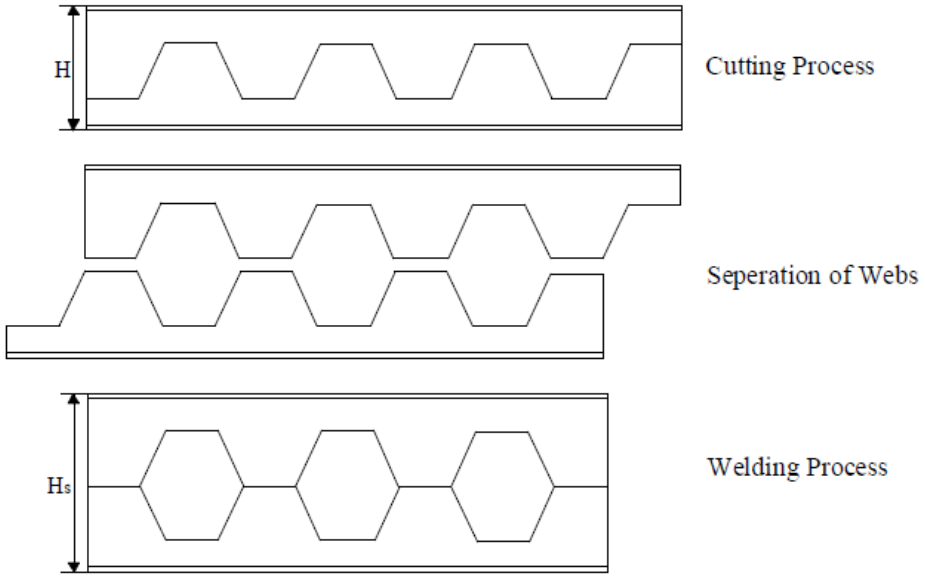


FIGURE 1 BASIC PROCESS OF CASTELLATION OF BEAM

The cutting and re-welding processes increase the overall beam depth, moment of inertia and section modulus of the original rolled beam, while reducing the overall weight of the beam. Since the 1940s the high strength to weight ratio of castellated beams has been a desirable item to structural engineers in their efforts to design even lighter and more cost efficient steel structures.

1.3. Cellular Beams

The emergence of cellular beams was firstly for architectural application, where exposed steelwork with circular web openings in the beam was considered aesthetically pleasing more than castellated beams. Cellular beams are steel sections with circular web openings that are made by twice cutting an original rolled beams web in a half circular pattern along its centreline, separating two tee parts and re-welding these two halves of hot rolled steel sections as shown in Figure 1.2.

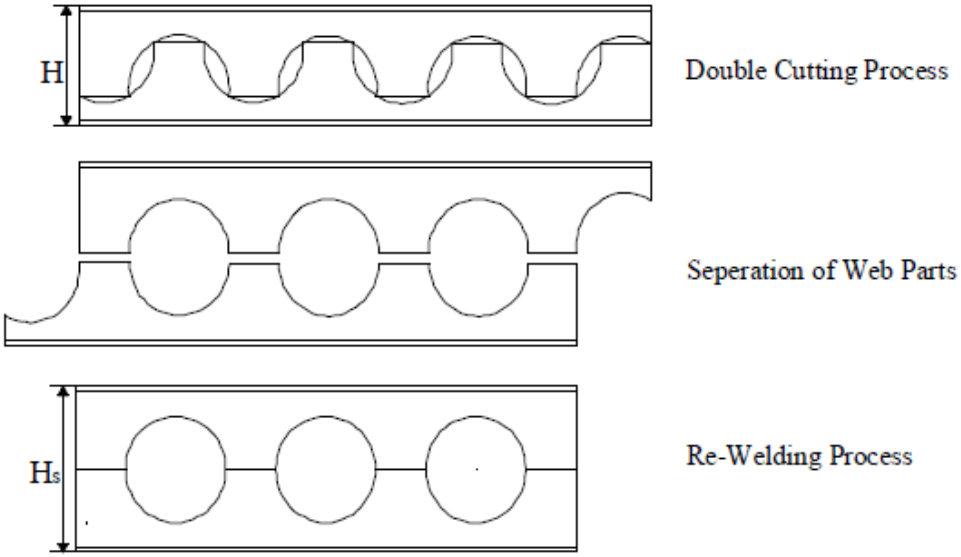


FIGURE 1.2 BASIC PROCESS OF CELLULAR BEAM

This circular opening up of the original rolled beam increases the overall beam depth, moment of inertia and section modulus, while reducing the overall weight of the beam.

The most common building types for the cellular beams are office buildings, car parks, shopping centres and structures with a suspended floor. Cellular beams are also used as roof beams beyond the range of portal-frame construction, and are perfect solutions for curved roof applications, combining weight savings with a low-cost manufacturing process. Cellular beams are a very economical means of producing tapered members, which have been used extensively in sports halls. They can also be used as gable columns and wind posts at practical applications.

Cellular beams always produce a more cost-effective solution than castellated beams as a result of their flexible geometry. Although the profile for any castellated beam section is standard or fixed, the major dimensions which are the final depth, cell diameter and spacing are completely flexible in cellular beams. The production process of cellular beams improves the section properties of the original beam used, thus saving enormous weight compared to plain original beams. Figure 1.3 shows that cellular beams are approximately 40-60% deeper and 40-60% stronger than the original member while reducing the overall weight. As a result of using cellular beams, structures are lightened, spans are increased, and pulling spaces helps us to save in overall height. This flexibility

goes together with the functionality of allowing utilization of the web openings as passages for pipes and ducts services through the web holes shown in Figure 1.4.

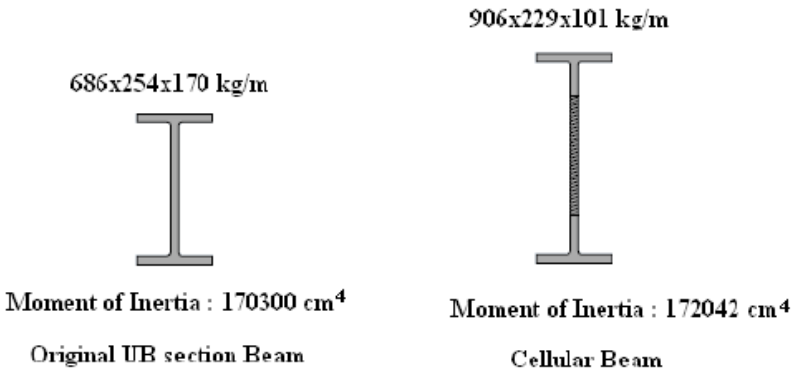


Figure 1.3 The comparison of cellular and original I-beams

FIGURE 1.3 THE COMPARISION OF CELLULAR AND ORIGINAL I-BEAMS

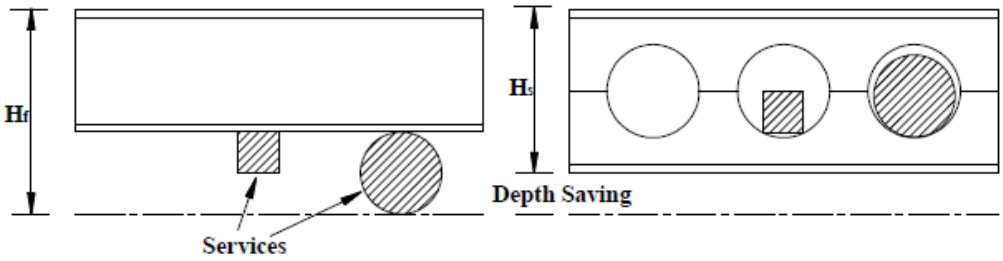


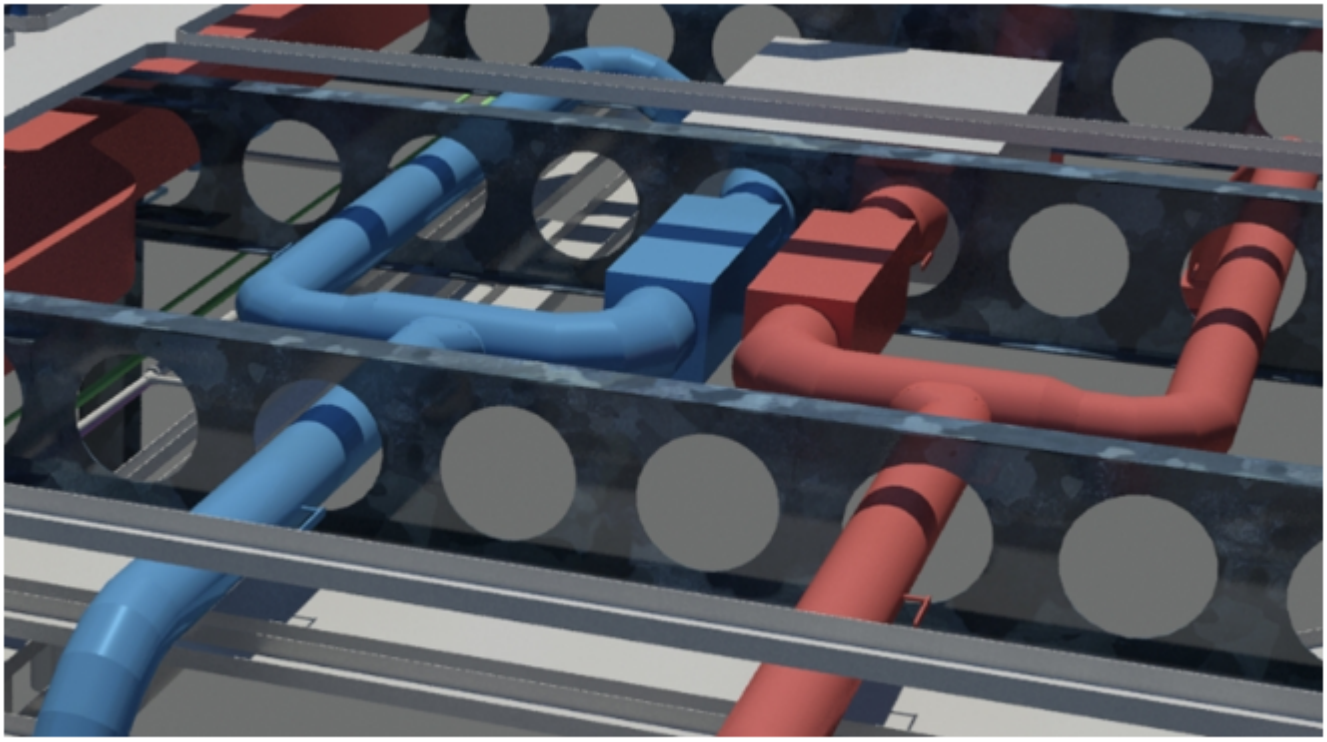
FIGURE 1.4 BASIC PROCESS OF CASTELLATION OF BEAM

1.3.1 APPLICATIONS OF CELLULAR BEAMS

Cellular beams have been used in various designs of structural buildings. Some of them are office buildings, car parks, shopping centres, hospitals and any structure with a suspended floor. Cellular beams provide long clear spans and great flexibility for service integration, when they are used as floor beams as shown in Figure 1.5.

Figure 1.5 premier places with 15 m clear span, London

1. Sport & Leisure



Industrial & Commercial

Figure 1.8 Blackpool car park, Cork

Figure 1.10 Stamford bridge stadiums, London

Advantages

- Clear Longer spans (column-free)
- Faster fabrication and erection
- Easier servicing
- Service Integration
- Reduced number of foundations
- Curved beams
- Shallower construction
- Good dynamic performance
- Flexibility for the client

Applications

- *Floor Beams*

Cellular Beams are most commonly used as floor beams; this enables the designer to achieve long clear spans, service integration and a shallower overall floor depth. With cellular beams clear spans varying from 12m to 20m can now be easily achieved at the same depth and cost as short spans. Long spans often require the specification of costly pre-cambers but cellular beams can easily be pre-cambered as part of the manufacturing process without any additional costs.

- *Roof Beams*

Most applications of cellular beams in South Africa are as roof beams. This has been influenced by the demand within the commercial sector for shopping malls, motor dealerships and sports facilities. Cellular beams are a perfect solution for curved roof applications, combining a considerable weight saving and a low cost curving process which eliminates the need for a specialist section bending company. In projects where cost and speed of erection have been the deciding factors, without exception cellular beams have been used in preference to traditional clear span solutions; such as lattice trusses, stub girders and tapered plate girders. This is simply due to the fact that cellular beams require much less fabrication time, their lightweight and also much shallower than the traditional clear span solutions.

- *Curved Roofs*

  The relative economy of cellular beams is greatly enhanced in curved roof applications. The structural efficiency and economy of curved cellular roof beams in clear span structures makes them eminently suitable for use in many applications. Curved cellular beams combine a considerable weight saving compared to plain sections and a low-cost curving process as most beams are curved in-house at little or no extra cost.

- Tapered Beams & Cantilevers

  Cellular beams provide the most economical method of producing tapered steel members. Tapered beams are produced by profiling the web along the diagonal, then swinging the tees around to produce a tapered beam with uniform cells or cells with diameters varying according to the degree of the taper. Tapering the ends of a cellular beam also creates an attractive feature to the exposed overhanging ends.

- Columns

  As building HEIGHT INCREASES cellular columns become increasingly more economical as compared to universal columns.

- Parallel Flange Columns

  High-bay columns in today's 'super-sheds' are a particular suitable application, where the increased inertia of cellular beams will minimize the deflection of the tall column. Cellular columns are most efficient in cases where the axial loads are small, such as gable columns, portal legs, wind posts and valley columns.

- Tapered Flange Columns

  The initial decision to use any form of tapered column is most likely to be influenced by aesthetics. But once a decision has been made to use tapered columns, a cellular column would be the most

economical solution. There are no restrictions on the shape of the taper and cell diameters can be uniform or can vary in proportion with the degree of the taper.

- Car Parks

  In car parks the long spanning ability of cellular beams help create a building with minimal internal columns. This enhances the feeling of security as the area is more open and will have few barriers to sight lines. In addition, cellular beams can also be pre-cambered at no extra cost during production in order to offset the proportion of the dead-load deflection. Large pre-cambers allow for natural drainage of surface water, eliminating the need for additional screed. The large circular openings accelerate smoke dispersion as compared to solid-web beams and also make provision for service integration.

- Sports Stadiums

  The clear long spanning ability of cellular beams provide a structurally efficient and economical solution to stadium roofs. Cellular beams are much lighter and shallower than other clear span solutions, making them eminently suitable for use in many sporting facilities. Through tapering the beams an attractive feature can be created, which is not only aesthetic but structurally efficient as well.

- Transport Facilities
- Hospitals
- Bridges, Scrapers & Conveyor Gantries
- Advertising Posts
- Arches

1.4 Objective and Scope of Research

The current dissertation research encompasses an investigation into the optimum design, experimental research and finite element studies of non-composite cellular beams. In this dissertation thesis, chapters are arranged as follows;

In Chapter 1, a general definition is given about web-expanded beams. Then, the common types of open web expanded beams: beams with hexagonal openings and beams with circular openings are explained respectively. Lastly, a literature survey on the web opening beams is included in a historical order and the practical applications of cellular beams are shown with some pictures.

The design equations of cellular beams are explained in Chapter 3. Failure modes of web-expanded beams and then the first phase of the research with focus on the design process of cellular beams according to BS5950 provisions to prevent the failure of these beams. The design procedure of cellular beams is taken from The Steel Construction Institute

The last part of the thesis study, Chapter 3, focuses on performing a numerical study on steel cellular beams utilizing finite element analysis. The finite element code, ANSYS, is used to perform elastic buckling analysis and predict critical loads for all tested specimens. Finite element analysis results of these optimally designed steel cellular beams are compared with the experimental results. There is a design calculation odf G+5 Multi-storey buildings in which solid web sections and castellated sections were used in Staad pro and Ansys Software's respectively.

Finally, in the last chapter, some brief discussions and conclusions are presented.

CHAPTER 2

THE DESIGN OF CELLULAR BEAMS

The structure must also satisfy the safety requirements regulated by the provisions of design codes and in the meantime it should be economical to be constructed. Design of a steel structure in particular requires a meticulous attention to design of steel members as well as the details of their connections. Non-composite web-expanded steel beams are
no exception to this procedure. Structural designer has to consider all cases of failure that can occur in such beam so that safety is assured in their life time. The failure modes that can take place in web-expanded steel beams are explained in the following subsections with more details.

2.1.1 Failure Modes of Web-Expanded Beams

There are mainly six different failure modes of these beams according to experimental tests carried out by Kerdal and Nethercot on web-expanded beams. These failure modes are caused by beam geometry, web slenderness, type of loading, and provision of lateral supports. Under applied load conditions, failure is likely to occur due to one the following modes:

- Formation of a Vierendeel mechanism
- Lateral torsional buckling of the entire span
- Lateral torsional buckling of the web post
- Rupture of the welded joint
- Web post buckling
- Formation of a flexure mechanism

2.1.2 Formation of a Vierendeel Bending Mechanism

The Vierendeel mechanism is always critical in perforated steel beams with single large web openings, where global shear forces and Vierendeel moments coexist. Thus far, the main

parameters that affect the structural behaviour of such beams are the depth of the web opening, the critical opening length of the top T-section, and the web opening area.

This failure mode is associated with transferring high shear forces across the web holes, parallel to rate of change of bending moment along the beam. The formation of a Vierendeel mechanism often occurs in web-expanded beams with long horizontal opening lengths.

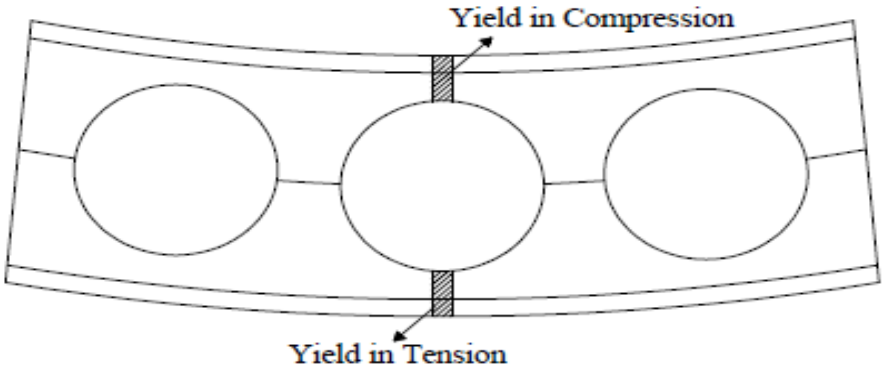


Figure 2.1 High bending in the cellular beam

When a web-expanded beam is subjected to a shear, the top and bottom tee sections must carry the applied shear, as well as the primary and secondary stresses. The primary stress is the formal bending moment on the beam cross section. This stress is applied uniformly over the areas of the upper and lower part of tees. The secondary stress, also called the Vierendeel bending, comes from the transfer of shear force in the tee sections over the horizontal length of the web opening. The resulting overall stress is the sum of the primary and secondary stresses.

The collapse of web-expanded beam has two reasons in the absence of regional or overall instability. Firstly plastic tension and compression stresses in the upper and lower tee parts in regions of high overall bending may lead to such a collapse, shown in Figure 2.1. The second cause of collapse of these beams is formation of plastic hinges at the all corners of the holes in regions of high shear called Vierendeel bending moment, shown below in Figure 2.2.29.

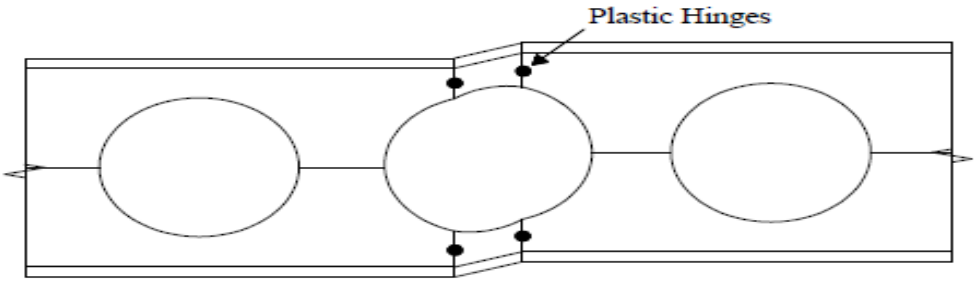


Figure 2.2 High shears in the cellular beam

2.1.3 Lateral Torsional Buckling

This mode of failure was first investigated in 1982 by Nethercot and Kerdal [20]. After experimental tests, they concluded that web openings only had a negligible effect on the overall lateral torsional buckling behaviour of the web expanded beams. Furthermore, they stated that due to the reduced cross sectional properties, web-expanded beams can be subjected to the same design procedures as original solid beams, to settle the lateral buckling strength.

This mode of failure is mainly brought about by out of plane motions of the beam which does not have web distortions in original web beams. Lateral torsional buckling, as shown in Figure 2.3, is usually associated with longer span beams with inadequate lateral support to the compression flange. The reduced torsional stiffness of the web-expanded beam, which is a result of relatively deeper and slender section properties, contributes to lateral buckling mode.

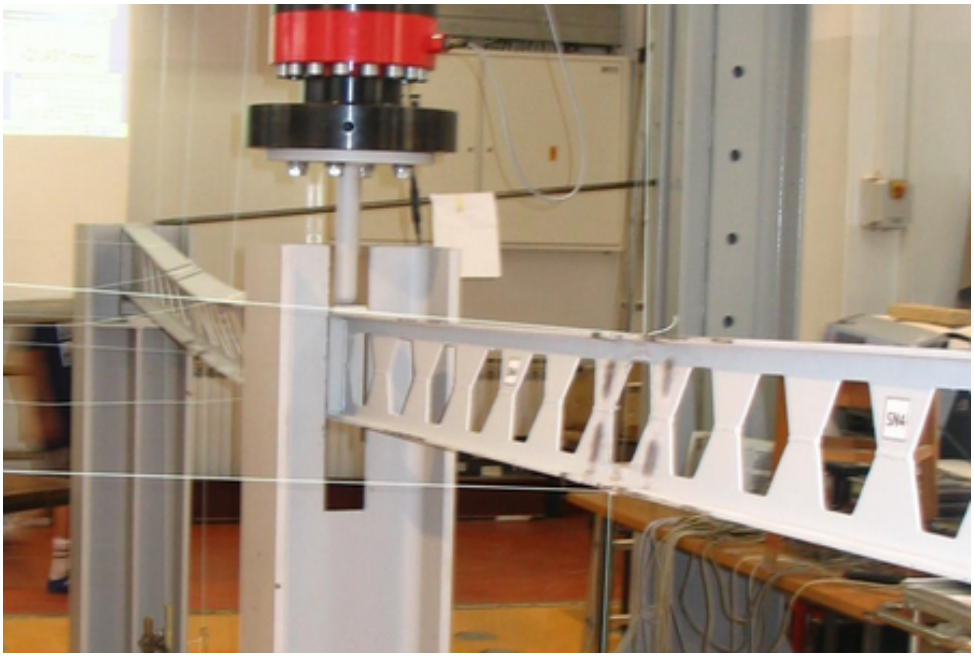


Figure 2.3 Lateral torsional buckling along beam

2.1.4 Web-Post Buckling

Web buckling is also related with on web thickness and the ratio of pitch opening and hole diameter. The first inclined edge of the opening is stressed in tension and the other edge of the hole in compression, all of which in a twisting effect of the web post along its depth, shown in Figure 2.4.

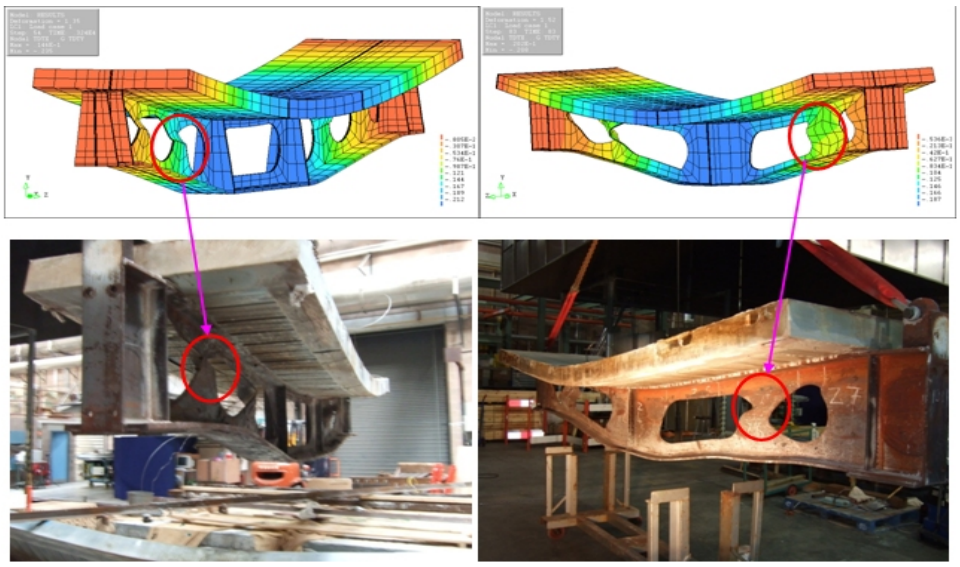


Figure 2.4 Web buckling on web-expanded beams

Web post buckling has been a subject matter for many analytical and experimental studies on web-expanded beams. This failure type is caused by concentrated loading or reaction points applied directly over a web-post of beam. Horizontal shear in the web-post of the beam is due to double curvature bending over the depth of the web-post.

2.1.5 Rupture of Welded Joints

This mode of failure depends upon the length of the welded joint. Hussain and Speirs [7] have found this mode after tested six castellated beams with short welded throat. These tests showed that if the horizontal shear stresses exceed the yield strength of the welded throat, weld joint depth of the web between two openings could be ruptured.

2.1.6 Flexure Mechanism

Under pure bending conditions, provided the section is compact, which means that the beam does not exhibit buckling behaviour, the tee sections above and below the openings yield in tension and compression until they become fully plastic. This mode of failure was reported in the works of Toprac and Cooke (1959) [4]. They concluded that yielding in the tee sections above and below the openings of a web-expanded beam was similar to that of an original solid beam under applied pure bending forces.

2.2 Design Process of Cellular Beams

The design process of a cellular beam consists of checks such that the above mentioned failure modes do not occur. The strength of a beam with various web openings shall be determined based on the interaction of flexure and shear at the web opening. Design constraints include the displacement limitations, overall beam flexural capacity, beam shear capacity, overall beam buckling strength, web post flexure and buckling, Vierendel bending of upper and lower tees, local buckling of compression flange and practical restrictions between cell diameter and the spacing between cells.

2.2.1 Overall Bean Flexural Capacity

Under unfavourable applied load combinations the cellular beam should have sufficient flexural capacity to be able to resist the external loading. That is the maximum moment U M under applied load combinations should not exceed plastic moment capacity P M of the cellular beam.

$$M_u = A_{LT} P_y H_u < M_P$$

Where A_{LT} - Cross sectional area of lower tee,

P_y - design strength of steel

H_u -Distance between centrals of upper tee and lower tee.

2.2.2 Beam Shear Capacity

There is two shear failure modes in cellular beams. The first one is the vertical shear capacity check in the beam. The sum of the shear capacities of the upper and lower tees gives the vertical shear capacity of the beam. The factored shear force in the beam should not exceed P_{VY} :

$$P_{VY} = 0.6\ P_y\ (0.9A_{WUL})$$

Where A_{WUL} – Cross sectional area of webs of Tees.

The second check is the horizontal shear failure. The horizontal shear is developed in the web post due the change in axial forces in the tee as shown in Figure 2.7. The horizontal shear capacity in the web post of beam should not exceed P_{VH}

$$P_{VH} = 0.6\ P_y\ (0.9A_{WH})$$

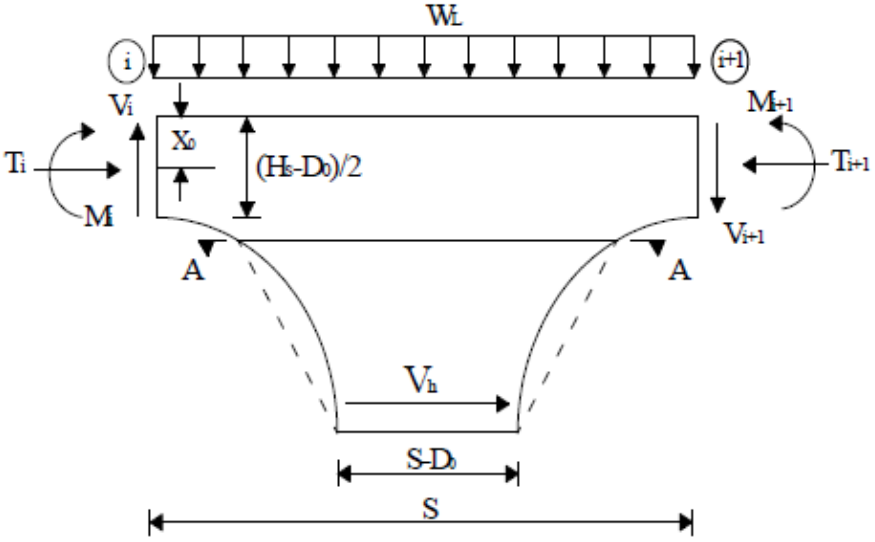


Figure 2 Horizontal shear in the web post of cellular beam

Where A_{WP} is the minimum area of the web-post.

2.2.3 Flexural and Buckling Strength of Web Post

To derive an expression for web buckling due to pure bending moment forces. The same series of beams under the same conditions were subjected to two horizontal clockwise coupling forces. Taking a,, = $-M_{CR}/S$ where S is the section modules of the unperforated section. And assuming that the area of the web resisting the compression force is jt_w, a coefficient k is defined by

2.2.4 Vierendeel Bending of Upper and Lower Test

The flexural capacity of the upper and lower tees under Vierendeel bending is critical. The transfer of shear forces across a single web opening causes secondary bending stresses. Olander utilizes a circular section for the position of the critical section and the ultimate resistance of the tees shown in Figure 2.8.

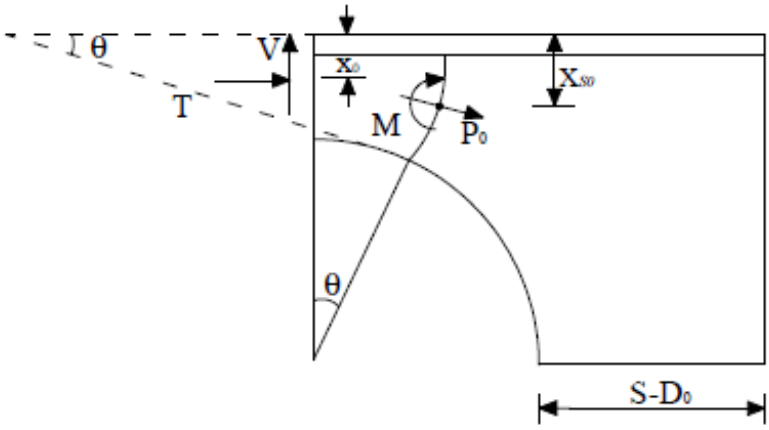


Figure 2.8 Olander's curved beam approach

For asymmetrical sections, the shear force is resisted by the upper and lower web sections in proportion to their depth squared. For symmetrical sections, the shear force is divided equally between upper and lower web sections. The interaction between Vierendeel bending moment and axial force for the critical section in the tee should be checked as follows:

$$\frac{Po}{Pu} + \frac{M}{Mp} < 1.0 \qquad 2.14$$

$$Po = T\cos\theta - \frac{V}{2}\sin\theta \qquad 2.15$$

$$M = T\,(x_{s0} - x_0) + \frac{V}{2}(H_s - x_{s0}) \qquad 2.16$$

Where, Po and M are the force and the moment on the section respectively.

P_u is equal to area of critical section X P_y, M_p is calculated as the plastic module of critical sections x P_y in plastic section or elastic modules of critical section X P_y for other sections.

2.2.5 Classification of cellular Beam

The computation of the nominal moment strength Mp of a laterally supported beam necessitates first the classification of the cellular beam. The beam can be plastic, compact, non-compact or slender according to IS code. In compact sections, local buckling of the compression flange and the

web does not occur before the plastic hinge develops in the cross section. On the other hand in compact sections, the local buckling of compression flange or web may occur after the first yield is reacted at the outer fiber of the flanges. Classification of I-shaped sections is carried out according to Table 2 of IS 800 : 2007 which is repeated below.

Compression Element			Ratio	Class of Section		
				Class 1 Plastic	Class 2 Compact	Class 3 Semi-compact
(1)			(2)	(3)	(4)	(5)
Outstanding element of compression flange	Rolled section		b/t_f	9.4ε	10.5ε	15.7ε
	Welded section		b/t_f	8.4ε	9.4ε	13.6ε
Internal element of compression flange	Compression due to bending		b/t_f	29.3ε	33.5ε	42ε
	Axial compression		b/t_f	Not applicable		
Web of an I, H or box section	Neutral axis at mid-depth		d/t_w	84ε	105ε	126ε
	Generally	If r_1 is negative:	d/t_w	$\frac{84\varepsilon}{1+r_1}$ but $\leq 42\varepsilon$	$\frac{105.0\varepsilon}{1+r_1}$	$\frac{126.0\varepsilon}{1+2r_1}$ but $\leq 42\varepsilon$
		If r_1 is positive :	d/t_w		$\frac{105.0\varepsilon}{1+1.5r_1}$ but $\leq 42\varepsilon$	
	Axial compression		d/t_w	Not applicable		42ε

Table 2.1 Limiting width to thickness ratios

$$M_{P(plastic)=} P_y \times S_x \quad 2.17$$

$$M_{P(plastic)=} P_y \times Z_x \quad 2.18$$

$$\varepsilon = \sqrt{275/P_y} \quad 2.19$$

$$\lambda_f = \frac{b_f}{2t_f} \quad 2.20$$

$$\lambda_w = \frac{H}{t_w} \quad 2.21$$

$$H = d - 2t_f \quad 2.22$$

The moment capacity of beams for plastic or compact sections and semi-compact sections is calculated respectively in 2.17 and 2.18. In these equations; P_y is the design strength of steel, S_x is the plastic modulus and Z_x is the elastic modulus of section about relevant axis. In equation 2.19, ε defines a constant in connection with limiting with to thickness ratios. λ_f given in equation 2.20 is slenderness ratio for I-shaped member flanges and the thickness in which b_F and t_F are the width

and the thickness of the flange. Equation 2.21 describes, λ_w , slenderness ratio for beam web, in which H plus W allowance for undersize inside fillet at compression flange for rolled I-shaped sections shown in equation 2.22, where d is the overall depth of the section and t_w is the web thickness. H / t_w is readily available in UB-section properties table.

2.2.6 Deflection of cellular Beam

The limiting values for deflection of a beam under applied load combinations are given in IS 800:2007 Table 6. According to these limitations the maximum deflection of a beam should not exceed span/360 under live loads. The deflection of cellular beam is computed using the virtual work method which is explained in detail in [14]. Figure 2.7 shows points of inflection at sections i and i 1. Shear force under applied load combinations is distributed equally to upper and lower tees. The axial and horizontal forces in these tees are given by;

$$T_i = \frac{M_i}{h} \qquad 2.23$$

$$V_h = \frac{S(V_i + V_{i+1}}{2h} \qquad 2.24$$

Where; h is the distance between the centroids of upper and lower tees and S is distance between centrals of holes. The deflection at each point is found by applying a unit load at that point.

Internal forces under a unit load are given by

$$\frac{\overline{V_i}}{2}, \overline{N}_i, \overline{V}_h \qquad 2.25$$

Deflection due to bending moment in tee;

$$e_{mt} = \frac{0.091\,(D_0/2)^3}{3EI_T} V_i \overline{V}_i \qquad 2.26$$

Deflection due to bending moment in web post of beam;

$$y_{wp} = \frac{13.15}{Et_w}\left[\log_e\left(\frac{S-0.9(D_0/2)}{S-2.0(D_0/2)}\right)+2\left(\frac{S-2.0(D_0/2)}{S-0.9(D_0/2)}\right)-\frac{1}{2}\left(\frac{S-2.0(D_0/2)}{S-0.9(D_0/2)}\right)^2-\frac{3}{2}\right]V_h\overline{V_h} \quad (2.27)$$

Deflection due to axial force in tee;

$$y_{at} = \frac{2S}{EA_T}(T_t\overline{T_t}) \quad (2.28)$$

Deflection due to shear in tee;

$$y_t = \frac{0.45(D_0/2)}{GA_{TWEB}}(V_t\overline{V_t}) \quad (2.29)$$

Deflection due to shear in web post;

$$y_w = \frac{1.636}{Gt_w}X\log_e\left(\frac{S-0.9(D_0/2)}{S-2.0(D_0/2)}\right)V_h\overline{V_h} \quad (2.30)$$

Where E is the elasticity modulus of steel cellular beam,$I_t$is total moment of inertia of cell beam, G is shear modulus of steel and X is the web post form factor. The total deflection of a single opening under applied load conditions is obtained by summing the deflections computed above in Eq. 2.26-2.30.

$$y_t = y_{mt} + y_{wp} + y_{at} + y_t + y_w \quad 2.31$$

On the other hand the deflection of the cellular beam is calculated by multiplying the deflection of each opening by the total number of openings in the beam as given in [14].

CHAPTER 3

ANALYSIS AND RESULTS

3.1 Reconciliation of Analysis with Test Results

3.1.1 GENERAL

The results compared in this chapter with the method of analysis described in chapter 2.All shear and bending moment loads are non-dimensionalized by dividing by the plastic shear or moment capacity of the section to facilitate numerical comparison and a governing mode of failure is predicted.

The design of a cellular beam requires the choice of an original rolled beam from which the cellular beam is to be produced, circular opening diameter and the spacing between the centres of these circular holes or the total number of holes in the beam. Steel beam with web opening are combine beauty versatility, economy in steel design. These are fabricated from standard rolled section & are engineered to save time of construction. Many attempts have been made by Structural Engineers to find way to decrease the cost of steel structures. Due to limitation on maximum allowable deflection the high strength properties of structural steel cannot always be utilized to best advantages. As a result several new methods have been aimed at increasing the stiffness of steel members without any increasing in weight of the steel required. Beam with web opening were one of these one solution. The shape of the web opening will depend upon the designer's choice & the purpose of the openings. The scope of study deals with Aspect ratio, Deformation characteristics, Load caring capacity and Buckling load on beam. The introduction of an opening in the web of the beam alters the stress distribution within the member and also influences its collapse behaviour. Thus, the efficient design of beams and plate girder sections with web openings has become one of the important considerations in modern structures.

Application of beams with web openings Steel beams with web opening find wide use in light to medium construction and medium to long spans.

They are used in structures like commercial and industrial building, warehouse and portal frames.

These are also used in cranes, crane girders, towers, secondary members and deck stiffeners in bridges.

These beams are effectively uses as ring beams in pressure vessels and storage tanks, under-carriages of railway wagons and as light duty automobiles chassis frames.

These beams can also be used for platforms and temporary structures for off shore sores and for marine oil drilling rig etc.

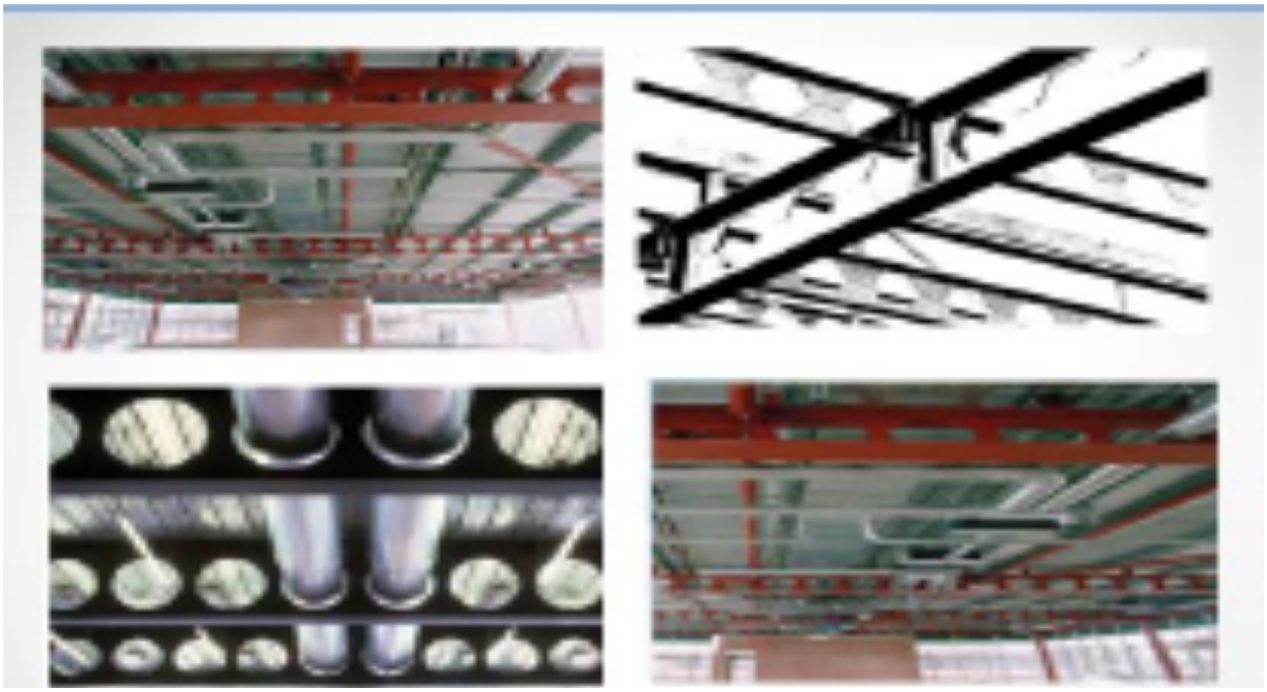


Fig. 3.2 Application of beams with web openings

3.1.2 Methodology :

ANSYS Workbench provides an excellent platform for analysis of various structural systems. ANSYS Workbench easily modelled steel beam and steel beam with web opening using the geometry modeller in ANSYS Workbench. Present study focuses on the calculation of buckling load on steel beam by various sizes of beam and providing the web opening on the beam using ANSYS Workbench software. Based on the results of ANSYS Workbench.

3.1.2.1 Finite element method (Ansys) – Analysis

The finite element method is a numerical analysis technique for obtaining approximate solutions to a wide variety of engineering problems. Although originally developed to study stresses in complex airframe structures, it has since been extended and applied to the broad field of continuum mechanics. Because of its diversity and flexibility as an analysis tool, it is receiving much attention in engineering schools and in industry. The resourcefulness of the analyst usually comes to the rescue and provides several alternatives to overcome this dilemma. One possibility is to make simplifying assumptions to ignore the difficulties and reduce the problem to one that can be handled. Sometimes this procedures works; but, more often than not, it leads to serious inaccuracies or wrong answers. Now that computers are widely available, a more viable alternative is to retain the complexities of the problem and find an approximate numerical solution.

3.1.2.2 Steps Followed while Analysis of Beam with and without web openings

A finite element model of a simply supported ISMB 300 of actual span length 5.0 m and a pressure of 20 kN acting on the beam is shown in figure. Material properties are given in table.

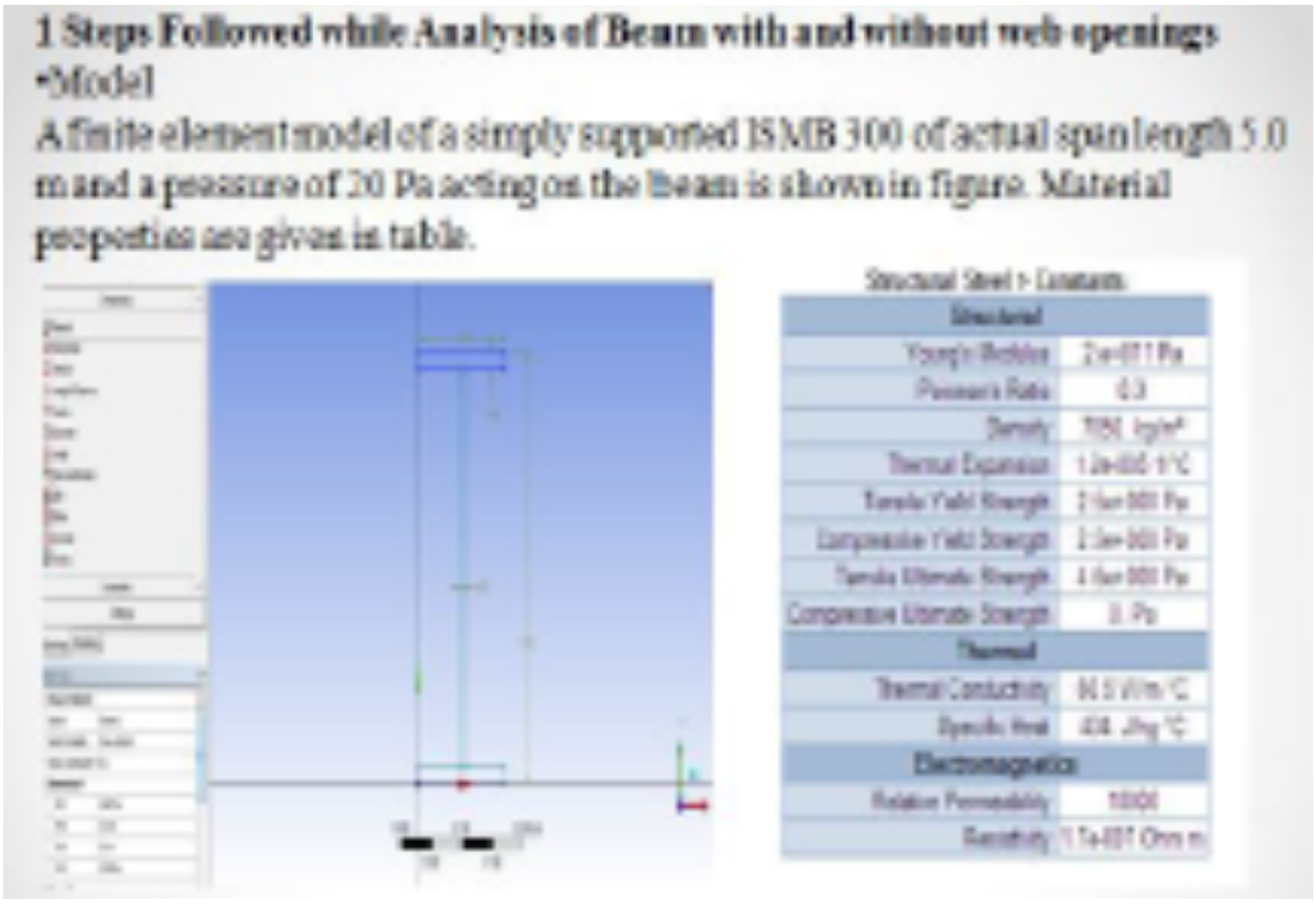


Figure3.3 ANSYS model for solid beam and material properties

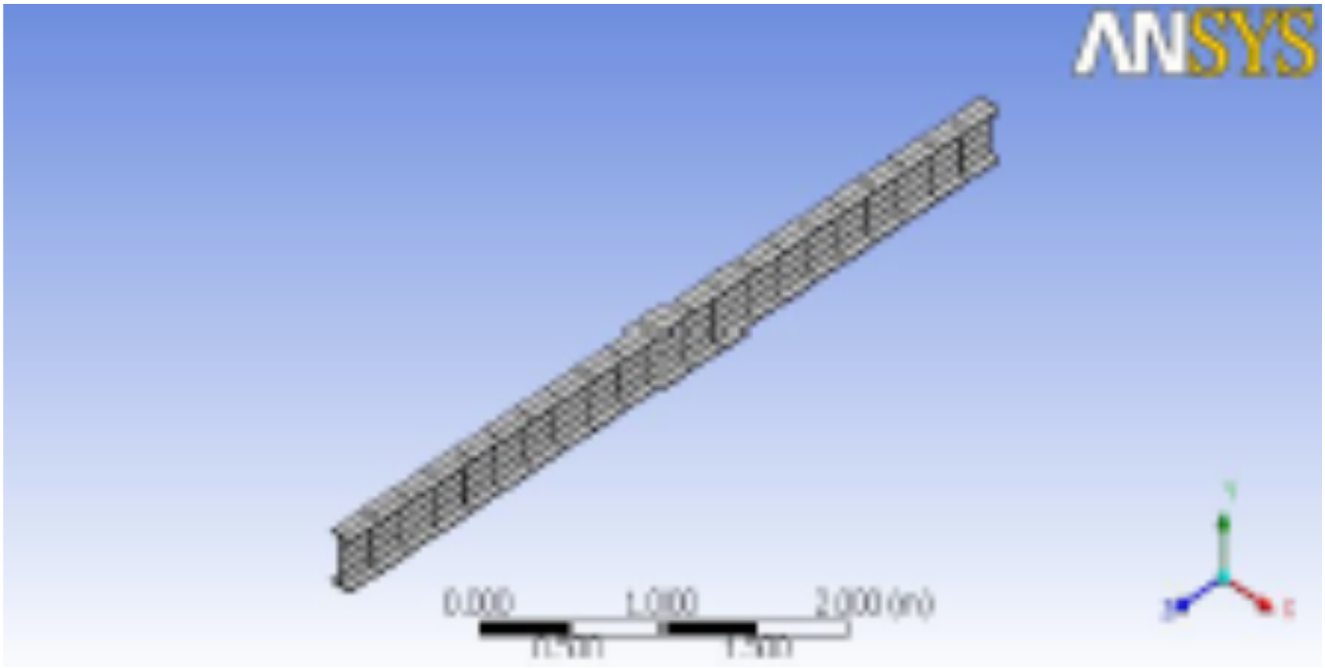


Figure 2.2 Meshing ISMB 300

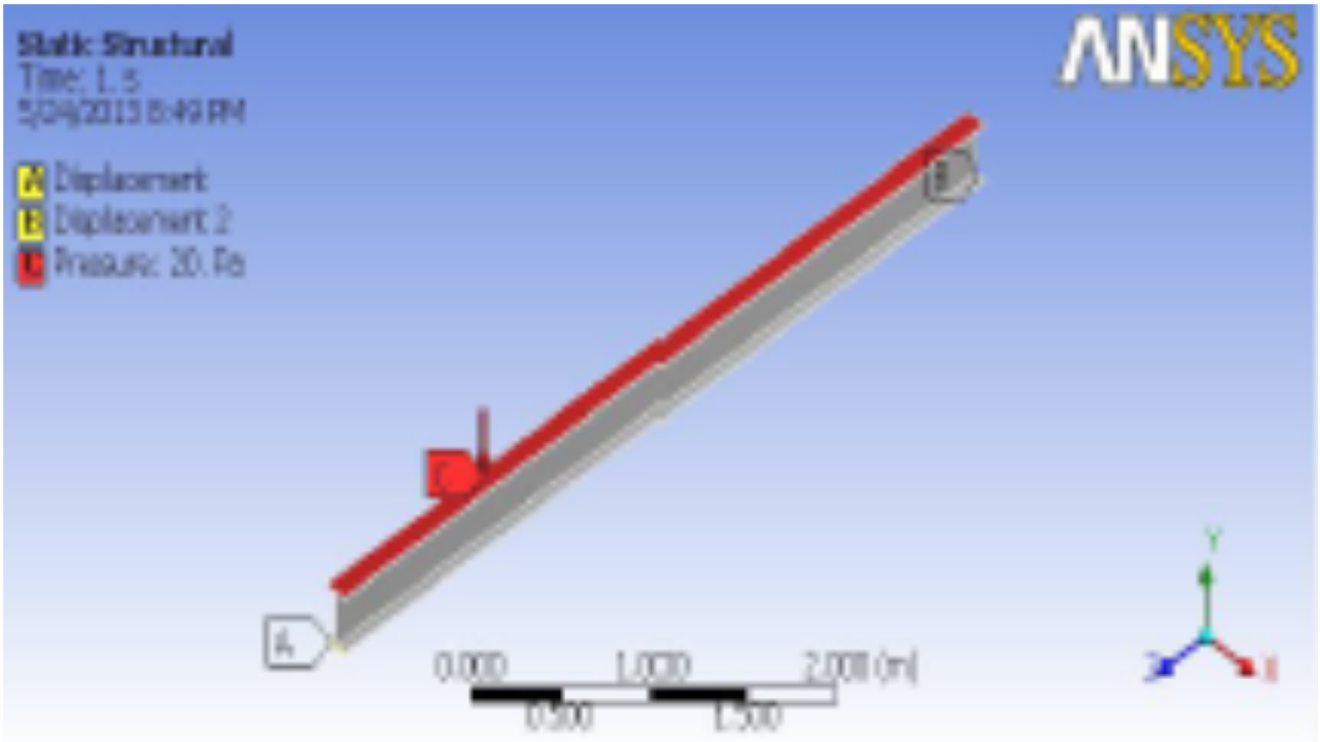


Figure3.4 load acting on the beam and support condition

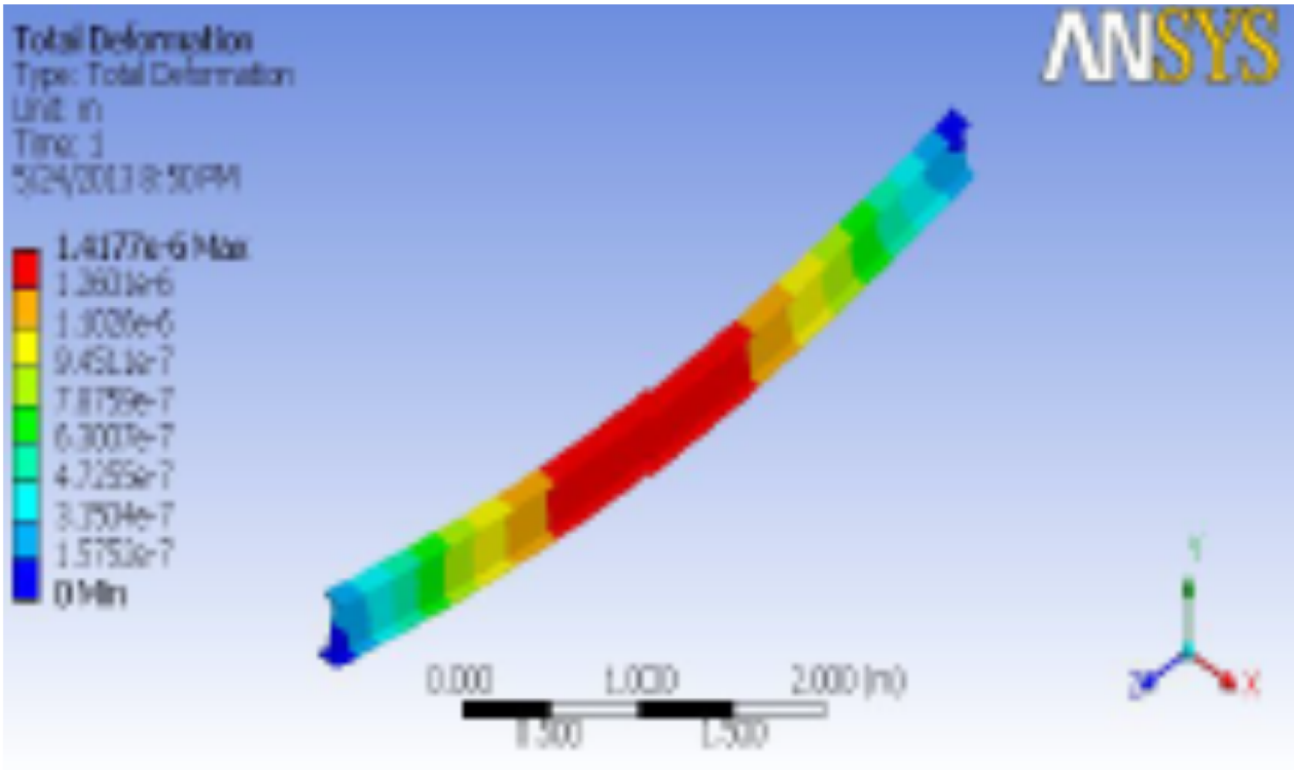


Figure 3.5 Total Static Deformations

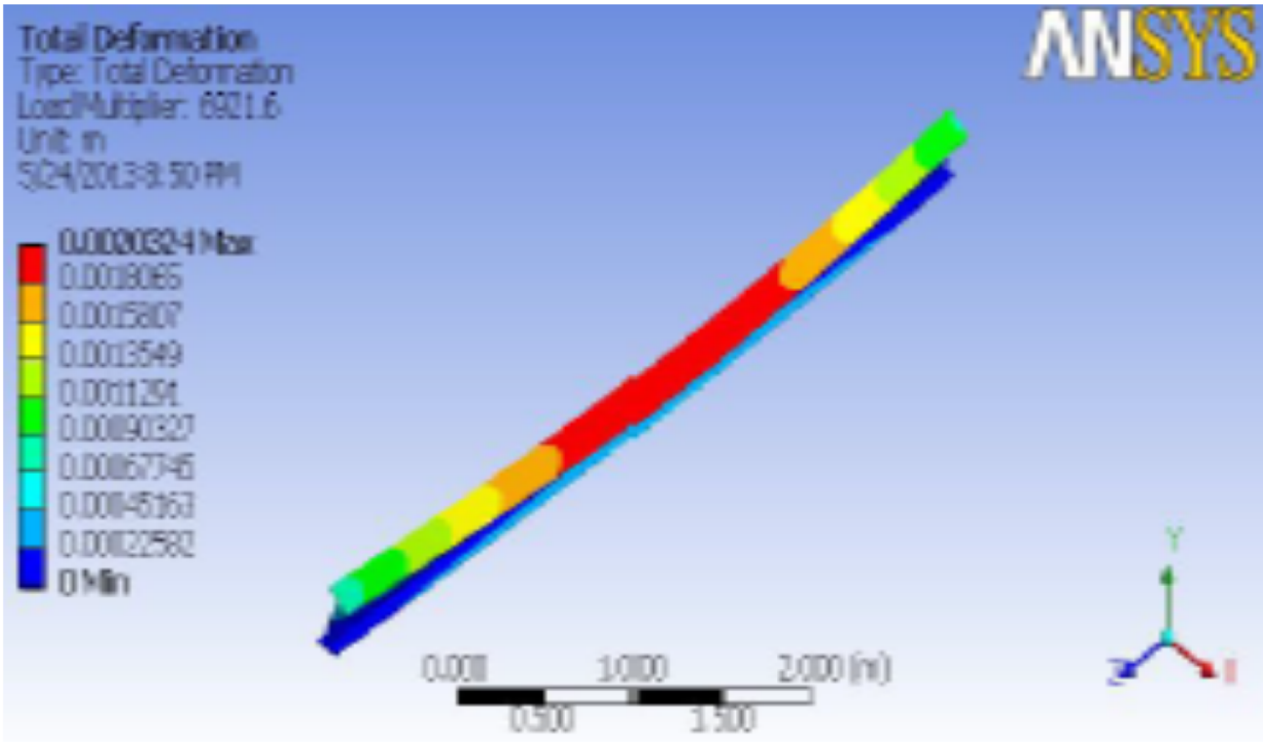


Figure 3.6 Total Buckling Deformation and load Multiplier

3.2 Comparative Data of different types of beams

Steel beam of ISMB 300 of span 5m acting 20kN/m2 pressure on it, having circular, hexagonal and square web opening of restrained, unrestrained and simply supported condition having d/d ratio 0.5. Fig. 3.2.1 shows different end conditions of beam. Table 3.2.2, Table 3.2.3 and Table 3.2.4 shows ISMB 300 for 20 kN/m2 pressure on it having restrained, unrestrained and simply supported condition for circular, square and hexagonal opening.

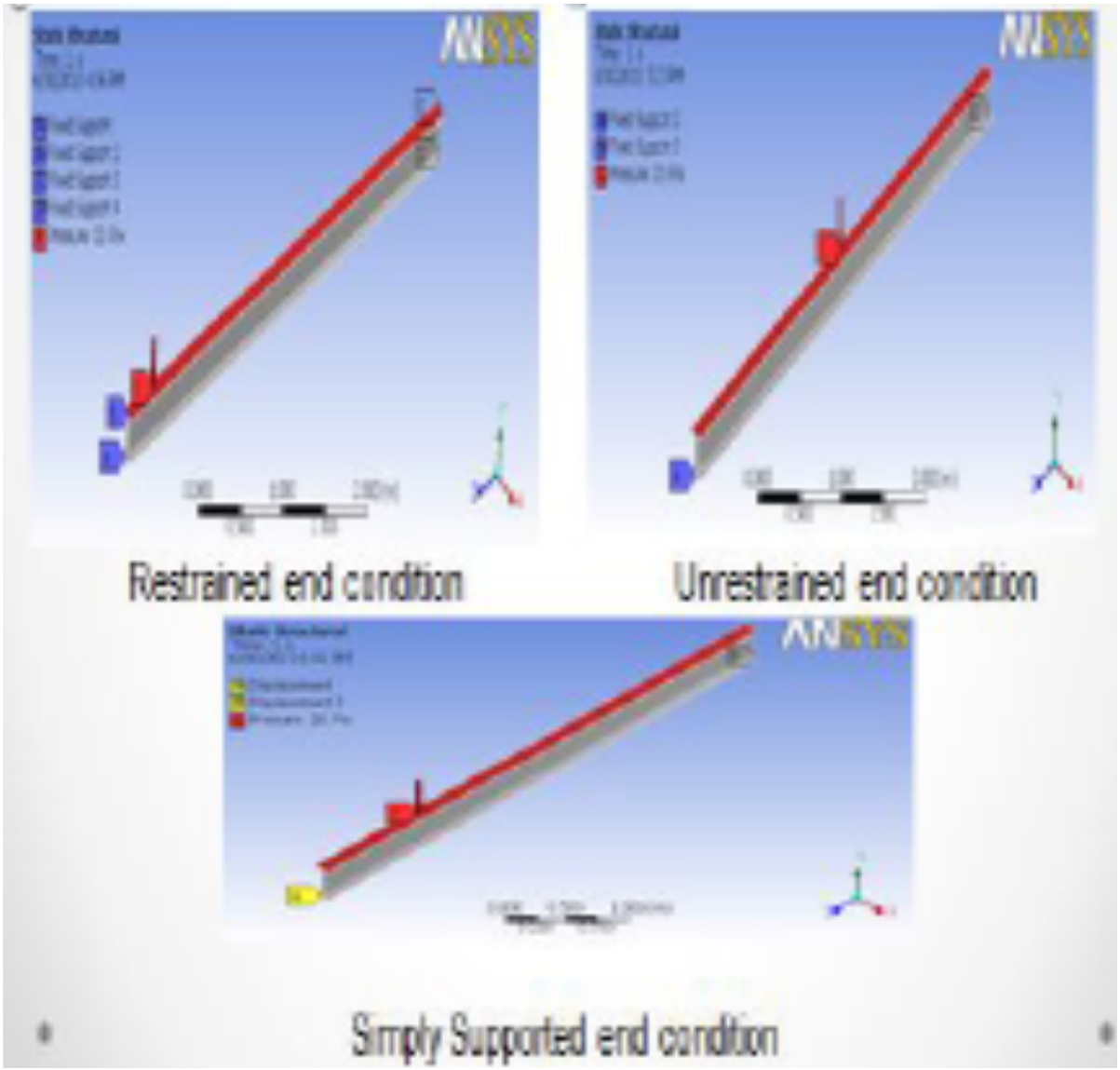


Figure 3.2.1 Different end conditions of beam

Table 3.2.2 ISMB 300 for 20 kN/m2 pressure on it having restrained, unrestrained and simply supported condition for circular opening.

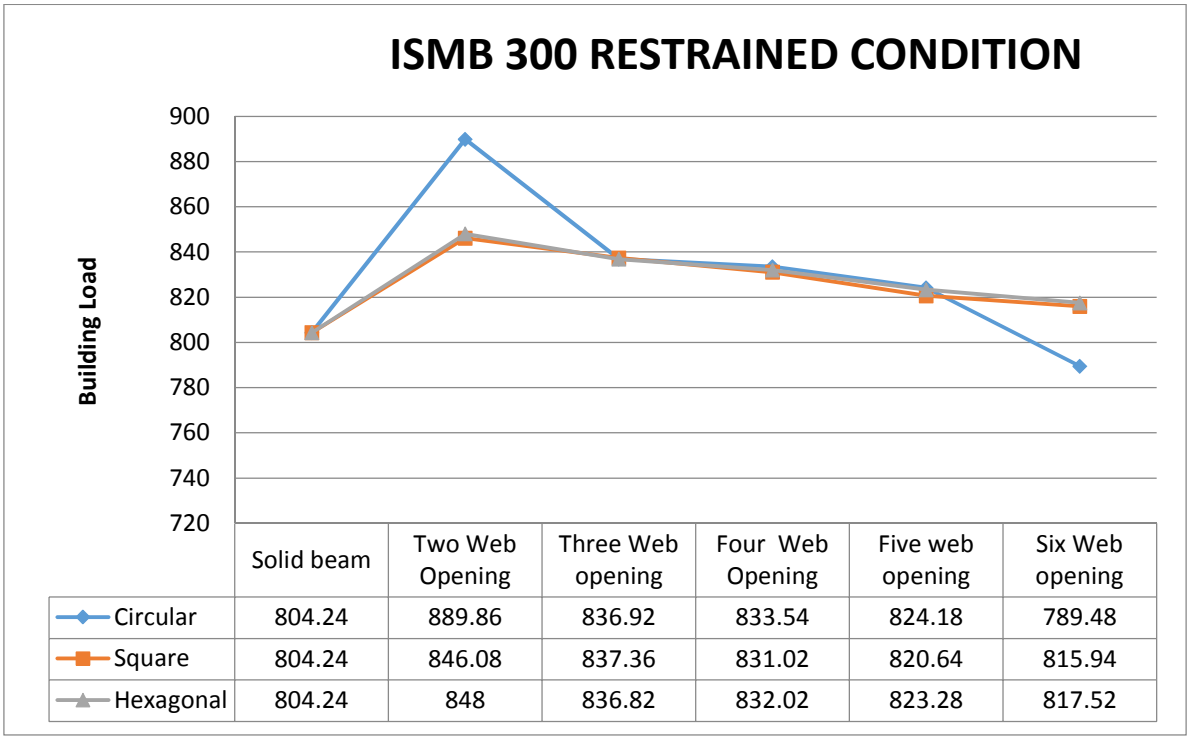
S. NO.	Section	Restrained Condition		Unrestrained Condition		Simply supported beam	
		Static Deflection (m)	Buckling Load (kN)	Static Deflection (m)	Buckling Load (kN)	Static Deflection (m)	Buckling Load (kN)
	1	2	3	4	5	6	7
1	Solid beam	3.391 X 10^{-7}	804.24	7.716 X 10^{-7}	142.1	1.417 X 10^{-6}	138.42
2	Two Web Opening	3.356 X 10^{-7}	889.86	7.798 X 10^{-7}	177.456	1.422 X 10^{-6}	172.84
3	Three Web opening	3.336 X 10^{-7}	836.92	7.228 X 10^{-7}	159.88	1.345 X 10^{-6}	156.16
4	Four Web Opening	3.523 X 10^{-7}	833.54	7.993 X 10^{-7}	151.76	1.434 X 10^{-6}	148.25
5	Five web opening	3.554 X 10^{-7}	824.18	8.088 X 10^{-7}	150.68	1.438 X 10^{-6}	147.27
6	Six Web opening	3.664 X 10^{-7}	789.48	7.599 X 10^{-7}	151.89	1.375 X 10^{-6}	148.73

Table 3.2.3 ISMB 300 for 20n/m2 pressure on it having restrained, unrestrained and simply supported condition for square opening

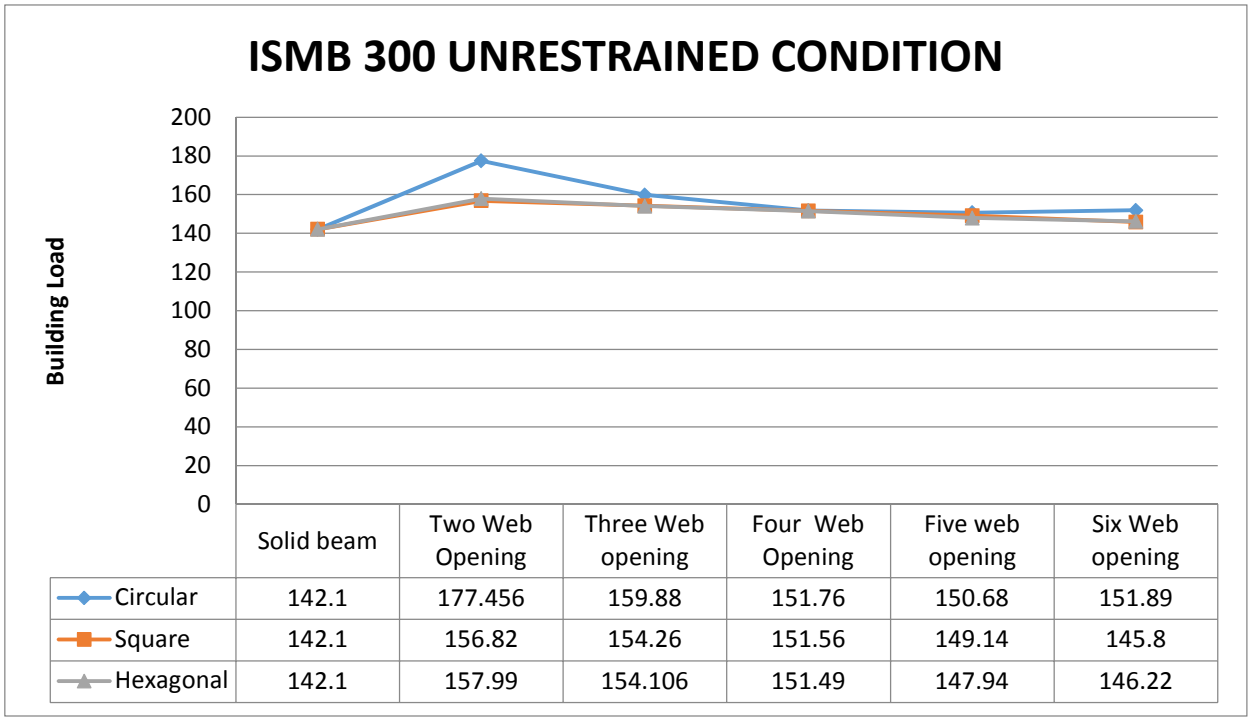
S. NO.	Section	Restrained Condition		Unrestrained Condition		Simply supported beam	
		Static Deflection (m)	Buckling Load (kN)	Static Deflection (m)	Buckling Load (kN)	Static Deflection (m)	Buckling Load (kN)
	1	2	3	4	5	6	7
1	Solid beam	3.391 X 10^{-7}	804.24	7.716 X 10^{-7}	142.1	1.417 X 10^{-6}	138.42
2	Two Web Opening	3.466 X 10^{-7}	846.08	7.898 X 10^{-7}	156.82	1.431 X 10^{-6}	153.04
3	Three Web opening	3.563 X 10^{-7}	837.36	8.068 X 10^{-7}	154.26	1.440 X 10^{-6}	150.79
4	Four Web Opening	3.678 X 10^{-7}	831.02	8.211 X 10^{-7}	151.56	1.454 X 10^{-6}	148.11
5	Five web opening	3.763 X 10^{-7}	820.64	8.342 X 10^{-7}	149.14	1.463 X 10^{-6}	145.88
6	Six Web opening	3.885 X 10^{-7}	815.94	8.494 X 10^{-7}	145.80	1.476 X 10^{-6}	142.70

Table 3.2.4 ISMB 300 for 20N/m2 pressure on it having restrained, unrestrained and simply supported condition for hexagonal opening.

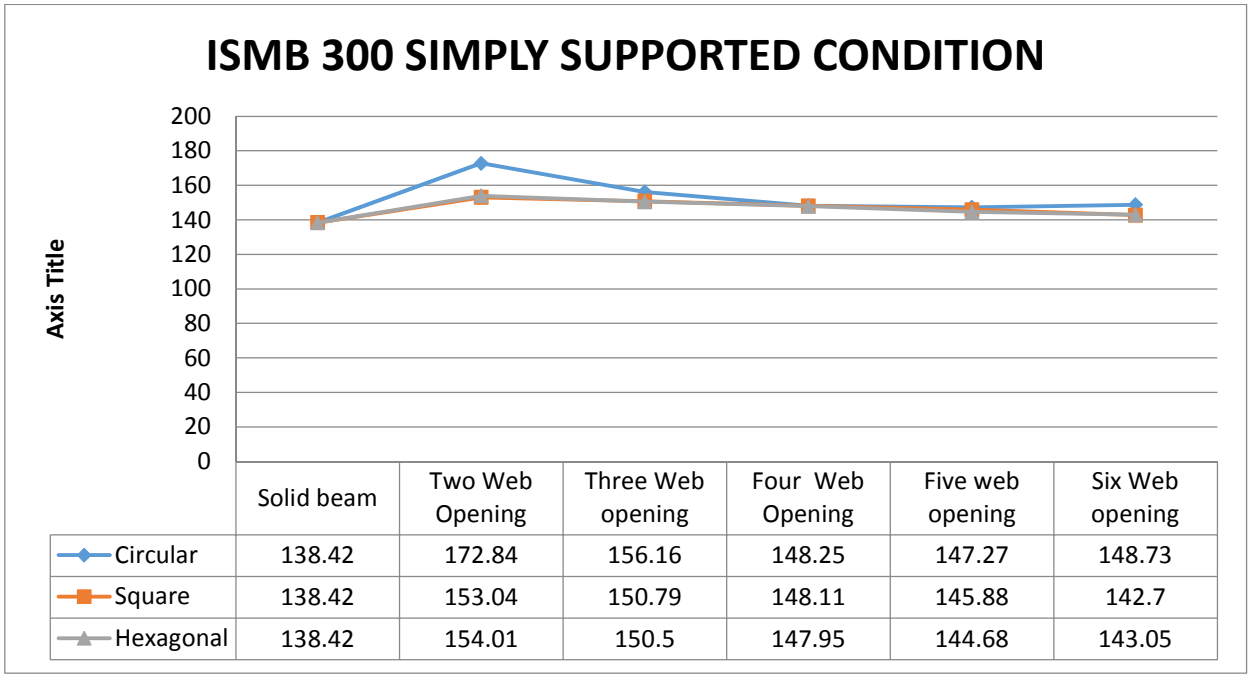
S. NO.	Section	Restrained Condition		Unrestrained Condition		Simply supported beam	
		Static Deflection (m)	Buckling Load (kN)	Static Deflection (m)	Buckling Load (kN)	Static Deflection (m)	Buckling Load (kN)
	1	2	3	4	5	6	7
1	Solid beam	3.391 X 10^{-7}	804.24	7.716 X 10^{-7}	142.1	1.417 X 10^{-6}	138.42
2	Two Web Opening	3.428 X 10^{-7}	848	7.848 X 10^{-7}	157.99	1.425 X 10^{-6}	154.01
3	Three Web opening	3.484 X 10^{-7}	836.82	7.956 X 10^{-7}	154.106	1.430 X 10^{-6}	150.50
4	Four Web Opening	3.541 X 10^{-7}	832.02	8.045 X 10^{-7}	151.49	1.438 X 10^{-6}	147.95
5	Five web opening	3.585 X 10^{-7}	823.28	8.140 X 10^{-7}	147.94	1.444 X 10^{-6}	144.68
6	Six Web opening	3.647 X 10^{-7}	817.52	8.231 X 10^{-7}	146.22	1.451 X 10^{-6}	143.05



	Solid beam	Two Web Opening	Three Web opening	Four Web Opening	Five web opening	Six Web opening
Circular	804.24	889.86	836.92	833.54	824.18	789.48
Square	804.24	846.08	837.36	831.02	820.64	815.94
Hexagonal	804.24	848	836.82	832.02	823.28	817.52



	Solid beam	Two Web Opening	Three Web opening	Four Web Opening	Five web opening	Six Web opening
Circular	142.1	177.456	159.88	151.76	150.68	151.89
Square	142.1	156.82	154.26	151.56	149.14	145.8
Hexagonal	142.1	157.99	154.106	151.49	147.94	146.22



	Solid beam	Two Web Opening	Three Web opening	Four Web Opening	Five web opening	Six Web opening
Circular	138.42	172.84	156.16	148.25	147.27	148.73
Square	138.42	153.04	150.79	148.11	145.88	142.7
Hexagonal	138.42	154.01	150.5	147.95	144.68	143.05

Figure 3.2.5 ISMB 300 for 20N/m2 pressure on it having Restrained, Unrestrained and Simply Supported Condition for circular, square and hexagonal opening.

3.3 Beam Result

The Buckling load Analysis and deflection calculation of different section of beams with different support condition and different loadings with circular, square and hexagonal web openings is done and the results obtained are:

1. If the section of beam increases buckling load will also be increases and it will be decreases as the web opening are provided in the section.
2. Value of buckling load is nearer same for square and hexagonal web opening of same section of beam but different for circular web opening of the same section.
3. Value of buckling load is nearer same for Unrestrained and simply supported end condition but higher in Restrained end condition for same section of beam.
4. If number of web opening in the beam is increases buckling load will be decreases.
5. If number of web opening in the beam is increases deflection of beam will also be increases.
6. Cellular beam subjected to mid span concentrated load provide higher moment carrying capacity than those supporting uniformly distributed load. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

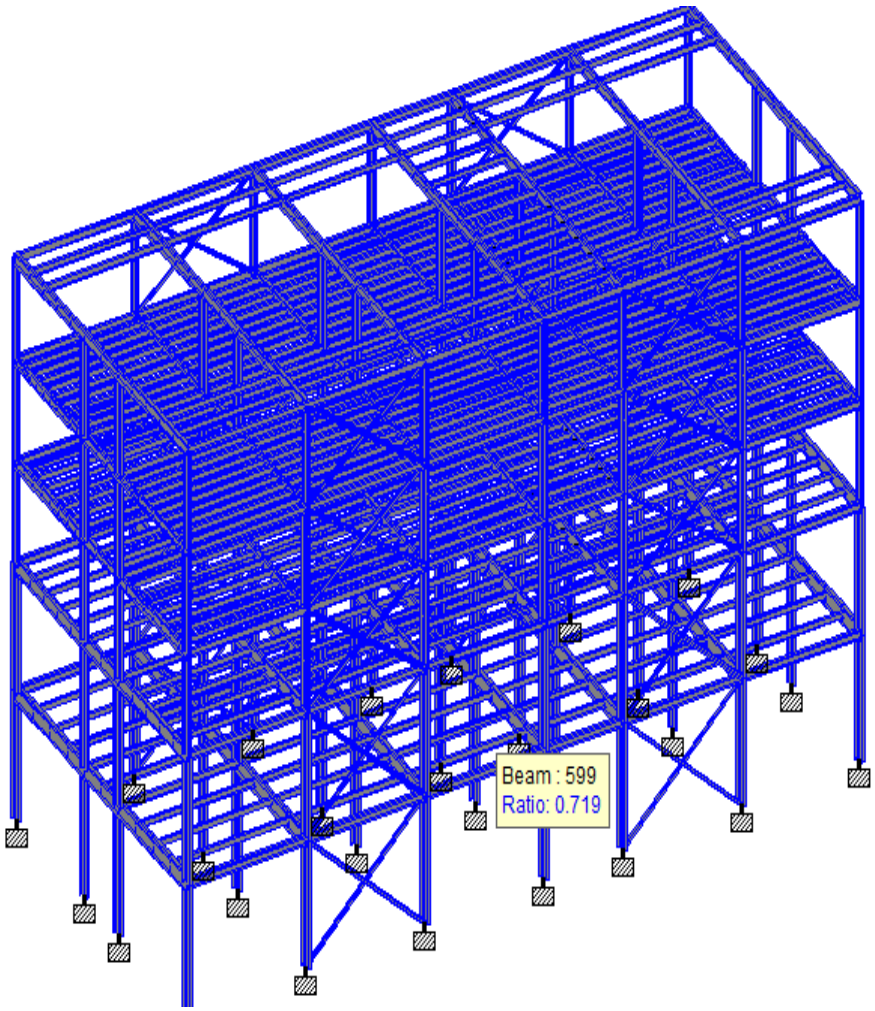
3.4 Comparison of Analysis of structure from Open Web beam and Solid web beam options (I-Beam and Castellated beams)

3.4.1 STAAD ANALYSIS WITH SOLID WEB BEAMS

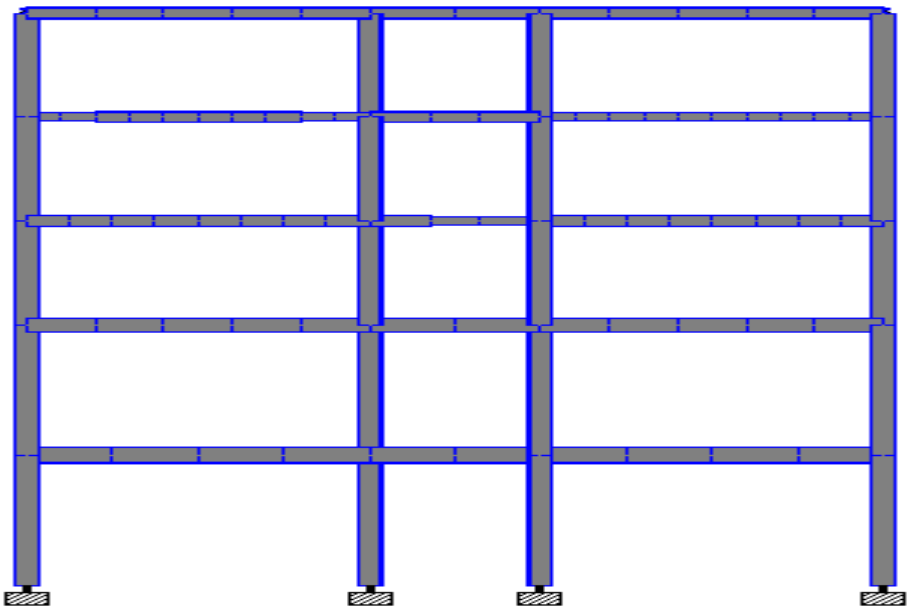
Size of Structure: 15 x 35 M

Height: 22.0 M

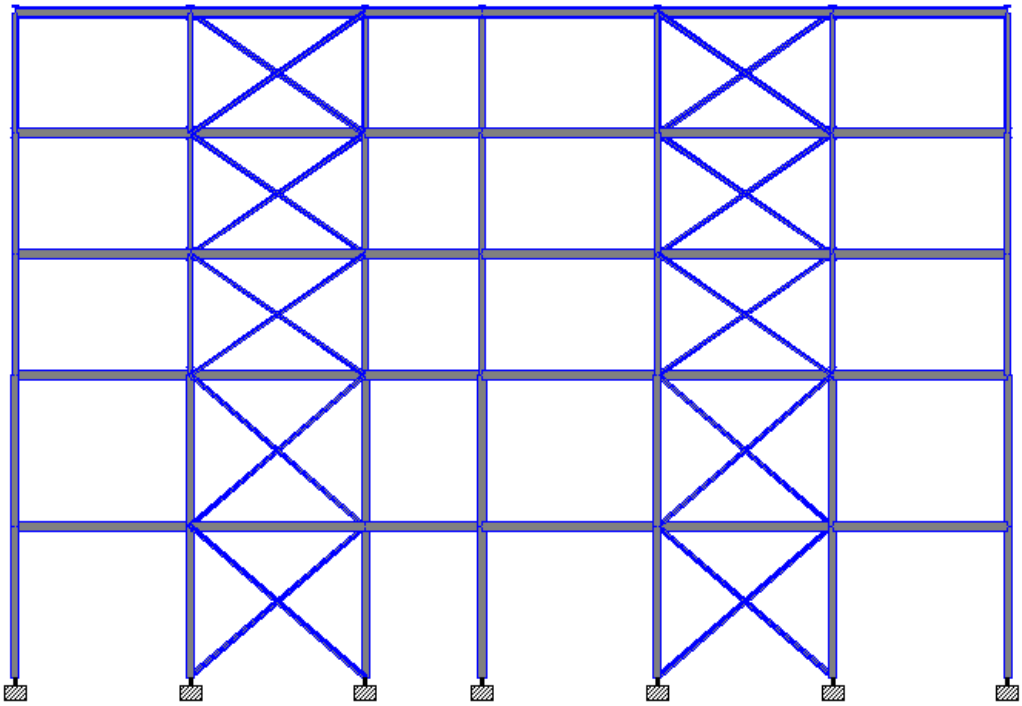
Loadings Applied: Seismic Load, Dead Load and Live Load



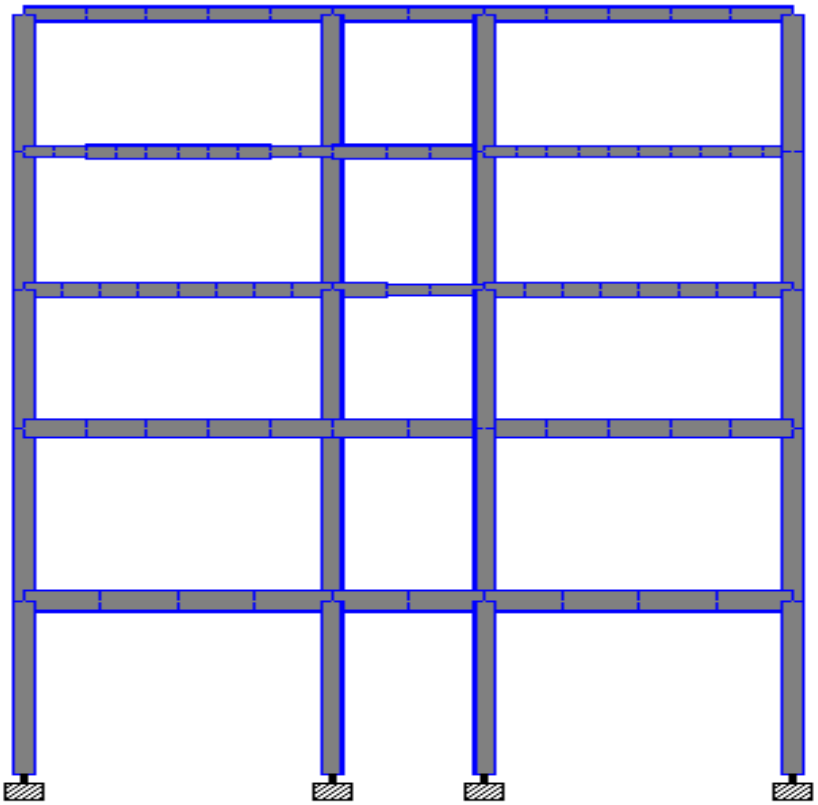
3D view of G+5 Multi Storey



Front Elevation



Side Elevation



Cross Section of Structure

G+5 Mulristorey Analysis output from Staad Software :

1. STAAD SPACE
INPUT FILE: Infra 344_R2_yash+10.STD
2. START JOB INFORMATION
3. ENGINEER DATE 24-MAR-14
4. END JOB INFORMATION
5. INPUT WIDTH 79
6. UNIT METER KN
7. JOINT COORDINATES
8. 1 -0.25 0 0; 2 14.75 0 0; 6 -0.25 5 0; 7 14.75 5 0; 8 -0.25 10 0; 9 14.75 10 0
9. 10 -0.25 14 0; 11 14.75 14 0; 12 -0.25 18 0; 13 14.75 18 0; 16 5.75 0 0
10. 17 5.75 5 0; 18 5.75 10 0; 19 5.75 14 0; 20 5.75 18 0; 23 8.75 0 0
11. 24 8.75 5 0; 25 8.75 10 0; 26 8.75 14 0; 27 8.75 18 0; 32 -0.25 0 6
12. 33 14.75 0 6; 37 -0.25 5 6; 38 14.75 5 6; 39 -0.25 10 6; 40 14.75 10 6
13. 41 -0.25 14 6; 42 14.75 14 6; 43 -0.25 18 6; 44 14.75 18 6; 47 5.75 0 6
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15. 54 8.75 5 6; 55 8.75 10 6; 56 8.75 14 6; 57 8.75 18 6; 61 -0.25 0 12
16. 62 14.75 0 12; 66 -0.25 5 12; 67 14.75 5 12; 68 -0.25 10 12; 69 14.75 10 12
17. 70 -0.25 14 12; 71 14.75 14 12; 72 -0.25 18 12; 73 14.75 18 12; 76 5.75 0 12
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38. 201 8.75 14 -16; 202 8.75 18 -16; 248 1.25 5 0; 249 1.25 5 6; 250 1.25 5 12
STAAD SPACE -- PAGE NO. 2

39. 251 1.25 5 18; 252 1.25 5 -4; 253 1.25 5 -10; 254 1.25 5 -16; 256 2.75 5 0
40. 257 2.75 5 6; 258 2.75 5 12; 259 2.75 5 18; 260 2.75 5 -4; 261 2.75 5 -10
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52. 321 7.25 10 18; 322 7.25 10 -4; 323 7.25 10 -10; 324 7.25 10 -16
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302. 1933 893 907; 1934 892 893; 1935 894 908; 1936 890 894; 1937 895 909
303. 1938 894 895; 1939 896 910; 1940 895 896; 1941 897 822; 1942 898 826
304. 1943 897 898; 1944 899 830; 1945 898 899; 1946 900 834; 1947 899 900
305. 1948 901 838; 1949 897 901; 1950 902 842; 1951 901 902; 1952 903 846
306. 1953 902 903; 1954 904 821; 1955 905 825; 1956 904 905; 1957 906 829
307. 1958 905 906; 1959 907 833; 1960 906 907; 1961 908 837; 1962 904 908
308. 1963 909 841; 1964 908 909; 1965 910 845; 1966 909 910; 1967 820 911
309. 1968 821 912; 1969 822 913; 1970 823 914; 1971 824 915; 1972 825 916
310. 1973 826 917; 1974 827 918; 1975 828 919; 1976 829 920; 1977 830 921
311. 1978 831 922; 1979 832 923; 1980 833 924; 1981 834 925; 1982 835 926
312. 1983 836 927; 1984 837 928; 1985 838 929; 1986 839 930; 1987 840 931
313. 1988 841 932; 1989 842 933; 1990 843 934; 1991 844 935; 1992 845 936
314. 1993 846 937; 1994 847 938; 1995 836 931; 1996 840 927; 1997 828 915
315. 1998 824 919; 1999 829 916; 2000 825 920; 2001 837 932; 2002 841 928
316. 2003 911 939; 2004 913 940; 2005 914 941; 2006 911 915; 2007 912 916
317. 2008 913 917; 2009 914 918; 2010 915 942; 2011 917 943; 2012 918 944
318. 2013 915 919; 2014 916 920; 2015 917 921; 2016 918 922; 2017 919 945

319. 2018 921 946; 2019 922 947; 2020 919 923; 2021 920 924; 2022 921 925
320. 2023 922 926; 2024 923 948; 2025 925 949; 2026 926 950; 2027 911 927
321. 2028 912 928; 2029 913 929; 2030 914 930; 2031 927 951; 2032 929 952
322. 2033 930 953; 2034 927 931; 2035 928 932; 2036 929 933; 2037 930 934
323. 2038 931 954; 2039 933 955; 2040 934 956; 2041 931 935; 2042 932 936
324. 2043 933 937; 2044 934 938; 2045 935 957; 2046 937 958; 2047 938 959
325. 2048 939 960; 2049 942 961; 2050 939 942; 2051 945 962; 2052 942 945
326. 2053 948 963; 2054 945 948; 2055 951 964; 2056 939 951; 2057 954 965
327. 2058 951 954; 2059 957 966; 2060 954 957; 2061 960 967; 2062 961 968
328. 2063 960 961; 2064 962 969; 2065 961 962; 2066 963 970; 2067 962 963
329. 2068 964 971; 2069 960 964; 2070 965 972; 2071 964 965; 2072 966 973
330. 2073 965 966; 2074 940 914; 2075 943 918; 2076 940 943; 2077 946 922
331. 2078 943 946; 2079 949 926; 2080 946 949; 2081 952 930; 2082 940 952
332. 2083 955 934; 2084 952 955; 2085 958 938; 2086 955 958; 2087 941 974
333. 2088 944 975; 2089 941 944; 2090 947 976; 2091 944 947; 2092 950 977
334. 2093 947 950; 2094 953 978; 2095 941 953; 2096 956 979; 2097 953 956
335. 2098 959 980; 2099 956 959; 2100 974 981; 2101 975 982; 2102 974 975
336. 2103 976 983; 2104 975 976; 2105 977 984; 2106 976 977; 2107 978 985
337. 2108 974 978; 2109 979 986; 2110 978 979; 2111 980 987; 2112 979 980
338. 2113 967 988; 2114 968 989; 2115 967 968; 2116 969 990; 2117 968 969
339. 2118 970 991; 2119 969 970; 2120 971 992; 2121 967 971; 2122 972 993
340. 2123 971 972; 2124 973 994; 2125 972 973; 2126 981 995; 2127 982 996
341. 2128 981 982; 2129 983 997; 2130 982 983; 2131 984 998; 2132 983 984
342. 2133 985 999; 2134 981 985; 2135 986 1000; 2136 985 986; 2137 987 1001
343. 2138 986 987; 2139 988 913; 2140 989 917; 2141 988 989; 2142 990 921
344. 2143 989 990; 2144 991 925; 2145 990 991; 2146 992 929; 2147 988 992
345. 2148 993 933; 2149 992 993; 2150 994 937; 2151 993 994; 2152 995 912
346. 2153 996 916; 2154 995 996; 2155 997 920; 2156 996 997; 2157 998 924
347. 2158 997 998; 2159 999 928; 2160 995 999; 2161 1000 932; 2162 999 1000
348. 2163 1001 936; 2164 1000 1001
349. START GROUP DEFINITION
350. MEMBER
351. _RTWALL 48 50 116 118 184 186 252 254 320 322 388 390 1449 1456 1463 1470 -
352. 1477 1484 1611 1618 1625 1632 1639 1646 1809 1816 1823 1830 1837 1844 2007 -
353. 2014 2021 2028 2035 2042
354. _LTWALL 47 49 115 117 183 185 251 253 319 321 387 389 1448 1455 1462 1469 -
355. 1476 1483 1610 1617 1624 1631 1638 1645 1808 1815 1822 1829 1836 1843 2006 -
356. 2013 2020 2027 2034 2041
357. _FRONT 219 220 224 226 557 572 587 634 662 675 688 733 1354 1466 1467 1495 -
358. 1508 1521 1560 1586 1628 1629 1657 1670 1683 1722 1748 1826 1827 1855 1868 -
359. 1881 1920 1946 2024 2025 2053 2066 2079 2118 2144

360. _BACK 428 430 439 441 593 608 625 653 694 709 724 752 1373 1488 1489 1527 -
361. 1540 1553 1579 1605 1650 1651 1689 1702 1715 1741 1767 1848 1849 1887 1900 -
362. 1913 1939 1965 2046 2047 2085 2098 2111 2137 2163
363. _TRIAL 20 70 83 88 99 138 151 156 167 224 273 274 292 341 342 355 360 371 -
364. 428 582 583 585 587 589 591 593 629 630 632 636 638 643 645 651 742 744 1363 -
365. 1365 1569 1571 1595 1597 1731 1733 1757 1759 1929 1931 1955 1957 2127 2129 -
366. 2153 2155
367. _JOISTS 47 TO 50 57 58 62 63 115 TO 118 125 126 130 131 183 TO 186 193 194 -
368. 198 199 251 TO 254 261 262 266 267 319 TO 322 329 330 334 335 387 TO 390 -
369. 397 398 402 403 554 556 558 560 562 564 569 571 573 575 577 579 584 586 588 -
370. 590 592 594 599 601 603 605 607 609 616 618 620 622 624 626 631 633 635 637 -
371. 639 641 644 646 648 650 652 654 659 661 663 665 667 669 672 674 676 678 680 -
372. 682 685 687 689 691 693 695 700 702 704 706 708 710 715 717 719 721 723 725 -
373. 730 732 734 736 738 740 743 745 747 749 751 753 1351 1353 1355 1357 1359 -
374. 1361 1364 1366 1368 1370 1372 1374 1448 TO 1451 1455 TO 1458 1462 TO 1465 -

375. 1469 TO 1472 1476 TO 1479 1483 TO 1486 1492 1494 1496 1498 1500 1502 1505 -
376. 1507 1509 1511 1513 1515 1518 1520 1522 1524 1526 1528 1531 1533 1535 1537 -
377. 1539 1541 1544 1546 1548 1550 1552 1554 1557 1559 1561 1563 1565 1567 1570 -
378. 1572 1574 1576 1578 1580 1583 1585 1587 1589 1591 1593 1596 1598 1600 1602 -
379. 1604 1606 1610 TO 1613 1617 TO 1620 1624 TO 1627 1631 TO 1634 1638 TO 1641 -
380. 1645 TO 1648 1654 1656 1658 1660 1662 1664 1667 1669 1671 1673 1675 1677 -
381. 1680 1682 1684 1686 1688 1690 1693 1695 1697 1699 1701 1703 1706 1708 1710 -
382. 1712 1714 1716 1719 1721 1723 1725 1727 1729 1732 1734 1736 1738 1740 1742 -
383. 1745 1747 1749 1751 1753 1755 1758 1760 1762 1764
384. _JOISTS 1766 1768 1808 TO 1811 1815 TO 1818 1822 TO 1825 1829 TO 1832 1836 -
385. 1837 TO 1839 1843 TO 1846 1852 1854 1856 1858 1860 1862 1865 1867 1869 1871 -
386. 1873 1875 1878 1880 1882 1884 1886 1888 1891 1893 1895 1897 1899 1901 1904 -
387. 1906 1908 1910 1912 1914 1917 1919 1921 1923 1925 1927 1930 1932 1934 1936 -
388. 1938 1940 1943 1945 1947 1949 1951 1953 1956 1958 1960 1962 1964 1966 2006 -
389. 2007 TO 2009 2013 TO 2016 2020 TO 2023 2027 TO 2030 2034 TO 2037 2041 TO 2044 -
390. 2050 2052 2054 2056 2058 2060 2063 2065 2067 2069 2071 2073 2076 2078 2080 -
391. 2082 2084 2086 2089 2091 2093 2095 2097 2099 2102 2104 2106 2108 2110 2112 -
392. 2115 2117 2119 2121 2123 2125 2128 2130 2132 2134 2136 2138 2141 2143 2145 -
393. 2147 2149 2151 2154 2156 2158 2160 2162 2164
394. _MAIN-BEAM 15 16 20 22 31 33 83 84 88 90 99 101 151 152 156 158 167 169 219 -
395. 220 224 226 235 237 287 288 292 294 303 305 355 356 360 362 371 373 423 424 -
396. 428 430 439 441 552 553 555 557 559 561 563 567 568 570 572 574 576 578 582 -
397. 583 585 587 589 591 593 597 598 600 602 604 606 608 614 615 617 619 621 623 -
398. 625 629 630 632 634 636 638 640 642 643 645 647 649 651 653 657 658 660 662 -
399. 664 666 668 670 671 673 675 677 679 681 683 684 686 688 690 692 694 698 699 -
400. 701 703 705 707 709 713 714 716 718 720 722 724 728 729 731 733 735 737 739 -
401. 741 742 744 746 748 750 752 1349 1350 1352 1354 1356 1358 1360 1362 1363 -
402. 1365 1367 1369 1371 1373 1445 TO 1447 1452 TO 1454 1459 TO 1461 1466 TO 1468 -
403. 1473 TO 1475 1480 TO 1482 1487 TO 1491 1493 1495 1497 1499 1501 1503 1504 -
404. 1506 1508 1510 1512 1514 1516 1517 1519 1521 1523 1525 1527 1529 1530 1532 -
405. 1534 1536 1538 1540 1542 1543 1545 1547 1549 1551 1553 1555 1556 1558 1560 -
406. 1562 1564 1566 1568 1569 1571 1573 1575 1577 1579 1581 1582 1584 1586 1588 -
407. 1590 1592 1594 1595 1597 1599 1601 1603 1605 1607 TO 1609 1614 TO 1616 1621 -
408. 1622 TO 1623 1628 TO 1630 1635 TO 1637 1642 TO 1644 1649 TO 1653 1655 1657 -
409. 1659 1661 1663 1665 1666 1668 1670 1672 1674 1676 1678 1679 1681 1683 1685 -
410. 1687 1689 1691 1692 1694 1696
411. _MAIN-BEAM 1698 1700 1702 1704 1705 1707 1709 1711 1713 1715 1717 1718 1720 -
412. 1722 1724 1726 1728 1730 1731 1733 1735 1737 1739 1741 1743 1744 1746 1748 -
413. 1750 1752 1754 1756 1757 1759 1761 1763 1765 1767 1805 TO 1807 1812 TO 1814 -
414. 1819 TO 1821 1826 TO 1828 1833 TO 1835 1840 TO 1842 1847 TO 1851 1853 1855 -
415. 1857 1859 1861 1863 1864 1866 1868 1870 1872 1874 1876 1877 1879 1881 1883 -
416. 1885 1887 1889 1890 1892 1894 1896 1898 1900 1902 1903 1905 1907 1909 1911 -
417. 1913 1915 1916 1918 1920 1922 1924 1926 1928 1929 1931 1933 1935 1937 1939 -
418. 1941 1942 1944 1946 1948 1950 1952 1954 1955 1957 1959 1961 1963 1965 2003 -
419. 2004 TO 2005 2010 TO 2012 2017 TO 2019 2024 TO 2026 2031 TO 2033 2038 TO 2040 -
420. 2045 TO 2049 2051 2053 2055 2057 2059 2061 2062 2064 2066 2068 2070 2072 -

421. 2074 2075 2077 2079 2081 2083 2085 2087 2088 2090 2092 2094 2096 2098 2100 -
422. 2101 2103 2105 2107 2109 2111 2113 2114 2116 2118 2120 2122 2124 2126 2127 -
423. 2129 2131 2133 2135 2137 2139 2140 2142 2144 2146 2148 2150 2152 2153 2155 -
424. 2157 2159 2161 2163
425. _JOIST_8.5D 49 50 58 63 117 118 126 131 185 186 194 199 253 254 262 267 321 -
426. 322 330 335 389 390 398 403 659 661 663 665 667 669 672 674 676 678 680 682 -
427. 700 702 704 706 708 710 715 717 719 721 723 725 730 732 734 736 738 740 743 -
428. 745 747 749 751 753 1351 1353 1355 1357 1359 1361 1364 1366 1368 1370 1372 -
429. 1374 1448 TO 1451 1455 TO 1458 1462 TO 1465 1469 TO 1472 1476 TO 1479 1483 -
430. 1484 TO 1486 1492 1494 1496 1498 1500 1502 1505 1507 1509 1511 1513 1515 1531 -

431. 1533 1535 1537 1539 1541 1544 1546 1548 1550 1552 1554 1557 1559 1561 1563 -
432. 1565 1567 1570 1572 1574 1576 1578 1580 1583 1585 1587 1589 1591 1593 1596 -
433. 1598 1600 1602 1604 1606 1610 TO 1613 1617 TO 1620 1624 TO 1627 1631 TO 1634 -
434. 1638 TO 1641 1645 TO 1648 1654 1656 1658 1660 1662 1664 1667 1669 1671 1673 -
435. 1675 1677 1693 1695 1697 1699 1701 1703 1706 1708 1710 1712 1714 1716 1719 -
436. 1721 1723 1725 1727 1729 1732 1734 1736 1738 1740 1742 1745 1747 1749 1751 -
437. 1753 1755 1758 1760 1762 1764 1766 1768 1808 TO 1811 1815 TO 1818 -
438. 1822 TO 1825 1829 TO 1832 1836 TO 1839 1843 TO 1846 1852 1854 1856 1858 1860 -
439. 1862 1865 1867 1869 1871 1873 1875 1891 1893 1895 1897 1899 1901 1904 1906 -
440. 1908 1910 1912 1914 1917 1919 1921 1923 1925 1927 1930 1932 1934 1936 1938 -
441. 1940 1943 1945 1947 1949 1951 1953 1956 1958 1960 1962 1964 1966 -
442. 2006 TO 2009 2013 TO 2016 2020 TO 2023 2027
443. _JOIST_8.5D 2028 TO 2030 2034 TO 2037 2041 TO 2044 2050 2052 2054 2056 2058 -
444. 2060 2063 2065 2067 2069 2071 2073 2089 2091 2093 2095 2097 2099 2102 2104 -
445. 2106 2108 2110 2112 2115 2117 2119 2121 2123 2125 2128 2130 2132 2134 2136 -
446. 2138 2141 2143 2145 2147 2149 2151 2154 2156 2158 2160 2162 2164
447. _JOIST_6.0D 47 48 57 62 115 116 125 130 183 184 193 198 251 252 261 266 319 -
448. 320 329 334 387 388 397 402 554 556 558 560 562 564 569 571 573 575 577 579 -
449. 599 601 603 605 607 609 616 618 620 622 624 626 631 633 635 637 639 641 644 -
450. 646 648 650 652 654
451. _JOIST_2.5D 584 586 588 590 592 594 685 687 689 691 693 695 1518 1520 1522 -
452. 1524 1526 1528 1680 1682 1684 1686 1688 1690 1878 1880 1882 1884 1886 1888 -
453. 2076 2078 2080 2082 2084 2086
454. END GROUP DEFINITION
455. DEFINE MATERIAL START
456. ISOTROPIC STEEL
457. E 2.05E+008
458. POISSON 0.3
459. DENSITY 76.9822
460. ALPHA 1.2E-005
461. DAMP 0.03
462. TYPE STEEL
463. STRENGTH FY 253200 FU 407800 RY 1.5 RT 1.2
464. END DEFINE MATERIAL
465. MEMBER PROPERTY AMERICAN
466. 1 2 5 6 69 70 73 74 137 138 141 142 205 206 209 -
467. 210 TAPERED 0.432 0.008 0.432 0.325 0.016
468. 7 TO 10 75 TO 78 143 TO 146 211 TO 214 279 TO 282 347 TO 350 415 TO 418 1769 -
469. 1770 1773 1774 1777 1778 1781 1782 1785 1786 1789 1790 1793 1794 1967 1968 -
470. 1971 1972 1975 1976 1979 1980 1983 1984 1987 1988 1991 -
471. 1992 TAPERED 0.42 0.006 0.42 0.25 0.012
472. **********
473. 16 22 33 84 90 101 152 158 169 220 226 237 288 294 305 356 362 373 424 430 -
474. 441 657 658 660 662 664 666 668 670 671 673 675 677 679 681 683 684 686 688 -
475. 690 692 694 698 699 701 703 705 707 709 713 714 716 718 720 722 724 728 729 -
476. 731 733 735 737 739 741 742 744 746 748 750 752 1349 1350 1352 1354 1356 -
477. 1358 1360 1362 1363 1365 1367 1369 1371 1373 1445 TO 1447 1452 TO 1454 1459 -
478. 1460 TO 1461 1466 TO 1468 1473 TO 1475 1480 TO 1482 1487 TO 1491 1493 1495 -
479. 1497 1499 1501 1503 1504 1506 1508 1510 1512 1514 1516 1517 1519 1521 1523 -
480. 1525 1527 1529 1530 1532 1534 1536 1538 1540 1542 1543 1545 1547 1549 1551 -
481. 1553 1555 1556 1558 1560 1562 1564 1566 1568 1569 1571 1573 1575 1577 1579 -

482. 1581 1582 1584 1586 1588 1590 1592 1594 1595 1597 1599 1601 1603 1605 1607 -
483. 1608 TO 1609 1614 TO 1616 1621 TO 1623 1628 TO 1630 1635 TO 1637 1642 TO 1644 -
484. 1649 TO 1653 1655 1657 1659 1661 1663 1665 1666 1668 1670 1672 1674 1676 -
485. 1678 1679 1681 1683 1685 1687 1689 1691 1692 1694 1696 1698 1700 1702 1704 -
486. 1705 1707 1709 1711 1713 1715 1717 1718 1720 1722 1724 1726 1728 1730 1731 -

487. 1733 1735 1737 1739 1741 1743 1744 1746 1748 1750 1752 1754 1756 1757 1759 -
488. 1761 1763 1765 1767 1805 TO 1807 1812 TO 1814 1819 TO 1821 1826 TO 1828 1833 -
489. 1834 TO 1835 1840 TO 1842 1847 TO 1851 1853 1855 1857 1859 1861 1863 1864 -
490. 1866 1868 1870 1872 TAPERED 0.57 0.005 0.57 0.225 0.01
491. 1874 1876 1877 1879 1881 1883 1885 1887 1889 1890 1892 1894 1896 1898 1900 -
492. 1902 1903 1905 1907 1909 1911 1913 1915 1916 1918 1920 1922 1924 1926 1928 -
493. 1929 1931 1933 1935 1937 1939 1941 1942 1944 1946 1948 1950 1952 1954 1955 -
494. 1957 1959 1961 1963 1965 2003 TO 2005 2010 TO 2012 2017 TO 2019 2024 TO 2026 -
495. 2031 TO 2033 2038 TO 2040 2045 TO 2049 2051 2053 2055 2057 2059 2061 2062 -
496. 2064 2066 2068 2070 2072 2074 2075 2077 2079 2081 2083 2085 2087 2088 2090 -
497. 2092 2094 2096 2098 2100 2101 2103 2105 2107 2109 2111 2113 2114 2116 2118 -
498. 2120 2122 2124 2126 2127 2129 2131 2133 2135 2137 2139 2140 2142 2144 2146 -
499. 2148 2150 2152 2153 2155 2157 2159 2161 -
500. 2163 TAPERED 0.57 0.005 0.57 0.225 0.01
501. MEMBER PROPERTY INDIAN
502. 47 TO 50 115 TO 118 183 TO 186 251 TO 254 319 TO 322 387 TO 390 1448 1449 -
503. 1455 1456 1462 1463 1469 1470 1476 1477 1483 1484 1610 1611 1617 1618 1624 -
504. 1625 1631 1632 1638 1639 1645 1646 1808 1809 1815 1816 1822 1823 1829 1830 -
505. 1836 1837 1843 1844 2006 2007 2013 2014 2020 2021 2027 2028 2034 2035 2041 -
506. 2042 TAPERED 0.32 0.008 0.32 0.25 0.01
507. MEMBER PROPERTY INDIAN
508. 273 274 277 278 341 342 345 346 409 410 413 -
509. 414 TAPERED 0.428 0.008 0.428 0.325 0.016
510. MEMBER PROPERTY INDIAN
511. 57 58 62 63 125 126 130 131 193 194 198 199 261 262 266 267 329 330 334 335 -
512. 397 398 402 403 554 556 558 560 562 564 569 571 573 575 577 579 584 586 588 -
513. 590 592 594 599 601 603 605 607 609 616 618 620 622 624 626 631 633 635 637 -
514. 639 641 644 646 648 650 652 654 659 661 663 665 667 669 672 674 676 678 680 -
515. 682 685 687 689 691 693 695 700 702 704 706 708 710 715 717 719 721 723 725 -
516. 730 732 734 736 738 740 743 745 747 749 751 753 1351 1353 1355 1357 1359 -
517. 1361 1364 1366 1368 1370 1372 1374 1450 1451 1457 1458 1464 1465 1471 1472 -
518. 1478 1479 1485 1486 1492 1494 1496 1498 1500 1502 1505 1507 1509 1511 1513 -
519. 1515 1518 1520 1522 1524 1526 1528 1531 1533 1535 1537 1539 1541 1544 1546 -
520. 1548 1550 1552 1554 1557 1559 1561 1563 1565 1567 1570 1572 1574 1576 1578 -
521. 1580 1583 1585 1587 1589 1591 1593 1596 1598 1600 1602 1604 1606 1612 1613 -
522. 1619 1620 1626 1627 1633 1634 1640 1641 1647 1648 1654 1656 1658 1660 1662 -
523. 1664 1667 1669 1671 1673 1675 1677 1680 1682 1684 1686 1688 1690 1693 1695 -
524. 1697 1699 1701 1703 1706 1708 1710 1712 1714 1716 1719 1721 1723 1725 1727 -
525. 1729 1732 1734 1736 1738 1740 1742 1745 1747 1749 1751 1753 1755 1758 1760 -
526. 1762 1764 1766 1768 1810 1811 1817 1818 1824 1825 1831 1832 1838 1839 1845 -
527. 1846 1852 1854 1856 1858 1860 1862 1865 1867 1869 1871 1873 1875 1878 1880 -
528. 1882 1884 TAPERED 0.266 0.005 0.266 0.15 0.006
529. 1886 1888 1891 1893 1895 1897 1899 1901 1904 1906 1908 1910 1912 1914 1917 -
530. 1919 1921 1923 1925 1927 1930 1932 1934 1936 1938 1940 1943 1945 1947 1949 -
531. 1951 1953 1956 1958 1960 1962 1964 1966 2008 2009 2015 2016 2022 2023 2029 -
532. 2030 2036 2037 2043 2044 2050 2052 2054 2056 2058 2060 2063 2065 2067 2069 -
533. 2071 2073 2076 2078 2080 2082 2084 2086 2089 2091 2093 2095 2097 2099 2102 -
534. 2104 2106 2108 2110 2112 2115 2117 2119 2121 2123 2125 2128 2130 2132 2134 -
535. 2136 2138 2141 2143 2145 2147 2149 2151 2154 2156 2158 2160 2162 -
536. 2164 TAPERED 0.266 0.005 0.266 0.15 0.006
537. 15 20 31 83 88 99 151 156 167 219 224 235 287 292 303 355 360 371 423 428 -
538. 439 552 553 555 557 559 561 563 567 568 570 572 574 576 578 582 583 585 587 -
539. 589 591 593 597 598 600 602 604 606 608 614 615 617 619 621 623 625 629 630 -
540. 632 634 636 638 640 642 643 645 647 649 651 -
541. 653 TAPERED 0.624 0.006 0.624 0.25 0.012
542. 1401 TO 1408 1413 TO 1420 1425 TO 1432 1437 TO 1444 1797 TO 1804 1995 TO 2001 -

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543. 2002 TABLE ST PIP2191M
544. MEMBER PROPERTY INDIAN
545. 25 27 36 38 93 95 104 106 161 163 172 174 229 231 240 242 297 299 308 310 -
546. 365 367 376 378 433 435 444 446 1771 1772 1775 1776 1779 1780 1783 1784 1787 -
547. 1788 1791 1792 1795 1796 1969 1970 1973 1974 1977 1978 1981 1982 1985 1986 -
548. 1989 1990 1993 1994 TAPERED 0.424 0.008 0.424 0.225 0.012
549. 21 23 32 34 89 91 100 102 157 159 168 170 225 227 236 238 293 295 304 306 -
550. 361 363 372 374 429 431 440 442 TAPERED 0.428 0.008 0.428 0.3 0.016
551. CONSTANTS
552. MATERIAL STEEL ALL
553. SUPPORTS
554. 1 2 16 23 32 33 47 53 61 62 76 82 90 91 105 111 119 120 134 140 148 149 163 -
555. 169 177 178 192 198 FIXED
556. MEMBER TRUSS
557. 1401 TO 1408 1413 TO 1420 1425 TO 1432 1437 TO 1444 1797 TO 1804 1995 TO 2002
558. MEMBER RELEASE
559. 47 TO 50 57 58 62 63 115 TO 118 125 126 130 131 183 TO 186 193 194 198 199 -
560. 251 TO 254 261 262 266 267 319 TO 322 329 330 334 335 387 TO 390 397 398 -
561. 402 403 554 556 558 560 562 564 569 571 573 575 577 579 584 586 588 590 592 -
562. 594 599 601 603 605 607 609 616 618 620 622 624 626 631 633 635 637 639 641 -
563. 644 646 648 650 652 654 659 661 663 665 667 669 672 674 676 678 680 682 685 -
564. 687 689 691 693 695 700 702 704 706 708 710 715 717 719 721 723 725 730 732 -
565. 734 736 738 740 743 745 747 749 751 753 1351 1353 1355 1357 1359 1361 1364 -
566. 1366 1448 TO 1451 1455 TO 1458 1462 TO 1465 1469 TO 1472 1476 TO 1479 1483 -
567. 1484 TO 1486 1492 1494 1496 1498 1500 1502 1505 1507 1509 1511 1513 1515 1518 -
568. 1520 1522 1524 1526 1528 1531 1533 1535 1537 1539 1541 1544 1546 1548 1550 -
569. 1552 1554 1557 1559 1561 1563 1565 1567 1570 1572 1574 1576 1578 1580 1583 -
570. 1585 1587 1589 1591 1593 1596 1598 1610 TO 1613 1617 TO 1620 1624 TO 1627 -
571. 1631 TO 1634 1638 TO 1641 1645 TO 1648 1654 1656 1658 1660 1662 1664 1667 -
572. 1669 1671 1673 1675 1677 1680 1682 1684 1686 1688 1690 1693 1695 1697 1699 -
573. 1701 1703 1706 1708 1710 1712 1714 1716 1719 1721 1723 1725 1727 1729 1732 -
574. 1734 1736 1738 1740 1742 1745 1747 1749 1751 1753 1755 1758 1760 -
575. 1808 TO 1811 1815 TO 1818 1822 TO 1825 1829 START MY MZ
576. 1830 TO 1832 1836 TO 1839 1843 TO 1846 1852 1854 1856 1858 1860 1862 1865 -
577. 1867 1869 1871 1873 1875 1878 1880 1882 1884 1886 1888 1891 1893 1895 1897 -
578. 1899 1901 1904 1906 1908 1910 1912 1914 1917 1919 1921 1923 1925 1927 1930 -
579. 1932 1934 1936 1938 1940 1943 1945 1947 1949 1951 1953 1956 1958 -
580. 2006 TO 2009 2013 TO 2016 2020 TO 2023 2027 TO 2030 2034 TO 2037 -
581. 2041 TO 2044 2050 2052 2054 2056 2058 2060 2063 2065 2067 2069 2071 2073 -
582. 2076 2078 2080 2082 2084 2086 2089 2091 2093 2095 2097 2099 2102 2104 2106 -
583. 2108 2110 2112 2115 2117 2119 2121 2123 2125 2128 2130 2132 2134 2136 2138 -
584. 2141 2143 2145 2147 2149 2151 2154 2156 START MY MZ
585. 1368 1370 1372 1374 1600 1602 1604 1606 1762 1764 1766 1768 1960 1962 1964 -
586. 1966 2158 2160 2162 2164 START MY MZ
587. 47 TO 50 57 58 62 63 115 TO 118 125 126 130 131 183 TO 186 193 194 198 199 -
588. 251 TO 254 261 262 266 267 319 TO 322 329 330 334 335 387 TO 390 397 398 -
589. 402 403 554 556 558 560 562 564 569 571 573 575 577 579 584 586 588 590 592 -
590. 594 599 601 603 605 607 609 616 618 620 622 624 626 631 633 635 637 639 641 -
591. 644 646 648 650 652 654 659 661 663 665 667 669 672 674 676 678 680 682 685 -
592. 687 689 691 693 695 700 702 704 706 708 710 715 717 719 721 723 725 730 732 -
593. 734 736 738 740 743 745 747 749 751 753 1351 1353 1355 1357 1359 1361 1364 -
594. 1366 1448 TO 1451 1455 TO 1458 1462 TO 1465 1469 TO 1472 1476 TO 1479 1483 -
595. 1484 TO 1486 1492 1494 1496 1498 1500 1502 1505 1507 1509 1511 1513 1515 1518 -
596. 1520 1522 1524 1526 1528 1531 1533 1535 1537 1539 1541 1544 1546 1548 1550 -
597. 1552 1554 1557 1559 1561 1563 1565 1567 1570 1572 1574 1576 1578 1580 1583 -
598. 1585 1587 1589 1591 1593 1596 1598 1610 TO 1613 1617 TO 1620 1624 TO 1627 -
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599. 1631 TO 1634 1638 TO 1641 1645 TO 1648 1654 1656 1658 1660 1662 1664 1667 -
600. 1669 1671 1673 1675 1677 1680 1682 1684 1686 1688 1690 1693 1695 1697 1699 -
601. 1701 1703 1706 1708 1710 1712 1714 1716 1719 1721 1723 1725 1727 1729 1732 -
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602. 1734 1736 1738 1740 1742 1745 1747 1749 1751 1753 1755 1758 1760 -
603. 1808 TO 1811 1815 TO 1818 1822 TO 1825 1829 END MY MZ
604. 1830 TO 1832 1836 TO 1839 1843 TO 1846 1852 1854 1856 1858 1860 1862 1865 -
605. 1867 1869 1871 1873 1875 1878 1880 1882 1884 1886 1888 1891 1893 1895 1897 -
606. 1899 1901 1904 1906 1908 1910 1912 1914 1917 1919 1921 1923 1925 1927 1930 -
607. 1932 1934 1936 1938 1940 1943 1945 1947 1949 1951 1953 1956 1958 -
608. 2006 TO 2009 2013 TO 2016 2020 TO 2023 2027 TO 2030 2034 TO 2037 -
609. 2041 TO 2044 2050 2052 2054 2056 2058 2060 2063 2065 2067 2069 2071 2073 -
610. 2076 2078 2080 2082 2084 2086 2089 2091 2093 2095 2097 2099 2102 2104 2106 -
611. 2108 2110 2112 2115 2117 2119 2121 2123 2125 2128 2130 2132 2134 2136 2138 -
612. 2141 2143 2145 2147 2149 2151 2154 2156 END MY MZ
613. 1368 1370 1372 1374 1600 1602 1604 1606 1762 1764 1766 1768 1960 1962 1964 -
614. 1966 2158 2160 2162 2164 END MY MZ
615. SLAVE FX FZ MX MZ MASTER 17 JOINT 6 7 24 37 38 48 54 66 67 77 83 95 96 106 -
616. 112 124 125 135 141 153 154 164 170 182 183 193 199
617. SLAVE FX FZ MX MZ MASTER 18 JOINT 8 TO 13 25 TO 27 39 TO 44 49 TO 51 -
618. 55 TO 57 68 TO 73 78 TO 80 84 TO 86 97 TO 102 107 TO 109 113 TO 115 -
619. 126 TO 131 136 TO 138 142 TO 144 155 TO 160 165 TO 167 171 TO 173 -
620. 184 TO 189 194 TO 196 200 TO 202 820 821 823 TO 847 911 912 914 TO 938
621. **SLAVE FX FZ MX MZ MASTER 114 JOINT 10 11 19 26 41 42 50 56 70 71 79 85 99 -
622. **100 108 114 128 129 137 143 157 158 166 172 186 187 195 201 664 TO 670 672 -
623. **673 TO 678
624. *SLAVE FX FZ MX MZ MASTER 115 JOINT 12 13 20 27 43 44 51 57 72 73 80 86 101 -
625. *102 109 115 130 131 138 144 159 160 167 173 188 189 196 202 579 TO 585 587 -
626. *588 TO 593
627. *SLAVE FX FZ MX MZ MASTER 116 JOINT 14 15 21 28 45 46 52 58 74 75 81 87 103 -
628. *104 110 116 132 133 139 145 161 162 168 174 190 191 197 203
629. DEFINE 1893 LOAD
630. ZONE 0.24 RF 4 I 1 SS 1 ST 2 DM 0.02
631. JOINT WEIGHT
632. 6 WEIGHT 72.658
633. 7 WEIGHT 72.654
634. 8 10 12 820 911 WEIGHT 86.926
635. 9 11 13 821 912 WEIGHT 86.942
636. 10 12 820 911 WEIGHT 44.8
637. 11 13 821 912 WEIGHT 44.74
638. 12 820 911 WEIGHT 85.997
639. 13 821 912 WEIGHT 85.912
640. 17 WEIGHT 78.654
641. 18 TO 20 822 913 WEIGHT 95.356
642. 19 20 822 913 WEIGHT 52.831
643. 20 822 913 WEIGHT 102.888
644. 24 WEIGHT 78.661
645. 25 TO 27 823 914 WEIGHT 95.315
646. 26 27 823 914 WEIGHT 52.949
647. 27 823 914 WEIGHT 102.934
648. 37 WEIGHT 85.94
649. 38 WEIGHT 85.936
650. 39 41 43 824 915 WEIGHT 103.839
651. 40 42 44 825 916 WEIGHT 103.859
652. 41 43 824 915 WEIGHT 53.774
653. 42 44 825 916 WEIGHT 53.702
654. 43 824 915 WEIGHT 103.321

655. 44 825 916 WEIGHT 103.199
656. 48 WEIGHT 92.5
657. 49 TO 51 826 917 WEIGHT 113.409
658. 50 51 826 917 WEIGHT 62.602
659. 51 826 917 WEIGHT 122.666
660. 54 WEIGHT 92.509
661. 55 TO 57 827 918 WEIGHT 113.358
662. 56 57 827 918 WEIGHT 62.745

663. 57 827 918 WEIGHT 122.687
664. 66 WEIGHT 85.94
665. 67 WEIGHT 85.936
666. 68 70 72 828 919 WEIGHT 103.839
667. 69 71 73 829 920 WEIGHT 103.859
668. 70 72 828 919 WEIGHT 53.774
669. 71 73 829 920 WEIGHT 53.702
670. 72 828 919 WEIGHT 103.321
671. 73 829 920 WEIGHT 103.199
672. 77 WEIGHT 92.5
673. 78 TO 80 830 921 WEIGHT 113.409
674. 79 80 830 921 WEIGHT 62.602
675. 80 830 921 WEIGHT 122.665
676. 83 WEIGHT 92.509
677. 84 TO 86 831 922 WEIGHT 113.358
678. 85 86 831 922 WEIGHT 62.745
679. 86 831 922 WEIGHT 122.687
680. 95 WEIGHT 48.89
681. 96 WEIGHT 49.743
682. 97 99 101 832 923 WEIGHT 54.891
683. 98 100 102 833 924 WEIGHT 55.756
684. 99 101 832 923 WEIGHT 28.573
685. 100 102 833 924 WEIGHT 29.265
686. 101 832 923 WEIGHT 53.071
687. 102 833 924 WEIGHT 53.79
688. 106 WEIGHT 50.961
689. 107 TO 109 834 925 WEIGHT 59.252
690. 108 109 834 925 WEIGHT 33.288
691. 109 834 925 WEIGHT 63.334
692. 112 WEIGHT 51.32
693. 113 TO 115 835 926 WEIGHT 59.581
694. 114 115 835 926 WEIGHT 34.085
695. 115 835 926 WEIGHT 64.153
696. 124 WEIGHT 72.746
697. 125 WEIGHT 72.742
698. 126 128 130 836 927 WEIGHT 87.38
699. 127 129 131 837 928 WEIGHT 87.396
700. 128 130 836 927 WEIGHT 45.661
701. 129 131 837 928 WEIGHT 45.601
702. 130 836 927 WEIGHT 86.858
703. 131 837 928 WEIGHT 86.773
704. 135 WEIGHT 78.665
705. 136 TO 138 838 929 WEIGHT 95.366
706. 137 138 838 929 WEIGHT 52.831
707. 138 838 929 WEIGHT 102.888
708. 141 WEIGHT 78.672
709. 142 TO 144 839 930 WEIGHT 95.324
710. 143 144 839 930 WEIGHT 52.949

711. 144 839 930 WEIGHT 102.934
712. 153 WEIGHT 84.628
713. 154 WEIGHT 84.624
714. 155 157 159 840 931 WEIGHT 103.395
715. 156 158 160 841 932 WEIGHT 103.415
716. 157 159 840 931 WEIGHT 53.774
717. 158 160 841 932 WEIGHT 53.702
718. 159 840 931 WEIGHT 103.321
719. 160 841 932 WEIGHT 103.199
720. 164 WEIGHT 92.513
721. 165 TO 167 842 933 WEIGHT 113.42
722. 166 167 842 933 WEIGHT 62.602
723. 167 842 933 WEIGHT 122.665

724. 170 WEIGHT 92.522
725. 171 TO 173 843 934 WEIGHT 113.369
726. 172 173 843 934 WEIGHT 62.745
727. 173 843 934 WEIGHT 122.687
728. 182 WEIGHT 48.439
729. 183 WEIGHT 47.582
730. 184 186 188 844 935 WEIGHT 55.307
731. 185 187 189 845 936 WEIGHT 54.462
732. 186 188 844 935 WEIGHT 29.301
733. 187 189 845 936 WEIGHT 28.538
734. 188 844 935 WEIGHT 53.8
735. 189 845 936 WEIGHT 53.062
736. 193 WEIGHT 51.322
737. 194 TO 196 846 937 WEIGHT 59.611
738. 195 196 846 937 WEIGHT 34.016
739. 196 846 937 WEIGHT 64.059
740. 199 WEIGHT 50.972
741. 200 TO 202 847 938 WEIGHT 59.233
742. 201 202 847 938 WEIGHT 33.357
743. 202 847 938 WEIGHT 63.428
744. LOAD 1 LOADTYPE NONE TITLE EQ+X
745. 1893 LOAD X 1
746. LOAD 2 LOADTYPE NONE TITLE EQ-X
747. 1893 LOAD X -1.
748. LOAD 3 LOADTYPE NONE TITLE EQ+Z
749. 1893 LOAD Z 1
750. LOAD 4 LOADTYPE NONE TITLE EQ-Z
751. 1893 LOAD X -1.
752. LOAD 5 LOADTYPE NONE TITLE DEAD LOAD
753. SELFWEIGHT Y -1
754. MEMBER LOAD

755. **********0.8MM THICK DECKING SHEET WEIGHT 8.1 KG/M2***
756. ******WEIGHT = 8.1 KG/M2 APPROX***
757. *_JOIST_5.0D UNI GY -4.7
758. ******0.08 X 1.2 = 0.1
759. _JOIST_8.5D UNI GY -0.12
760. ******0.08 X 1.5 = 0.12
761. _JOIST_6.0D UNI GY -0.12
762. ******0.08 X 1.5= 0.12
763. _JOIST_2.5D UNI GY -0.12
764. **********6MM THICK CHEQUERED PLATE OF WEIGHT 53.2 KG/M2***
765. ******WEIGHT = 55 KG/M2 APPROX***
766. ******0.55 X 0.83 = 0.5
767. ******0.55 X 0.75 = 0.42
768. ******0.55 X 0.6 = 0.34
769. LOAD 6 LOADTYPE NONE TITLE LIVE LOAD
770. MEMBER LOAD
771. **********
772. ******8.50 X 1.2 = 10.2
773. _JOIST_8.5D UNI GY -10.2
774. ******6.00 X 1.5 = 9.0
775. _JOIST_6.0D UNI GY -9
776. ******2.50 X 1.5= 3.75
777. _JOIST_2.5D UNI GY -3.75
778. ******2.50 X 0.83 = 2.1
779. ******3.0 X 0.75 = 2.25
780. ******8.50 X 0.6 = 5.1
781. ********************************
782. ********************************
783. LOAD 7 LOADTYPE NONE TITLE WL1 (+0)
784. MEMBER LOAD

785. _RTWALL UNI GX -3.94
786. _LTWALL UNI GX -4.72
787. _FRONT UNI GZ 6.85
788. _BACK UNI GZ -6.85
789. LOAD 8 LOADTYPE NONE TITLE WL2 (-0)
790. MEMBER LOAD
791. _RTWALL UNI GX -7.09
792. _LTWALL UNI GX -1.57
793. _FRONT UNI GZ 3.81
794. _BACK UNI GZ -3.81
795. LOAD 9 LOADTYPE NONE TITLE WL3 (+90)
796. MEMBER LOAD
797. _RTWALL UNI GX 5.51
798. _LTWALL UNI GX -5.51
799. _FRONT UNI GZ -4.57
800. _BACK UNI GZ -2.28
801. LOAD 10 LOADTYPE NONE TITLE WL4 (-90)
802. MEMBER LOAD
803. _RTWALL UNI GX 2.36
804. _LTWALL UNI GX -2.36
805. _FRONT UNI GZ -7.61
806. _BACK UNI GZ 0.76
807. LOAD 11 LOADTYPE NONE TITLE WL5 (+180)
808. MEMBER LOAD
809. _RTWALL UNI GX 4.72
810. _LTWALL UNI GX 3.94

811. _FRONT UNI GZ 6.85
812. _BACK UNI GZ -6.85
813. LOAD 12 LOADTYPE NONE TITLE WL6 (-180)
814. MEMBER LOAD
815. _RTWALL UNI GX 1.57
816. _LTWALL UNI GX 7.09
817. _FRONT UNI GZ 3.81
818. _BACK UNI GZ -3.81
819. LOAD 13 LOADTYPE NONE TITLE WL7 (+270)
820. MEMBER LOAD
821. _RTWALL UNI GX 5.51
822. _LTWALL UNI GX -5.51
823. _FRONT UNI GZ 2.28
824. _BACK UNI GZ 4.57
825. LOAD 14 LOADTYPE NONE TITLE WL8 (-270)
826. MEMBER LOAD
827. _RTWALL UNI GX 2.36
828. _LTWALL UNI GX -2.36
829. _FRONT UNI GZ -0.76
830. _BACK UNI GZ 7.61
831. **********
832. **********B) IS800-2007 LOAD COMBINATION FOR STRENGTH**********
833. **********
834. LOAD COMB 101 1.5 DL1+1.5 LL1
835. 5 1.5 6 1.5
836. LOAD COMB 102 1.5 DL1+1.5 WL1
837. 5 1.5 7 1.5
838. LOAD COMB 103 1.5 DL1+1.5 WL2
839. 5 1.5 8 1.5
840. LOAD COMB 104 1.5 DL1+1.5 WL3
841. 5 1.5 9 1.5
842. LOAD COMB 105 1.5 DL1+1.5 WL4
843. 5 1.5 10 1.5
844. LOAD COMB 106 1.5 DL1+1.5 WL5
845. 5 1.5 11 1.5

846. LOAD COMB 107 1.5 DL1+1.5 WL6
847. 5 1.5 12 1.5
848. LOAD COMB 108 1.5 DL1+1.5 WL7
849. 5 1.5 13 1.5
850. LOAD COMB 109 1.5 DL1+1.5 WL8
851. 5 1.5 14 1.5
852. LOAD COMB 110 0.9 DL1+1.5 WL1
853. 5 0.9 7 1.5
854. LOAD COMB 111 0.9 DL1+1.5 WL2
855. 5 0.9 8 1.5
856. LOAD COMB 112 0.9 DL1+1.5 WL3
857. 5 0.9 9 1.5
858. LOAD COMB 113 0.9 DL1+1.5 WL4
859. 5 0.9 10 1.5
860. LOAD COMB 114 0.9 DL1+1.5 WL5
861. 5 0.9 11 1.5
862. LOAD COMB 115 0.9 DL1+1.5 WL6
863. 5 0.9 12 1.5
864. LOAD COMB 116 0.9 DL1+1.5 WL7
865. 5 0.9 13 1.5
866. LOAD COMB 117 0.9 DL1+1.5 WL8

867. 5 0.9 14 1.5
868. LOAD COMB 118 1.5 SL1+1.5 DL1
869. 1 1.5 5 1.5
870. LOAD COMB 119 1.5 SL2+1.5 DL1
871. 2 1.5 5 1.5
872. LOAD COMB 120 1.5 SL3+1.5 DL1
873. 3 1.5 5 1.5
874. LOAD COMB 121 1.5 SL4+1.5 DL1
875. 4 1.5 5 1.5
876. LOAD COMB 122 1.5 SL1+0.9 DL1
877. 1 1.5 5 0.9
878. LOAD COMB 123 1.5 SL2+0.9 DL1
879. 2 1.5 5 0.9
880. LOAD COMB 124 1.5 SL3+0.9 DL1
881. 3 1.5 5 0.9
882. LOAD COMB 125 1.5 SL4+0.9 DL1
883. 4 1.5 5 0.9
884. LOAD COMB 126 1.2 DL1+1.2 LL1+1.2 WL1
885. 5 1.2 6 1.2 7 1.2
886. LOAD COMB 127 1.2 DL1+1.2 LL1+1.2 WL2
887. 5 1.2 6 1.2 8 1.2
888. LOAD COMB 128 1.2 DL1+1.2 LL1+1.2 WL3
889. 5 1.2 6 1.2 9 1.2
890. LOAD COMB 129 1.2 DL1+1.2 LL1+1.2 WL4
891. 5 1.2 6 1.2 10 1.2
892. LOAD COMB 130 1.2 DL1+1.2 LL1+1.2 WL5
893. 5 1.2 6 1.2 11 1.2
894. LOAD COMB 131 1.2 DL1+1.2 LL1+1.2 WL6
895. 5 1.2 6 1.2 12 1.2
896. LOAD COMB 132 1.2 DL1+1.2 LL1+1.2 WL7
897. 5 1.2 6 1.2 13 1.2
898. LOAD COMB 133 1.2 DL1+1.2 LL1+1.2 WL8
899. 5 1.2 6 1.2 14 1.2
900. LOAD COMB 134 1.2 DL1+1.2 LL1+0.6 WL1
901. 5 1.2 6 1.2 7 0.6
902. LOAD COMB 135 1.2 DL1+1.2 LL1+0.6 WL2
903. 5 1.2 6 1.2 8 0.6
904. LOAD COMB 136 1.2 DL1+1.2 LL1+0.6 WL3
905. 5 1.2 6 1.2 9 0.6
906. LOAD COMB 137 1.2 DL1+1.2 LL1+0.6 WL4

907. 5 1.2 6 1.2 10 0.6
908. LOAD COMB 138 1.2 DL1+1.2 LL1+0.6 WL5
909. 5 1.2 6 1.2 11 0.6
910. LOAD COMB 139 1.2 DL1+1.2 LL1+0.6 WL6
911. 5 1.2 6 1.2 12 0.6
912. LOAD COMB 140 1.2 DL1+1.2 LL1+0.6 WL7
913. 5 1.2 6 1.2 13 0.6
914. LOAD COMB 141 1.2 DL1+1.2 LL1+0.6 WL8
915. 5 1.2 6 1.2 14 0.6
916. LOAD COMB 142 1.2 SL1+1.2 DL1+1.2 LL1
917. 1 1.2 5 1.2 6 1.2
918. LOAD COMB 143 1.2 SL2+1.2 DL1+1.2 LL1
919. 2 1.2 5 1.2 6 1.2
920. LOAD COMB 144 1.2 SL3+1.2 DL1+1.2 LL1
921. 3 1.2 5 1.2 6 1.2
922. LOAD COMB 145 1.2 SL4+1.2 DL1+1.2 LL1

923. 4 1.2 5 1.2 6 1.2
924. LOAD COMB 146 0.6 SL1+1.2 DL1+1.2 LL1
925. 1 0.6 5 1.2 6 1.2
926. LOAD COMB 147 0.6 SL2+1.2 DL1+1.2 LL1
927. 2 0.6 5 1.2 6 1.2
928. LOAD COMB 148 0.6 SL3+1.2 DL1+1.2 LL1
929. 3 0.6 5 1.2 6 1.2
930. LOAD COMB 149 0.6 SL4+1.2 DL1+1.2 LL1
931. 4 0.6 5 1.2 6 1.2
932. **********
933. **********
934. **********B) IS800-2007 LOAD COMBINATION FOR SERVICEABILITY******
935. **********
936. LOAD COMB 201 1 DL1+1 LL1
937. 5 1.0 6 1.0
938. LOAD COMB 202 1 DL1+1 WL1
939. 5 1.0 7 1.0
940. LOAD COMB 203 1 DL1+1 WL2
941. 5 1.0 8 1.0
942. LOAD COMB 204 1 DL1+1 WL3
943. 5 1.0 9 1.0
944. LOAD COMB 205 1 DL1+1 WL4
945. 5 1.0 10 1.0
946. LOAD COMB 206 1 DL1+1 WL5
947. 5 1.0 11 1.0
948. LOAD COMB 207 1 DL1+1 WL6
949. 5 1.0 12 1.0
950. LOAD COMB 208 1 DL1+1 WL7
951. 5 1.0 13 1.0
952. LOAD COMB 209 1 DL1+1 WL8
953. 5 1.0 14 1.0
954. LOAD COMB 210 1 SL1+1 DL1
955. 1 1.0 5 1.0
956. LOAD COMB 211 1 SL2+1 DL1
957. 2 1.0 5 1.0
958. LOAD COMB 212 1 SL3+1 DL1
959. 3 1.0 5 1.0
960. LOAD COMB 213 1 SL4+1 DL1
961. 4 1.0 5 1.0
962. LOAD COMB 214 1 DL1+0.8 LL1+0.8 WL1
963. 5 1.0 6 0.8 7 0.8
964. LOAD COMB 215 1 DL1+0.8 LL1+0.8 WL2
965. 5 1.0 6 0.8 8 0.8
966. LOAD COMB 216 1 DL1+0.8 LL1+0.8 WL3
967. 5 1.0 6 0.8 9 0.8

968. LOAD COMB 217 1 DL1+0.8 LL1+0.8 WL4
969. 5 1.0 6 0.8 10 0.8
970. LOAD COMB 218 1 DL1+0.8 LL1+0.8 WL5
971. 5 1.0 6 0.8 11 0.8
972. LOAD COMB 219 1 DL1+0.8 LL1+0.8 WL6
973. 5 1.0 6 0.8 12 0.8
974. LOAD COMB 220 1 DL1+0.8 LL1+0.8 WL7
975. 5 1.0 6 0.8 13 0.8
976. LOAD COMB 221 1 DL1+0.8 LL1+0.8 WL8
977. 5 1.0 6 0.8 14 0.8
978. LOAD COMB 222 0.8 SL1+1 DL1+0.8 LL1

979. 1 0.8 5 1.0 6 0.8
980. LOAD COMB 223 0.8 SL2+1 DL1+0.8 LL1
981. 2 0.8 5 1.0 6 0.8
982. LOAD COMB 224 0.8 SL3+1 DL1+0.8 LL1
983. 3 0.8 5 1.0 6 0.8
984. LOAD COMB 225 0.8 SL4+1 DL1+0.8 LL1
985. 4 0.8 5 1.0 6 0.8
986. **********
987. **********
988. PERFORM ANALYSIS

P R O B L E M S T A T I S T I C S

NUMBER OF JOINTS 560 NUMBER OF MEMBERS 1162
NUMBER OF PLATES 0 NUMBER OF SOLIDS 0
NUMBER OF SURFACES 0 NUMBER OF SUPPORTS 28

SOLVER USED IS THE OUT-OF-CORE BASIC SOLVER

ORIGINAL/FINAL BAND-WIDTH= 370/ 46/ 1335 DOF
TOTAL PRIMARY LOAD CASES = 14, TOTAL DEGREES OF FREEDOM = 2544
TOTAL LOAD COMBINATION CASES = 74 SO FAR.
SIZE OF STIFFNESS MATRIX = 3397 DOUBLE KILO-WORDS
REQRD/AVAIL. DISK SPACE = 51.4/ 91181.2 MB

**WARNING: IF THIS UBC/IBC ANALYSIS HAS TENSION/COMPRESSION
OR REPEAT LOAD OR RE-ANALYSIS OR SELECT OPTIMIZE, THEN EACH
UBC/IBC CASE SHOULD BE FOLLOWED BY PERFORM ANALYSIS & CHANGE.

****
* *
* TIME PERIOD FOR X 1893 LOADING = 0.97870 SEC *
* SA/G PER 1893= 1.430, LOAD FACTOR= 1.000 *
* VB PER 1893= 0.0429 X 27635.38= 1185.95 KN *
* *
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*                                 *
* TIME PERIOD FOR X 1893 LOADING =    0.97870 SEC     *
* SA/G PER 1893=    1.430, LOAD FACTOR=-1.000         *
* VB PER 1893=    0.0429 X    27635.38=   -1185.95 KN   *
*                                 *
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*                                 *
* TIME PERIOD FOR Z 1893 LOADING =    0.97870 SEC     *
* SA/G PER 1893=    1.430, LOAD FACTOR= 1.000         *
* VB PER 1893=    0.0429 X    27635.38=    1185.95 KN   *
*                                 *
*****************************************************



*****************************************************
*                                 *
* TIME PERIOD FOR X 1893 LOADING =    0.97870 SEC     *
* SA/G PER 1893=    1.430, LOAD FACTOR=-1.000         *
* VB PER 1893=    0.0429 X    27635.38=   -1185.95 KN   *
*                                 *
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 989. LOAD LIST 101 TO 149
 990. PARAMETER 1
 991. CODE IS800 LSD
 992. FYLD 345000 MEMB 1 2 5 TO 10 15 16 20 TO 23 25 27 31 TO 34 36 38 47 TO 50 -
 993. 57 58 62 63 69 70 73 TO 78 83 84 88 TO 91 93 95 99 TO 102 104 106 -
 994. 115 TO 118 125 126 130 131 137 138 141 TO 146 151 152 156 TO 159 161 163 -
 995. 167 TO 170 172 174 183 TO 186 193 194 198 199 205 206 209 TO 214 219 220 -
 996. 224 TO 227 229 231 235 TO 238 240 242 251 TO 254 261 262 266 267 273 274 -
 997. 277 TO 282 287 288 292 TO 295 297 299 303 TO 306 308 310 319 TO 322 329 330 -
 998. 334 335 341 342 345 TO 350 355 356 360 TO 363 365 367 371 TO 374 376 378 -
 999. 387 TO 390 397 398 402 403 409 410 413 TO 418 423 424 428 TO 431 433 435 -
1000. 439 TO 442 444 446 552 TO 564 567 TO 579 582 TO 594 597 TO 609 614 TO 626 -
1001. 629 TO 654 657 TO 695 698 TO 710 713 TO 725 728 TO 753 1349 TO 1374 1445 -
1002. 1446 TO 1796 1805 TO 1994 2003 TO 2164
1003. FYLD 250000 MEMB 1401 TO 1408 1413 TO 1420 1425 TO 1432 1437 TO 1444 1797 -
1004. 1798 TO 1804 1995 TO 2002
1005. LAT 0 MEMB 1 2 5 TO 10 21 23 25 27 32 34 36 38 69 70 73 TO 78 89 91 93 95 -
1006. 100 102 104 106 137 138 141 TO 146 157 159 161 163 168 170 172 174 205 206 -
1007. 209 TO 214 225 227 229 231 236 238 240 242 273 274 277 TO 282 293 295 297 -
1008. 299 304 306 308 310 341 342 345 TO 350 361 363 365 367 372 374 376 378 409 -
1009. 410 413 TO 418 429 431 433 435 440 442 444 446 1769 TO 1796 1967 TO 1994
1010. LAT 1 MEMB 15 16 20 22 31 33 47 TO 50 57 58 62 63 83 84 88 90 99 101 -
1011. 115 TO 118 125 126 130 131 151 152 156 158 167 169 183 TO 186 193 194 198 -
1012. 199 219 220 224 226 235 237 251 TO 254 261 262 266 267 287 288 292 294 303 -
1013. 305 319 TO 322 329 330 334 335 355 356 360 362 371 373 387 TO 390 397 398 -
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1014. 402 403 423 424 428 430 439 441 552 TO 564 567 TO 579 582 TO 594 597 TO 609 -
1015. 614 TO 626 629 TO 654 657 TO 695 698 TO 710 713 TO 725 728 TO 753 -
1016. 1349 TO 1374 1445 TO 1768 1805 TO 1966 2003 TO 2164
1017. LX 0.1 MEMB 47 TO 50 57 58 62 63 115 TO 118 125 126 130 131 183 TO 186 193 -
1018. 194 198 199 251 TO 254 261 262 266 267 319 TO 322 329 330 334 335 -
1019. 387 TO 390 397 398 402 403 554 556 558 560 562 564 569 571 573 575 577 579 -
1020. 584 586 588 590 592 594 599 601 603 605 607 609 616 618 620 622 624 626 631 -
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1021. 633 635 637 639 641 644 646 648 650 652 654 659 661 663 665 667 669 672 674 -
1022. 676 678 680 682 685 687 689 691 693 695 700 702 704 706 708 710 715 717 719 -
1023. 721 723 725 730 732 734 736 738 740 743 745 747 749 751 753 1351 1353 1355 -
1024. 1357 1359 1361 1364 1366 1368 1370 1372 1374 1448 TO 1451 1455 TO 1458 1462 -
1025. 1463 TO 1465 1469 TO 1472 1476 TO 1479 1483 TO 1486 1492 1494 1496 1498 1500 -
1026. 1502 1505 1507 1509 1511 1513 1515 1518 1520 1522 1524 1526 1528 1531 1533 -
1027. 1535 1537 1539 1541 1544 1546 1548 1550 1552 1554 1557 1559 1561 1563 1565 -
1028. 1567 1570 1572 1574 1576 1578 1580 1583 1585 1587 1589 1591 1593 1596 1598 -
1029. 1600 1602 1604 1606 1610 TO 1613 1617 TO 1620 1624 TO 1627 1631 TO 1634 1638 -
1030. 1639 TO 1641 1645 TO 1648 1654 1656 1658 1660 1662 1664 1667 1669 1671 1673 -
1031. 1675 1677 1680 1682 1684 1686 1688 1690 1693 1695 1697 1699 1701 1703 1706 -
1032. 1708 1710 1712 1714 1716 1719 1721 1723 1725 1727 1729 1732 1734 1736 1738 -
1033. 1740 1742 1745 1747 1749 1751 1753 1755 1758 1760 1762 1764
1034. LX 0.1 MEMB 1766 1768 1808 TO 1811 1815 TO 1818 1822 TO 1825 1829 TO 1832 -
1035. 1836 TO 1839 1843 TO 1846 1852 1854 1856 1858 1860 1862 1865 1867 1869 1871 -
1036. 1873 1875 1878 1880 1882 1884 1886 1888 1891 1893 1895 1897 1899 1901 1904 -
1037. 1906 1908 1910 1912 1914 1917 1919 1921 1923 1925 1927 1930 1932 1934 1936 -
1038. 1938 1940 1943 1945 1947 1949 1951 1953 1956 1958 1960 1962 1964 1966 2006 -
1039. 2007 TO 2009 2013 TO 2016 2020 TO 2023 2027 TO 2030 2034 TO 2037 2041 TO 2044 -
1040. 2050 2052 2054 2056 2058 2060 2063 2065 2067 2069 2071 2073 2076 2078 2080 -
1041. 2082 2084 2086 2089 2091 2093 2095 2097 2099 2102 2104 2106 2108 2110 2112 -
1042. 2115 2117 2119 2121 2123 2125 2128 2130 2132 2134 2136 2138 2141 2143 2145 -
1043. 2147 2149 2151 2154 2156 2158 2160 2162 2164
1044. LY 0.1 MEMB 47 TO 50 57 58 62 63 115 TO 118 125 126 130 131 183 TO 186 193 -
1045. 194 198 199 251 TO 254 261 262 266 267 319 TO 322 329 330 334 335 -
1046. 387 TO 390 397 398 402 403 554 556 558 560 562 564 569 571 573 575 577 579 -
1047. 584 586 588 590 592 594 599 601 603 605 607 609 616 618 620 622 624 626 631 -
1048. 633 635 637 639 641 644 646 648 650 652 654 659 661 663 665 667 669 672 674 -
1049. 676 678 680 682 685 687 689 691 693 695 700 702 704 706 708 710 715 717 719 -
1050. 721 723 725 730 732 734 736 738 740 743 745 747 749 751 753 1351 1353 1355 -
1051. 1357 1359 1361 1364 1366 1368 1370 1372 1374 1448 TO 1451 1455 TO 1458 1462 -
1052. 1463 TO 1465 1469 TO 1472 1476 TO 1479 1483 TO 1486 1492 1494 1496 1498 1500 -
1053. 1502 1505 1507 1509 1511 1513 1515 1518 1520 1522 1524 1526 1528 1531 1533 -
1054. 1535 1537 1539 1541 1544 1546 1548 1550 1552 1554 1557 1559 1561 1563 1565 -
1055. 1567 1570 1572 1574 1576 1578 1580 1583 1585 1587 1589 1591 1593 1596 1598 -
1056. 1600 1602 1604 1606 1610 TO 1613 1617 TO 1620 1624 TO 1627 1631 TO 1634 1638 -
1057. 1639 TO 1641 1645 TO 1648 1654 1656 1658 1660 1662 1664 1667 1669 1671 1673 -
1058. 1675 1677 1680 1682 1684 1686 1688 1690 1693 1695 1697 1699 1701 1703 1706 -
1059. 1708 1710 1712 1714 1716 1719 1721 1723 1725 1727 1729 1732 1734 1736 1738 -
1060. 1740 1742 1745 1747 1749 1751 1753 1755 1758 1760 1762 1764
1061. LY 0.1 MEMB 1766 1768 1808 TO 1811 1815 TO 1818 1822 TO 1825 1829 TO 1832 -
1062. 1836 TO 1839 1843 TO 1846 1852 1854 1856 1858 1860 1862 1865 1867 1869 1871 -
1063. 1873 1875 1878 1880 1882 1884 1886 1888 1891 1893 1895 1897 1899 1901 1904 -
1064. 1906 1908 1910 1912 1914 1917 1919 1921 1923 1925 1927 1930 1932 1934 1936 -
1065. 1938 1940 1943 1945 1947 1949 1951 1953 1956 1958 1960 1962 1964 1966 2006 -
1066. 2007 TO 2009 2013 TO 2016 2020 TO 2023 2027 TO 2030 2034 TO 2037 2041 TO 2044 -
1067. 2050 2052 2054 2056 2058 2060 2063 2065 2067 2069 2071 2073 2076 2078 2080 -
1068. 2082 2084 2086 2089 2091 2093 2095 2097 2099 2102 2104 2106 2108 2110 2112 -
1069. 2115 2117 2119 2121 2123 2125 2128 2130 2132 2134 2136 2138 2141 2143 2145 -

1070. 2147 2149 2151 2154 2156 2158 2160 2162 2164
1071. MAIN 180 MEMB 1 2 5 TO 10 15 16 20 TO 23 25 27 31 TO 34 36 38 47 TO 50 57 -
1072. 58 62 63 69 70 73 TO 78 83 84 88 TO 91 93 95 99 TO 102 104 106 115 TO 118 -
1073. 125 126 130 131 137 138 141 TO 146 151 152 156 TO 159 161 163 167 TO 170 -
1074. 172 174 183 TO 186 193 194 198 199 205 206 209 TO 214 219 220 224 TO 227 -
1075. 229 231 235 TO 238 240 242 251 TO 254 261 262 266 267 273 274 277 TO 282 -
1076. 287 288 292 TO 295 297 299 303 TO 306 308 310 319 TO 322 329 330 334 335 -
1077. 341 342 345 TO 350 355 356 360 TO 363 365 367 371 TO 374 376 378 387 TO 390 -
1078. 397 398 402 403 409 410 413 TO 418 423 424 428 TO 431 433 435 439 TO 442 -
1079. 444 446 552 TO 564 567 TO 579 582 TO 594 597 TO 609 614 TO 626 629 TO 654 -
1080. 657 TO 695 698 TO 710 713 TO 725 728 TO 753 1349 TO 1374 1445 TO 1796 1805 -
1081. 1806 TO 1994 2003 TO 2164

1082. MAIN 350 MEMB 1401 TO 1408 1413 TO 1420 1425 TO 1432 1437 TO 1444 -
1083. 1797 TO 1804 1995 TO 2002
1084. RATIO 1 ALL
1085. CHECK CODE ALL

STAAD.PRO CODE CHECKING - IS-800 2007(LSD) (V2.0)
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|---|
| Member Number: 1 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.809 Critical Load Case: 126 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 2
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.810 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 5
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.651 Critical Load Case: 126 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 6
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.642 Critical Load Case: 130 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 7
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.653 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 8 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.629 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 9
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.490 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 10
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.471 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 15
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.623 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 16

| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.779 Critical Load Case: 143 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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| Member Number: 20 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.614 Critical Load Case: 102 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |

| Member Number: 21 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.879 Critical Load Case: 126 Location: 0.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

| Member Number: 22 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.491 Critical Load Case: 119 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

| Member Number: 23 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.699 Critical Load Case: 126 Location: 5.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

| Member Number: 25 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.773 Critical Load Case: 101 Location: 4.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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| Member Number: 27 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.676 Critical Load Case: 142 Location: 0.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

| Member Number: 31 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.654 Critical Load Case: 126 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |

| Member Number: 32 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.854 Critical Load Case: 130 Location: 0.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

| Member Number: 33 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.761 Critical Load Case: 143 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

| Member Number: 34 |
| Member Section: TAP ERED (INDIAN SECTIONS) |

| Status: PASS Ratio: 0.665 Critical Load Case: 131 Location: 5.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |
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STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 36 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.691 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 38
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.520 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 47
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 48
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 49
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
STAAD SPACE -- PAGE NO. 28

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 50 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 57
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 58
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 62
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 63
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00

| Critical Condition: Major Axis Bending (Sec. 8) |

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STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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| Member Number: 69 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.852 Critical Load Case: 127 Location: 0.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

| Member Number: 70 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.889 Critical Load Case: 130 Location: 0.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

| Member Number: 73 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.695 Critical Load Case: 126 Location: 5.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

| Member Number: 74 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.705 Critical Load Case: 130 Location: 5.00 |
| Critical Condition: Sec. 9.3.2.2 (Y) |

| Member Number: 75 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.732 Critical Load Case: 101 Location: 0.00 |
| Critical Condition: Compression |

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STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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| Member Number: 76 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.735 Critical Load Case: 101 Location: 0.00 |
| Critical Condition: Compression |

| Member Number: 77 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.544 Critical Load Case: 101 Location: 0.00 |
| Critical Condition: Compression |

| Member Number: 78 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.547 Critical Load Case: 101 Location: 0.00 |
| Critical Condition: Compression |

| Member Number: 83 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.672 Critical Load Case: 126 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |

| Member Number: 84 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.918 Critical Load Case: 101 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 88 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.661 Critical Load Case: 102 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 89
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.953 Critical Load Case: 127 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 90
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.456 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 91
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.765 Critical Load Case: 127 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 93
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.866 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 95 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.649 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 99
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.691 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 100
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.972 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 101
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.889 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 102
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.774 Critical Load Case: 130 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 104 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.869 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 106
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.651 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 115
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 116
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 117
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 118 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 125
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 126
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 130
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 131
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 137 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.831 Critical Load Case: 126 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 138
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.855 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 141
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.666 Critical Load Case: 127 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 142
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.691 Critical Load Case: 130 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 143
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.856 Critical Load Case: 144 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 144 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.859 Critical Load Case: 144 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 145
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.581 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 146
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.583 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 151
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.674 Critical Load Case: 127 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 152
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.924 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 156 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.671 Critical Load Case: 102 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 157
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.945 Critical Load Case: 127 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 158
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.456 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 159
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.757 Critical Load Case: 127 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 161
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.860 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 163 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.644 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 167
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.677 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 168
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.979 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 169
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.883 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 170
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.781 Critical Load Case: 130 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)

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|---|
| Member Number: 172 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.862 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 174
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.646 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 183
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 184
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 185
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 186 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 193
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 194
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 198
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 199
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 205 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.653 Critical Load Case: 127 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 206
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.707 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 209
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.514 Critical Load Case: 127 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 210
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.553 Critical Load Case: 130 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 211
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.394 Critical Load Case: 143 Location: 0.33
Critical Condition: Compression

|---|
| Member Number: 212 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.396 Critical Load Case: 142 Location: 0.33 |
Critical Condition: Compression
Member Number: 213
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 214
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 219
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.533 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 220
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.536 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 224 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.709 Critical Load Case: 102 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 225
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.702 Critical Load Case: 127 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 226
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.484 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 227
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.543 Critical Load Case: 127 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 229
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.444 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 231 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness
Member Number: 235
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.545 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 236
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.752 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 237
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.526 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 238
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.582 Critical Load Case: 130 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)

|---|

| Member Number: 240 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.447 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 242
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 251
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.346 Critical Load Case: 131 Location: 2.00
Critical Condition: Sec. 9.3.1.3
Member Number: 252
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.346 Critical Load Case: 127 Location: 2.00
Critical Condition: Sec. 9.3.1.3
Member Number: 253
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.357 Critical Load Case: 131 Location: 2.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 254 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.357 Critical Load Case: 127 Location: 2.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 261
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.320 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 262
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 266
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.320 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 267
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 273 |

| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 126 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 274
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.785 Critical Load Case: 131 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 277
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.648 Critical Load Case: 126 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 278
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.628 Critical Load Case: 130 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 279
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.800 Critical Load Case: 144 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)

|---|
| Member Number: 280 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 144 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 281
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.540 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 282
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.541 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 287
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.624 Critical Load Case: 127 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 288
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.780 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 292 |
| Member Section: TAP ERED (INDIAN SECTIONS) |

| Status: PASS Ratio: 0.649 Critical Load Case: 102 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 293
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.885 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 294
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.455 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 295
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.705 Critical Load Case: 126 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 297
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.726 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 299 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.545 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 303
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.655 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 304
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.876 Critical Load Case: 131 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 305
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.761 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 306
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.691 Critical Load Case: 131 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)

|---|
| Member Number: 308 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.729 Critical Load Case: 101 Location: 0.00 |

Critical Condition: Compression
Member Number: 310
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.546 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 319
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 320
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 321
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3

Member Number: 322
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 329
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 330
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 334
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 335
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

Member Number: 341
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.847 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)

|---|
| Member Number: 342 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.836 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 345
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.693 Critical Load Case: 126 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 346
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.659 Critical Load Case: 131 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 347
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.686 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 348 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.689 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 349
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.509 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 350
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.512 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 355
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.676 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 356
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.924 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 360 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.643 Critical Load Case: 102 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3

| Member Number: 361 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.971 Critical Load Case: 126 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 362
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.456 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 363
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.781 Critical Load Case: 126 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 365
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.859 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 367 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.644 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 371
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.704 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 372
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.947 Critical Load Case: 131 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 373
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.884 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 374
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.753 Critical Load Case: 131 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)

|---|
| Member Number: 376 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.862 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 378

| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.646 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Compression
Member Number: 387
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 388
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.779 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 389
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 390 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 397
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 398
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 402
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 403
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 409 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.694 Critical Load Case: 126 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 410
Member Section: TAP ERED (INDIAN SECTIONS)

| Status: PASS Ratio: 0.652 Critical Load Case: 131 Location: 0.00 |
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 413
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.551 Critical Load Case: 126 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 414
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.503 Critical Load Case: 131 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 415
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.392 Critical Load Case: 143 Location: 4.00
Critical Condition: Compression

|---|
| Member Number: 416 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.395 Critical Load Case: 142 Location: 4.00 |
Critical Condition: Compression
Member Number: 417
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 418
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 423
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.533 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 424
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.536 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 428 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.620 Critical Load Case: 102 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 429
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.743 Critical Load Case: 126 Location: 0.00

Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 430
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.451 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 431
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.580 Critical Load Case: 126 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 433
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.444 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression

Member Number: 435
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 439
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.622 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 440
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.701 Critical Load Case: 131 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 441
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.605 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 442
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.538 Critical Load Case: 131 Location: 5.00
Critical Condition: Sec. 9.3.2.2 (Y)

Member Number: 444
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.447 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 446
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness

|---|
| Member Number: 552 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.297 Critical Load Case: 106 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 553
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.302 Critical Load Case: 126 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 554
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 555 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.306 Critical Load Case: 106 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 556
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 557
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.279 Critical Load Case: 106 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 558
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 559
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.296 Critical Load Case: 106 Location: 0.00
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 560 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.320 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 561
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.304 Critical Load Case: 126 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

| Member Number: 562 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 563
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.291 Critical Load Case: 106 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 564
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 567 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.275 Critical Load Case: 130 Location: 1.50 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 568
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.288 Critical Load Case: 131 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 569
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 570
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.287 Critical Load Case: 130 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 571
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 572 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.250 Critical Load Case: 102 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 573
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 574

| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.274 Critical Load Case: 130 Location: 1.50 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 575
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.320 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 576
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.286 Critical Load Case: 131 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 577 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 578
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.254 Critical Load Case: 102 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 579
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 582
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.673 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 583
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.649 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 584 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 585
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.644 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 586
Member Section: TAP ERED (INDIAN SECTIONS)

| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 587
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.621 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 588
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 589 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.660 Critical Load Case: 106 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 590
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.202 Critical Load Case: 104 Location: 2.00
Critical Condition: Slenderness
Member Number: 591
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.672 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 592
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 593
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.710 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 594 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 597
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 126 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 598
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.290 Critical Load Case: 126 Location: 0.00

Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 599
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 600
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.286 Critical Load Case: 127 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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Member Number: 601
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 602
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.260 Critical Load Case: 106 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 603
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 604
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 127 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 605
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.320 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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Member Number: 606
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.287 Critical Load Case: 126 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 607
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 608
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.252 Critical Load Case: 106 Location: 0.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 609 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 614
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.296 Critical Load Case: 102 Location: 1.50
Critical Condition: Sec. 9.3.1.3

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 615 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.300 Critical Load Case: 131 Location: 1.50 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 616
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 617
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.305 Critical Load Case: 130 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 618
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 619
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.293 Critical Load Case: 102 Location: 1.50
Critical Condition: Sec. 9.3.1.3

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 620 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 621
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.300 Critical Load Case: 102 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 622
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.320 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

| Member Number: 623 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.307 Critical Load Case: 102 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 624
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 625 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.281 Critical Load Case: 102 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 626
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 629
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.698 Critical Load Case: 130 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 630
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.696 Critical Load Case: 130 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 631
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 632 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.704 Critical Load Case: 130 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 633
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 634
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.621 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 635

| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 636
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.650 Critical Load Case: 130 Location: 1.50
Critical Condition: Sec. 9.3.1.3

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 637 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.320 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 638
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.677 Critical Load Case: 130 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 639
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 640
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.544 Critical Load Case: 130 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 641
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 642 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.618 Critical Load Case: 130 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 643
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.669 Critical Load Case: 131 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 644
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 645
Member Section: TAP ERED (INDIAN SECTIONS)

| Status: PASS Ratio: 0.678 Critical Load Case: 130 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 646
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 647 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.534 Critical Load Case: 130 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 648
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 649
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.628 Critical Load Case: 130 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 650
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.320 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 651
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.674 Critical Load Case: 131 Location: 1.50
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 652 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 653
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.534 Critical Load Case: 130 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 654
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.719 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 657
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.476 Critical Load Case: 143 Location: 0.00

Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 658
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.540 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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Member Number: 659
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 660
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.545 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 661
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 662
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.354 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 663
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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Member Number: 664
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.478 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 665
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 666
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.544 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 667
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 668 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.353 Critical Load Case: 143 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 669 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 670
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.312 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 671
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.349 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 672
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 673
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.348 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 674 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 675
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.215 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 676
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 677
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.310 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3

| Member Number: 678 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |
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|---|
| Member Number: 679 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.347 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 680
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 681
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.233 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 682
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 683
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.494 Critical Load Case: 118 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
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|---|
| Member Number: 684 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.456 Critical Load Case: 118 Location: 1.50 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 685
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 686
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.456 Critical Load Case: 118 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 687
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 688

| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.452 Critical Load Case: 118 Location: 1.50 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
****

| Member Number: 689 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |

| Member Number: 690 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.455 Critical Load Case: 118 Location: 1.50 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

| Member Number: 691 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.202 Critical Load Case: 104 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 692 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.456 Critical Load Case: 118 Location: 1.50 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

| Member Number: 693 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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| Member Number: 694 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.486 Critical Load Case: 106 Location: 1.50 |
| Critical Condition: Sec. 9.3.1.3 |

| Member Number: 695 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |

| Member Number: 698 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.459 Critical Load Case: 143 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

| Member Number: 699 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.517 Critical Load Case: 143 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

| Member Number: 700 |
| Member Section: TAP ERED (INDIAN SECTIONS) |

| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |
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STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 701 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.512 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 702
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 703
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.343 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 704
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 705
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.459 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
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STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 706 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 707
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.512 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 708
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 709
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.343 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 710
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00

| Critical Condition: Major Axis Bending (Sec. 8) |
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|---|
| Member Number: 713 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.313 Critical Load Case: 126 Location: 1.20 |
Critical Condition: Sec. 9.3.1.3
Member Number: 714
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.351 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 715
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 716
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.348 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 717
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
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|---|
| Member Number: 718 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.234 Critical Load Case: 126 Location: 1.20 |
Critical Condition: Sec. 9.3.1.3
Member Number: 719
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 720
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.312 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 721
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 722
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.350 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 723 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 724
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.217 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 725
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 728
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.467 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 729
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.522 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 730 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 731
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.517 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 732
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 733
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.349 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 734
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 735 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.464 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 736
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 737
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.518 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 738
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 739
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.349 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 740 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 741
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.476 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 742
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.545 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 743
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 744
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.550 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 745 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 746
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.359 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 747
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 748
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.483 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 749
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 750 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.549 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 751
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 752
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.359 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 753
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1349
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.791 Critical Load Case: 130 Location: 1.20
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1350 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.896 Critical Load Case: 101 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1351
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1352
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.890 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1353
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1354
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.612 Critical Load Case: 130 Location: 1.20
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1355 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1356
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.767 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1357
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1358
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.891 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1359
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1360 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.531 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1361
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1362
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.778 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1363
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.925 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1364
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1365 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.931 Critical Load Case: 101 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1366
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1367
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.542 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1368
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1369
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.786 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1370 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1371
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.930 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1372
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1373
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.542 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1374
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1401 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.457 Critical Load Case: 129 Location: 0.00 |
Critical Condition: Compression
Member Number: 1402
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.750 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1403
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.747 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1404
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.389 Critical Load Case: 129 Location: 0.00
Critical Condition: Compression
Member Number: 1405
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.712 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 1406 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.382 Critical Load Case: 124 Location: 7.21 |
Critical Condition: Tension
Member Number: 1407
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.484 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1408
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 1413
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.767 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1414
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.488 Critical Load Case: 129 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 1415 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.749 Critical Load Case: 144 Location: 0.00 |
Critical Condition: Compression
Member Number: 1416
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.429 Critical Load Case: 129 Location: 0.00
Critical Condition: Compression
Member Number: 1417
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.707 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1418
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.382 Critical Load Case: 124 Location: 7.21
Critical Condition: Tension
Member Number: 1419
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.468 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression

|---|

| Member Number: 1420 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Slenderness
Member Number: 1425
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.768 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1426
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.448 Critical Load Case: 128 Location: 0.00
Critical Condition: Compression
Member Number: 1427
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.750 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1428
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.399 Critical Load Case: 128 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 1429 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.708 Critical Load Case: 144 Location: 0.00 |
Critical Condition: Compression
Member Number: 1430
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.382 Critical Load Case: 124 Location: 7.21
Critical Condition: Tension
Member Number: 1431
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.468 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1432
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 1437
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.751 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 1438 |

| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.416 Critical Load Case: 128 Location: 0.00 |
Critical Condition: Compression
Member Number: 1439
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.748 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1440
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.359 Critical Load Case: 128 Location: 0.00
Critical Condition: Compression
Member Number: 1441
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.713 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1442
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.382 Critical Load Case: 124 Location: 7.21
Critical Condition: Tension

|---|
| Member Number: 1443 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.485 Critical Load Case: 144 Location: 0.00 |
Critical Condition: Compression
Member Number: 1444
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 1445
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.809 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1446
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.331 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1447
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.758 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1448 |
| Member Section: TAP ERED (INDIAN SECTIONS) |

| Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1449
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1450
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1451
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1452
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.920 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1453 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.395 Critical Load Case: 119 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1454
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.888 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1455
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1456
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1457
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1458 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |

Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1459
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.929 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1460
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.402 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1461
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.878 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1462
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3

Member Number: 1463
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1464
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1465
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1466
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.534 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1467
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.446 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3

Member Number: 1468
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.524 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1469 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.357 Critical Load Case: 131 Location: 2.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1470
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.357 Critical Load Case: 127 Location: 2.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1471
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1472
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1473 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.779 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1474
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.394 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1475
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.758 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1476
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1477
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1478 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)

| Member Number: 1479 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1480
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.928 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1481
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.395 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1482
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.879 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1483 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1484
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1485
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1486
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1487
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.534 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1488 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.390 Critical Load Case: 119 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1489

| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.604 Critical Load Case: 126 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1490
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.460 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1491
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.539 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1492
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1493 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.547 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1494
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1495
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.352 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1496
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1497
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.477 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1498 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1499
Member Section: TAP ERED (AISC SECTIONS)

| Status: PASS Ratio: 0.546 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1500
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1501
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.351 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1502
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1503 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.341 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1504
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.351 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1505
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1506
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.349 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1507
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1508 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.217 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1509
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00

Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1510
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.312 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1511
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1512
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.347 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3

Member Number: 1513
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1514
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.234 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1515
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1516
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.366 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 1517
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.395 Critical Load Case: 118 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)

Member Number: 1518
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1519
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.395 Critical Load Case: 118 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1520 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1521
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.391 Critical Load Case: 118 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1522
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1523 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.394 Critical Load Case: 118 Location: 1.50 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1524
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.202 Critical Load Case: 104 Location: 2.00
Critical Condition: Slenderness
Member Number: 1525
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.401 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 1526
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1527
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.445 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1528 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1529
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.455 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

| Member Number: 1530 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.513 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1531
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1532
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.506 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1533 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1534
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.341 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1535
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1536
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.456 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1537
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1538 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.507 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1539
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1540

| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.341 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1541
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1542
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.311 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 1543 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.349 Critical Load Case: 126 Location: 1.20 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1544
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1545
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.346 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1546
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1547
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.233 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 1548 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1549
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.311 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1550
Member Section: TAP ERED (INDIAN SECTIONS)

| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1551
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.347 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1552
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1553 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.215 Critical Load Case: 126 Location: 1.20 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1554
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1555
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.379 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1556
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.519 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1557
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1558 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.511 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1559
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1560
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.346 Critical Load Case: 142 Location: 1.20

Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1561
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1562
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.462 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

Member Number: 1563
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1564
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.512 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1565
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1566
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.346 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1567
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

Member Number: 1568
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.469 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1569
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.545 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1570
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1571 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.552 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1572
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
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|---|
| Member Number: 1573 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.357 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1574
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1575
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.482 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1576
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1577
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.551 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
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|---|
| Member Number: 1578 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1579
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.357 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1580
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

| Member Number: 1581 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.707 Critical Load Case: 101 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1582
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.894 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1583 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1584
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.885 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1585
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1586
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.613 Critical Load Case: 130 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1587
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1588 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.764 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1589
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1590
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.886 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1591

| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1592
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.529 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1593 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1594
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.772 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1595
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.927 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1596
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1597
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.936 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1598 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1599
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.540 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1600
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1601
Member Section: TAP ERED (AISC SECTIONS)

| Status: PASS Ratio: 0.785 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1602
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

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| Member Number: 1603 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.935 Critical Load Case: 101 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1604
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1605
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.540 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1606
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1607
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.805 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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| Member Number: 1608 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.313 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1609
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.755 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1610
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1611
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00

Critical Condition: Sec. 9.3.1.3
Member Number: 1612
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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Member Number: 1613
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1614
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.922 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1615
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.361 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1616
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.886 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1617
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3

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Member Number: 1618
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1619
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1620
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1621
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.932 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1622 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.372 Critical Load Case: 102 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |
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|---|
| Member Number: 1623 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.875 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1624
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1625
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1626
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1627
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
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|---|
| Member Number: 1628 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.533 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1629
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.416 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1630
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.521 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1631
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.357 Critical Load Case: 131 Location: 2.00
Critical Condition: Sec. 9.3.1.3

| Member Number: 1632 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.357 Critical Load Case: 127 Location: 2.00 |
| Critical Condition: Sec. 9.3.1.3 |
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|---|
| Member Number: 1633 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1634
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1635
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.778 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1636
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.353 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1637
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.756 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
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|---|
| Member Number: 1638 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1639
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1640
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1641
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1642

| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.932 Critical Load Case: 101 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

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|---|
| Member Number: 1643 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.354 Critical Load Case: 119 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1644
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.875 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1645
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1646
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1647
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1648 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1649
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.533 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1650
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.349 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1651
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.600 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1652
Member Section: TAP ERED (AISC SECTIONS)

| Status: PASS Ratio: 0.462 Critical Load Case: 143 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |
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|---|
| Member Number: 1653 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.539 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1654
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1655
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.547 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1656
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1657
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.350 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
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|---|
| Member Number: 1658 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1659
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.476 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1660
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1661
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.548 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1662
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00

| Critical Condition: Major Axis Bending (Sec. 8) |
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| Member Number: 1663 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.350 Critical Load Case: 143 Location: 0.00 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |
| Member Number: 1664 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |
| Member Number: 1665 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.335 Critical Load Case: 130 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |
| Member Number: 1666 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.350 Critical Load Case: 130 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |
| Member Number: 1667 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |
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| Member Number: 1668 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.347 Critical Load Case: 130 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |
| Member Number: 1669 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |
| Member Number: 1670 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.216 Critical Load Case: 130 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |
| Member Number: 1671 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |
| Member Number: 1672 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.311 Critical Load Case: 130 Location: 0.00 |
| Critical Condition: Sec. 9.3.1.3 |

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Member Number: 1673	
Member Section: TAP ERED (INDIAN SECTIONS)	
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location:	2.00
Critical Condition: Major Axis Bending (Sec. 8)	
Member Number: 1674	
Member Section: TAP ERED (AISC SECTIONS)	
Status: PASS Ratio: 0.346 Critical Load Case: 130 Location:	0.00
Critical Condition: Sec. 9.3.1.3	
Member Number: 1675	
Member Section: TAP ERED (INDIAN SECTIONS)	
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location:	3.00
Critical Condition: Major Axis Bending (Sec. 8)	
Member Number: 1676	
Member Section: TAP ERED (AISC SECTIONS)	
Status: PASS Ratio: 0.233 Critical Load Case: 130 Location:	0.00
Critical Condition: Sec. 9.3.1.3	
Member Number: 1677	
Member Section: TAP ERED (INDIAN SECTIONS)	
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location:	3.00
Critical Condition: Major Axis Bending (Sec. 8)	

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Member Number: 1678	
Member Section: TAP ERED (AISC SECTIONS)	
Status: PASS Ratio: 0.356 Critical Load Case: 106 Location:	1.50
Critical Condition: Sec. 9.3.1.3	
Member Number: 1679	
Member Section: TAP ERED (AISC SECTIONS)	
Status: PASS Ratio: 0.355 Critical Load Case: 118 Location:	1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)	
Member Number: 1680	
Member Section: TAP ERED (INDIAN SECTIONS)	
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location:	3.00
Critical Condition: Major Axis Bending (Sec. 8)	
Member Number: 1681	
Member Section: TAP ERED (AISC SECTIONS)	
Status: PASS Ratio: 0.355 Critical Load Case: 118 Location:	1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)	
Member Number: 1682	
Member Section: TAP ERED (INDIAN SECTIONS)	
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location:	3.00
Critical Condition: Major Axis Bending (Sec. 8)	

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|---|
| Member Number: 1683 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.350 Critical Load Case: 118 Location: 1.50 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1684
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1685
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 1686
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.202 Critical Load Case: 104 Location: 2.00
Critical Condition: Slenderness
Member Number: 1687
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.372 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1688 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1689
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.416 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 1690
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1691
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.453 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1692
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.510 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1693 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1694
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.502 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1695
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1696
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.339 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1697
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1698 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.454 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1699
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1700
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.502 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1701
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1702
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.339 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1703 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1704
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.310 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1705
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.348 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1706
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1707
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.344 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1708 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1709
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.232 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1710
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1711
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.310 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1712
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1713 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.348 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1714
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1715
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.214 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1716
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1717
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.386 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1718 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.515 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1719
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1720
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.507 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1721
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1722
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.344 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1723 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1724
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.459 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1725
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1726
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.507 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1727
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
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|---|
| Member Number: 1728 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.344 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1729
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1730
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.465 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1731
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.544 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1732
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
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|---|
| Member Number: 1733 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.553 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1734
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1735
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.355 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1736
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1737
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.481 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1738 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1739
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.553 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1740
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1741
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.355 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1742
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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| Member Number: 1743 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.710 Critical Load Case: 101 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1744
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.892 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1745
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1746
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.882 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1747
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1748 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.609 Critical Load Case: 130 Location: 1.20 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1749
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1750
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.762 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1751
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1752
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.882 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1753 |

| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1754
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.527 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1755
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1756
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.767 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1757
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.928 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1758 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1759
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.939 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1760
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1761
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.538 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1762
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1763 |
| Member Section: TAP ERED (AISC SECTIONS) |

| Status: PASS Ratio: 0.783 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1764
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1765
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.939 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1766
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1767
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.538 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1768 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1769
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1770
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1771
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.539 Critical Load Case: 142 Location: 0.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 1772
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness

|---|
| Member Number: 1773 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |

Critical Condition: Slenderness
Member Number: 1774
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1775
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.433 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 1776
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.434 Critical Load Case: 101 Location: 0.00
Critical Condition: Compression
Member Number: 1777
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness

Member Number: 1778
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1779
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1780
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1781
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1782
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness

Member Number: 1783
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness

|---|
| Member Number: 1784 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness
Member Number: 1785
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1786
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1787
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness

|---|
| Member Number: 1788 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness
Member Number: 1789
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1790
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1791
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1792
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness

|---|
| Member Number: 1793 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness

| Member Number: 1794 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness
Member Number: 1795
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1796
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1797
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.342 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression

|---|
| Member Number: 1798 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Slenderness
Member Number: 1799
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1800
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 1801
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 144 Location: 0.00
Critical Condition: Compression
Member Number: 1802
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness

|---|
| Member Number: 1803 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.343 Critical Load Case: 144 Location: 0.00 |
Critical Condition: Compression
Member Number: 1804

| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Slenderness
Member Number: 1805
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.805 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1806
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.300 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1807
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.753 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1808 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1809
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1810
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1811
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1812
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.923 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1813 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.344 Critical Load Case: 102 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1814
Member Section: TAP ERED (AISC SECTIONS)

| Status: PASS Ratio: 0.885 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1815
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1816
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1817
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1818 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1819
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.934 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1820
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.355 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1821
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.874 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1822
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 1823 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1824
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00

Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1825
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1826
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.531 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1827
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.398 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3

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Member Number: 1828
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.520 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1829
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.357 Critical Load Case: 131 Location: 2.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1830
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.357 Critical Load Case: 127 Location: 2.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1831
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1832
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

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Member Number: 1833
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.777 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1834
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.328 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 1835 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.755 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1836
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1837
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1838 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1839
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1840
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.935 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1841
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.329 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1842
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.872 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1843 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1844
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3

| Member Number: 1845 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1846
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1847
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.531 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1848 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.324 Critical Load Case: 119 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1849
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.597 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1850
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.462 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1851
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.539 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1852
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1853 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.548 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1854
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1855

| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.348 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1856
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1857
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.475 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1858 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1859
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.548 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1860
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1861
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.348 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1862
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1863 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.335 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1864
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.349 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1865
Member Section: TAP ERED (INDIAN SECTIONS)

| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1866
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.346 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1867
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1868 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.216 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1869
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1870
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.311 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1871
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1872
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.345 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 1873 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1874
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.233 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1875
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00

Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1876
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.352 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 1877
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.331 Critical Load Case: 142 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)

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Member Number: 1878
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1879
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.331 Critical Load Case: 142 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1880
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1881
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.325 Critical Load Case: 118 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1882
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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Member Number: 1883
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.342 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 1884
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.202 Critical Load Case: 104 Location: 2.00
Critical Condition: Slenderness
Member Number: 1885
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.354 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 1886 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1887
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.398 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1888 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1889
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.451 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1890
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.508 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1891
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1892
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.499 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1893 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1894
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.337 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1895
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

| Member Number: 1896 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.453 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1897
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1898 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.498 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1899
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1900
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.337 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1901
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1902
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.309 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1903 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.347 Critical Load Case: 126 Location: 1.20 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1904
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1905
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.344 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1906

| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1907
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.231 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 1908 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1909
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.310 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 1910
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1911
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.348 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 1912
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 1913 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.214 Critical Load Case: 126 Location: 1.20 |
Critical Condition: Sec. 9.3.1.3
Member Number: 1914
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1915
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.388 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1916
Member Section: TAP ERED (AISC SECTIONS)

| Status: PASS Ratio: 0.513 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1917
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 1918 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.504 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1919
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1920
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.342 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1921
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1922
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.458 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

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|---|
| Member Number: 1923 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1924
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.503 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1925
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1926
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.342 Critical Load Case: 142 Location: 1.20

Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1927
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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Member Number: 1928
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.462 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1929
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.544 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1930
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1931
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.553 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1932
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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Member Number: 1933
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.354 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1934
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1935
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.480 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1936
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 1937 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.554 Critical Load Case: 142 Location: 1.20 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 1938 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1939
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.353 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1940
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1941
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.711 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1942
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.891 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 1943 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1944
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.880 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1945
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1946
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.606 Critical Load Case: 130 Location: 1.20
Critical Condition: Sec. 9.3.1.3

| Member Number: 1947 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
| Critical Condition: Major Axis Bending (Sec. 8) |
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|---|
| Member Number: 1948 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.760 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1949
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1950
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.879 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1951
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1952
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.525 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
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|---|
| Member Number: 1953 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1954
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.765 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1955
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.930 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1956
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1957

| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.941 Critical Load Case: 101 Location: 1.20 |
| Critical Condition: Shear along Major Axis (Sec. 8.4) |
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|---|
| Member Number: 1958 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1959
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.536 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1960
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1961
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.782 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1962
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
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|---|
| Member Number: 1963 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.942 Critical Load Case: 101 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1964
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1965
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.536 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 1966
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 1967
Member Section: TAP ERED (AISC SECTIONS)

| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |
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|---|
| Member Number: 1968 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness
Member Number: 1969
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.497 Critical Load Case: 142 Location: 4.00
Critical Condition: Sec. 9.3.2.2 (Y)
Member Number: 1970
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1971
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1972
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
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|---|
| Member Number: 1973 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness
Member Number: 1974
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1975
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1976
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1977
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00

| Critical Condition: Slenderness |

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
****

| Member Number: 1978 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 1979 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 1980 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 1981 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 1982 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

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| Member Number: 1983 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 1984 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 1985 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 1986 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

| Member Number: 1987 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
| Critical Condition: Slenderness |

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|---|
| Member Number: 1988 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness
Member Number: 1989
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1990
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1991
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1992
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.364 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness

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|---|
| Member Number: 1993 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Slenderness
Member Number: 1994
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.432 Critical Load Case: 101 Location: 2.00
Critical Condition: Slenderness
Member Number: 1995
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 1996
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 1997
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 1998 |
| Member Section: ST PIP2191M (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Slenderness
Member Number: 1999
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 2000
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 2001
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness
Member Number: 2002
Member Section: ST PIP2191M (INDIAN SECTIONS)
Status: PASS Ratio: 0.273 Critical Load Case: 101 Location: 0.00
Critical Condition: Slenderness

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 2003 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.824 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2004
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.282 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2005
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.752 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2006
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2007
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 2008 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2009
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2010
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.924 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2011
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.335 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2012
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.884 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 2013 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 2014
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2015
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2016
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2017
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.935 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 2018 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.346 Critical Load Case: 102 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 2019
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.873 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2020
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2021
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2022
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 2023 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2024
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.531 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2025
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.390 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2026
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.519 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2027
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.357 Critical Load Case: 131 Location: 2.00
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 2028 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.357 Critical Load Case: 127 Location: 2.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 2029
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2030
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2031
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.776 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2032
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.320 Critical Load Case: 102 Location: 0.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 2033 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.754 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2034
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2035
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2036
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2037
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 2038 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.936 Critical Load Case: 101 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2039
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.318 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2040
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.871 Critical Load Case: 101 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2041
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 131 Location: 3.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2042
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.803 Critical Load Case: 127 Location: 3.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 2043 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2044
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2045
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.530 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2046
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.312 Critical Load Case: 119 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2047
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.596 Critical Load Case: 126 Location: 0.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 2048 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.458 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2049
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.539 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2050
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2051
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.548 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2052
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 2053 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.348 Critical Load Case: 143 Location: 0.00 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2054
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2055
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.474 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2056
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2057
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.549 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

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| Member Number: 2058 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2059
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.348 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2060
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2061
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.351 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2062
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.349 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 2063 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2064
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.346 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 2065
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2066
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.215 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2067
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 2068 |

| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.311 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 2069
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2070
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.344 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3
Member Number: 2071
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2072
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.233 Critical Load Case: 130 Location: 0.00
Critical Condition: Sec. 9.3.1.3

|---|
| Member Number: 2073 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2074
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.334 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 2075
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.322 Critical Load Case: 142 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2076
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2077
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.322 Critical Load Case: 142 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 2078 |
| Member Section: TAP ERED (INDIAN SECTIONS) |

| Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2079
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.313 Critical Load Case: 118 Location: 1.50
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2080
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2081
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.333 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 2082
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.202 Critical Load Case: 104 Location: 2.00
Critical Condition: Slenderness

|---|
| Member Number: 2083 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.345 Critical Load Case: 106 Location: 1.50 |
Critical Condition: Sec. 9.3.1.3
Member Number: 2084
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2085
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.389 Critical Load Case: 106 Location: 1.50
Critical Condition: Sec. 9.3.1.3
Member Number: 2086
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.316 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2087
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.450 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 2088 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.507 Critical Load Case: 143 Location: 0.00 |

Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2089
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2090
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.498 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2091
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2092
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.336 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

Member Number: 2093
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2094
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.452 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2095
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2096
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.497 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2097
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

Member Number: 2098
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.336 Critical Load Case: 143 Location: 0.00
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 2099 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2100
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.309 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 2101
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.346 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 2102
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

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|---|
| Member Number: 2103 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.344 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 2104
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2105
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.231 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 2106
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2107
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.310 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3

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|---|
| Member Number: 2108 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)

| Member Number: 2109 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.348 Critical Load Case: 130 Location: 0.00 |
Critical Condition: Sec. 9.3.1.3
Member Number: 2110
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2111
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.214 Critical Load Case: 126 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 2112
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 2113 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.353 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2114
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.512 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2115
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2116
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.503 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2117
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
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|---|
| Member Number: 2118 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.341 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2119

| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2120
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.457 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2121
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2122
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.502 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 2123 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2124
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.341 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2125
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2126
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.460 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2127
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.544 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 2128 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2129
Member Section: TAP ERED (AISC SECTIONS)

| Status: PASS Ratio: 0.553 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2130
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2131
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.353 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2132
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 2133 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.479 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2134
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2135
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.554 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2136
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2137
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.353 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

|---|
| Member Number: 2138 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2139
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.692 Critical Load Case: 101 Location: 1.20

Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2140
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.890 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2141
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2142
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.879 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

Member Number: 2143
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2144
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.605 Critical Load Case: 130 Location: 1.20
Critical Condition: Sec. 9.3.1.3
Member Number: 2145
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2146
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.759 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2147
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00
Critical Condition: Major Axis Bending (Sec. 8)

Member Number: 2148
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.878 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2149
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

|---|
| Member Number: 2150 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.524 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2151
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2152
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.764 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
****

|---|
| Member Number: 2153 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.930 Critical Load Case: 101 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2154
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2155
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.941 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2156
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2157
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.536 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
****

|---|
| Member Number: 2158 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2159
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.782 Critical Load Case: 142 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)

| Member Number: 2160 |
| Member Section: TAP ERED (INDIAN SECTIONS) |
| Status: PASS Ratio: 0.360 Critical Load Case: 101 Location: 2.00 |
Critical Condition: Major Axis Bending (Sec. 8)
Member Number: 2161
Member Section: TAP ERED (AISC SECTIONS)
Status: PASS Ratio: 0.943 Critical Load Case: 101 Location: 1.20
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2162
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

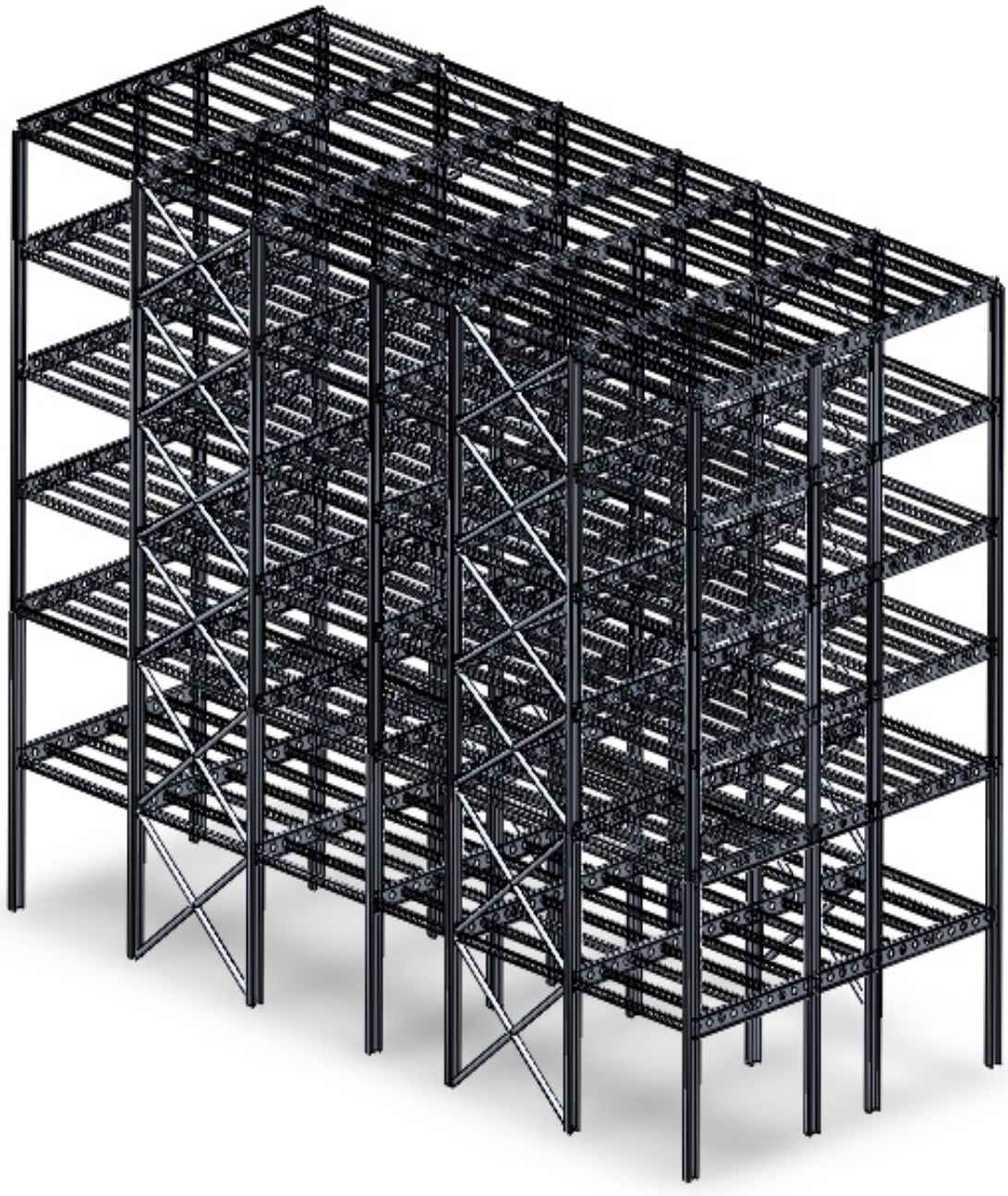
STAAD.PRO CODE CHECKING - IS-800 2007 (V2.0)
****

|---|
| Member Number: 2163 |
| Member Section: TAP ERED (AISC SECTIONS) |
| Status: PASS Ratio: 0.536 Critical Load Case: 142 Location: 1.20 |
Critical Condition: Shear along Major Axis (Sec. 8.4)
Member Number: 2164
Member Section: TAP ERED (INDIAN SECTIONS)
Status: PASS Ratio: 0.811 Critical Load Case: 101 Location: 3.00
Critical Condition: Major Axis Bending (Sec. 8)

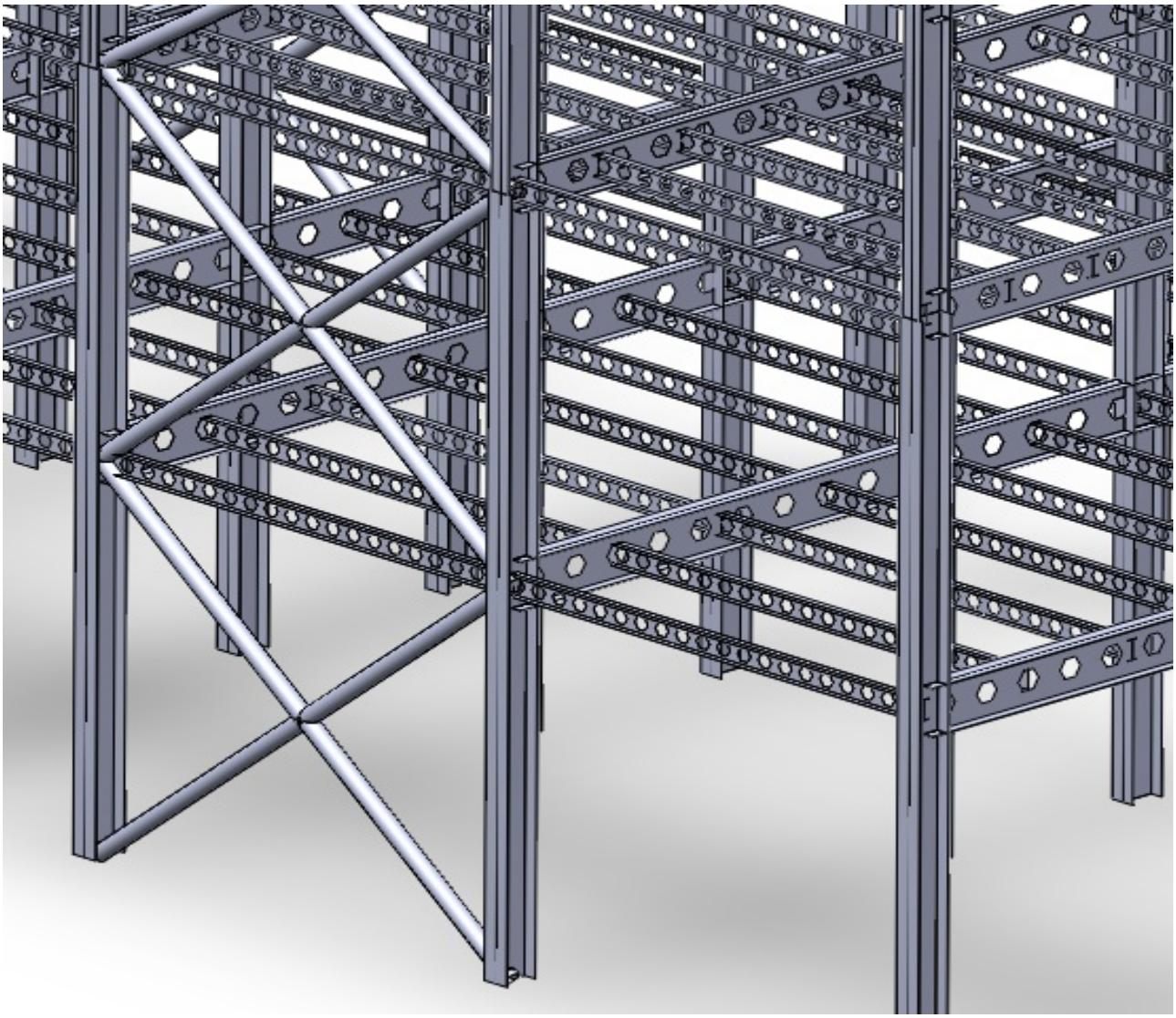
1112. FINISH

********** END OF THE STAAD.Pro RUN **********

3.4.2 STEPS ANALYSIS OF G+5 MULTI-STOREY WITH OPEN WEB BEAMS :



3D View of G+5 Multi-storey Structure



Close View of Castellated beams with circular openings

REPORT FINALIZED
UNITS

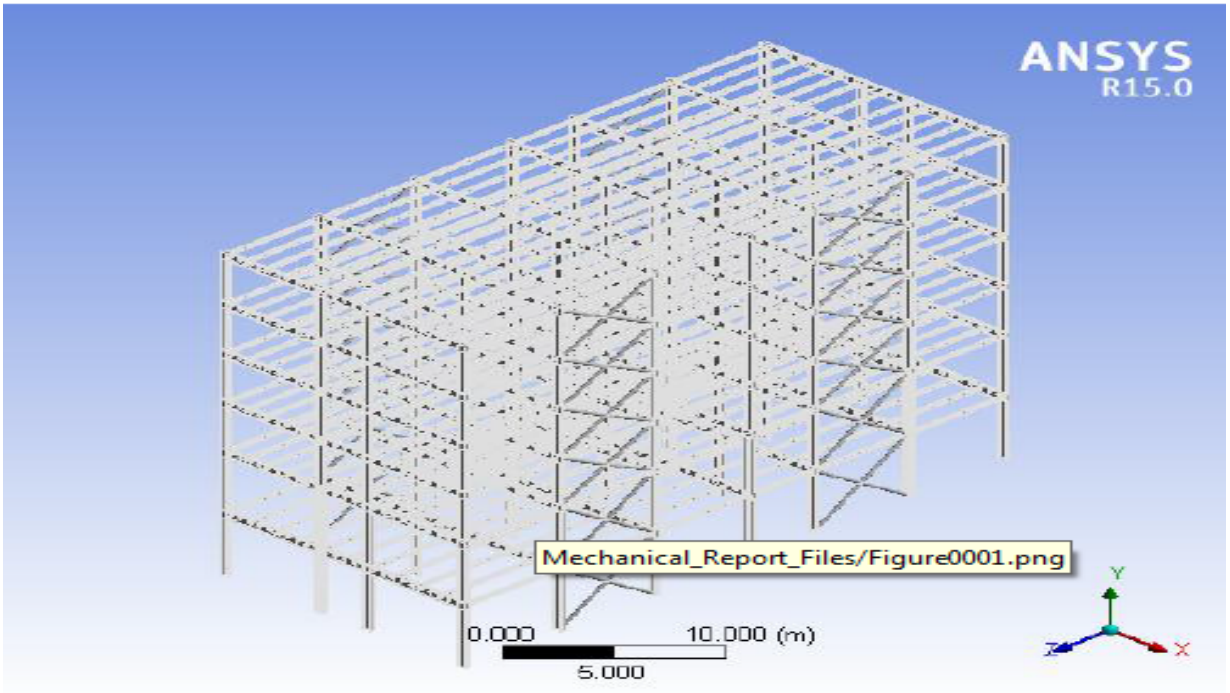


TABLE 1

Unit System	Metric (m, kg, N, s, V, A) Degrees rad/s Celsius
Angle	Degrees
Rotational Velocity	rad/s
Temperature	Celsius

MODEL (A4)

GEOMETRY

TABLE 2
Model (A4) > Geometry

Object Name	*Geometry*

State	Fully Defined
Definition	
Source	C:\Users\Schedio\Downloads\Multistorey G+5\Part1.SLDPRT
Type	SolidWorks
Length Unit	Meters
Element Control	Program Controlled
Display Style	Body Color
Bounding Box	
Length X	15.432 m
Length Y	26.369 m
Length Z	34.325 m
Properties	
Volume	24.674 m³
Mass	1.9369e+005 kg
Scale Factor Value	1.
Statistics	
Bodies	1
Active Bodies	1
Nodes	9995134
Elements	4852549
Mesh Metric	None
Basic Geometry Options	
Solid Bodies	Yes
Surface Bodies	Yes
Line Bodies	No
Parameters	Yes
Parameter Key	DS

Attributes	No
Named Selections	No
Material Properties	No
Advanced Geometry Options	
Use Associativity	Yes
Coordinate Systems	No
Reader Mode Saves Updated File	No
Use Instances	Yes
Smart CAD Update	No
Compare Parts On Update	No
Attach File Via Temp File	Yes
Temporary Directory	C:\Users\Paveen\AppData\Roaming\Ansys\v150
Analysis Type	3-D
Mixed Import Resolution	None
Decompose Disjoint Geometry	Yes
Enclosure and Symmetry Processing	Yes

TABLE 3
Model (A4) > Geometry > Parts

Object Name	*Part1*
State	Meshed
Graphics Properties	
Visible	Yes
Transparency	1
Definition	
Suppressed	No

Stiffness Behavior	Flexible
Coordinate System	Default Coordinate System
Reference Temperature	By Environment
Material	
Assignment	Structural Steel
Nonlinear Effects	Yes
Thermal Strain Effects	Yes
Bounding Box	
Length X	15.432 m
Length Y	26.369 m
Length Z	34.325 m
Properties	
Volume	24.674 m³
Mass	1.9369e+005 kg
Centroid X	7.2573 m
Centroid Y	14.39 m
Centroid Z	0.92689 m
Moment of Inertia Ip1	3.2925e+007 kg·m²
Moment of Inertia Ip2	2.8132e+007 kg·m²
Moment of Inertia Ip3	1.7112e+007 kg·m²
Statistics	
Nodes	9995134
Elements	4852549
Mesh Metric	None

FIGURE 1
Model (A4) > Geometry > Figure

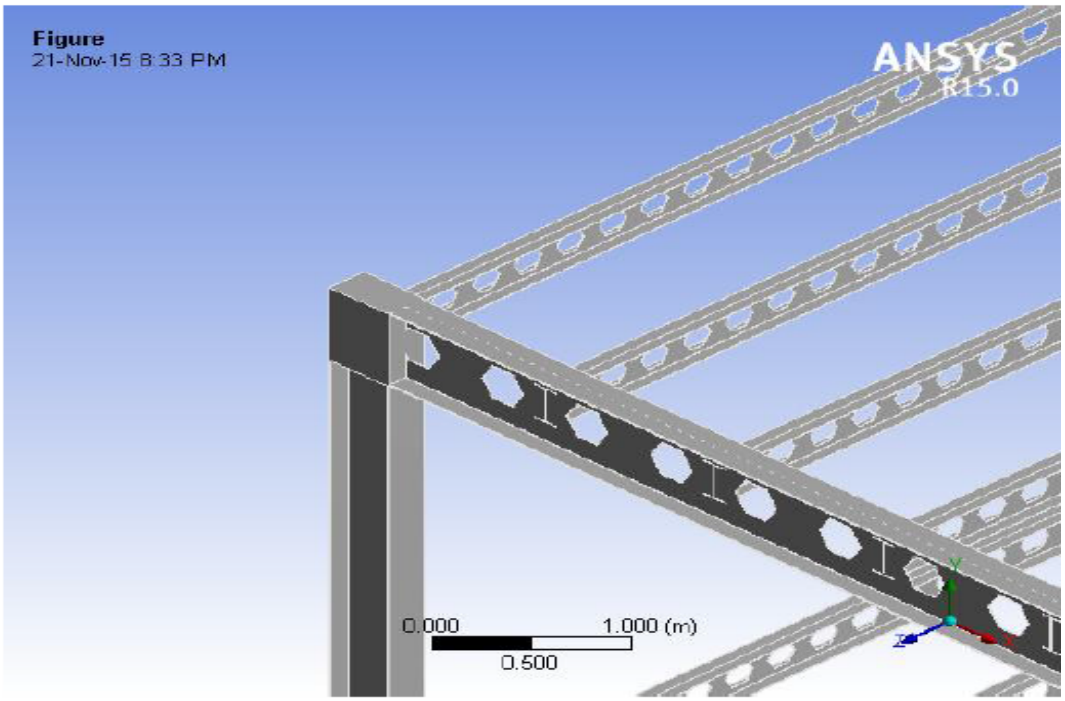


FIGURE 2
Model (A4) > Geometry > Figure 2

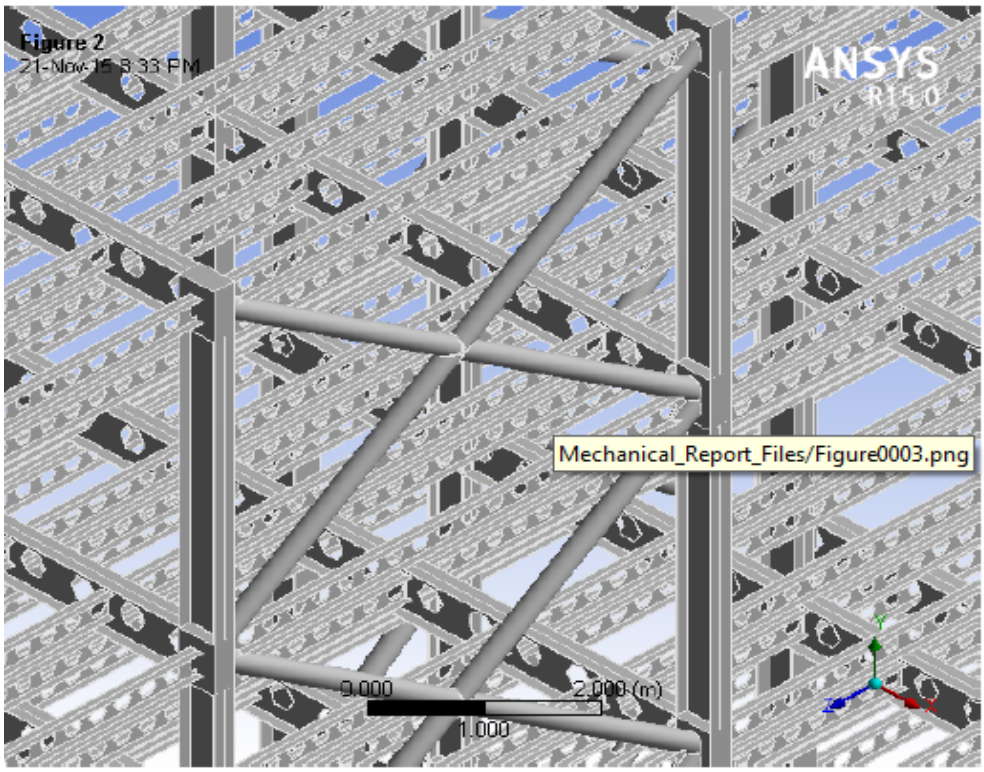
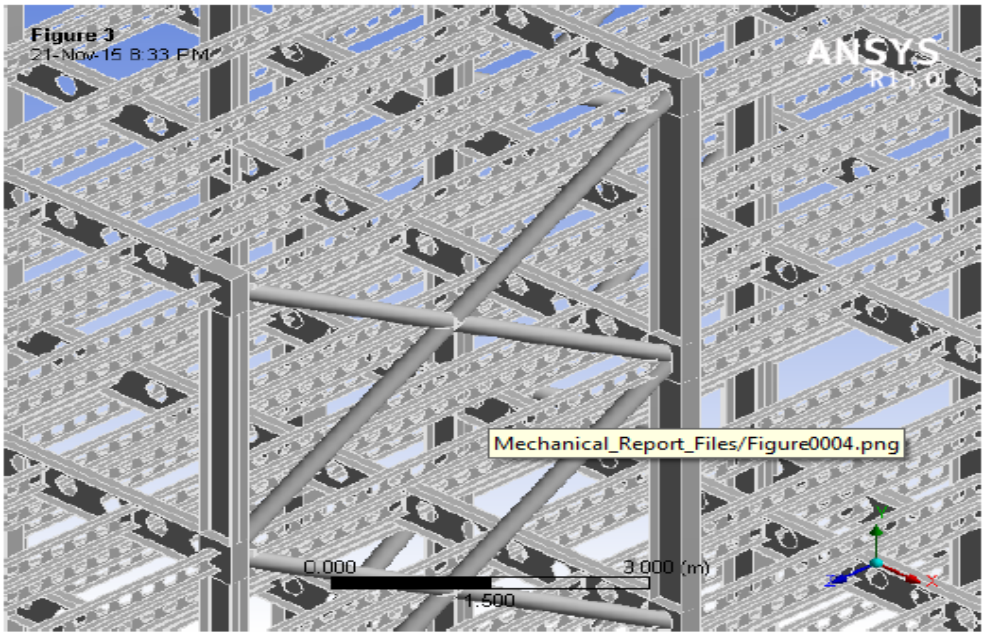


FIGURE 3
Model (A4) > Geometry > Figure 3

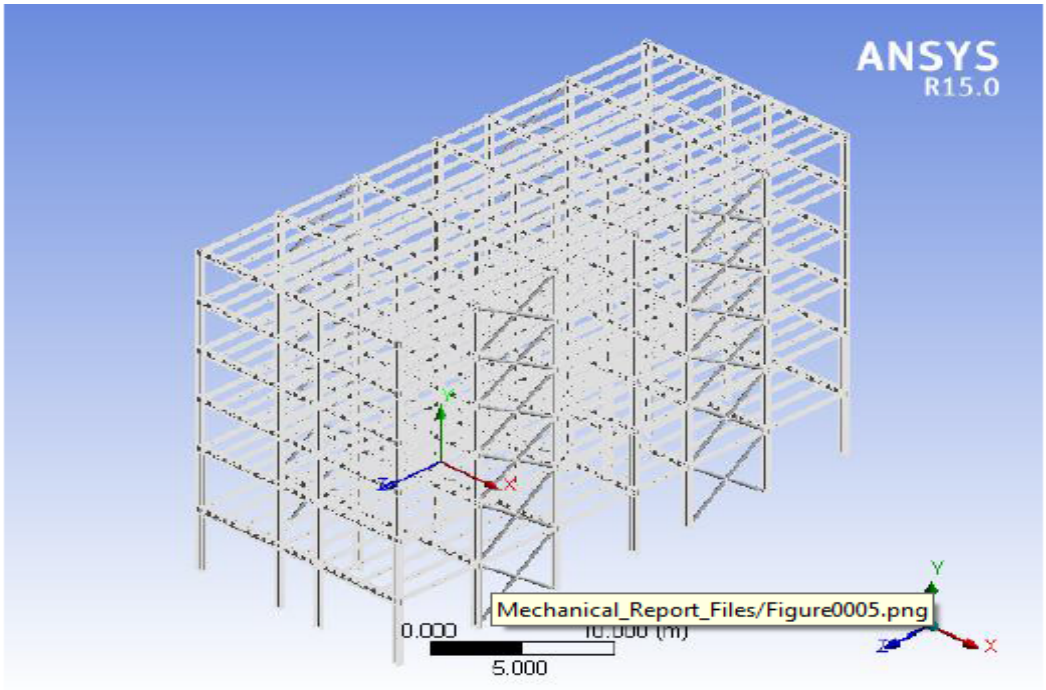


COORDINATE SYSTEMS

TABLE 4
Model (A4) > Coordinate Systems > Coordinate System

Object Name	*Global Coordinate System*
State	Fully Defined
Definition	
Type	Cartesian
Coordinate System ID	0.
Origin	
Origin X	0. m
Origin Y	0. m
Origin Z	0. m
Directional Vectors	
X Axis Data	[1. 0. 0.]
Y Axis Data	[0. 1. 0.]
Z Axis Data	[0. 0. 1.]

FIGURE 4
Model (A4) > Coordinate Systems > Global Coordinate System > Figure



MESH

TABLE 5
Model (A4) > Mesh

Object Name	*Mesh*
State	Solved
Defaults	
Physics Preference	Mechanical
Relevance	0
Sizing	
Use Advanced Size Function	On: Curvature
Relevance Center	Fine
Initial Size Seed	Active Assembly
Smoothing	High
Transition	Fast
Span Angle Center	Fine
Curvature Normal Angle	Default (18.0 °)
Min Size	Default (6.7085e-003 m)
Max Face Size	8.e-002 m
Max Size	8.e-002 m
Growth Rate	Default (1.850)
Minimum Edge Length	1.5e-003 m
Inflation	
Use Automatic Inflation	None
Inflation Option	Smooth Transition
Transition Ratio	0.272
Maximum Layers	5
Growth Rate	1.2
Inflation Algorithm	Pre
View Advanced Options	No
Patch Conforming Options	

Triangle Surface Mesher	Program Controlled
Patch Independent Options	
Topology Checking	Yes
Advanced	
Number of CPUs for Parallel Part Meshing	Program Controlled
Shape Checking	Standard Mechanical
Element Midside Nodes	Program Controlled
Straight Sided Elements	No
Number of Retries	0
Extra Retries For Assembly	Yes
Rigid Body Behavior	Dimensionally Reduced
Mesh Morphing	Disabled
Defeaturing	
Pinch Tolerance	Default (6.0376e-003 m)
Generate Pinch on Refresh	No
Automatic Mesh Based Defeaturing	On
Defeaturing Tolerance	Default (3.3542e-003 m)
Statistics	
Nodes	9995134
Elements	4852549
Mesh Metric	None

FIGURE 5
Model (A4) > Mesh > Figure

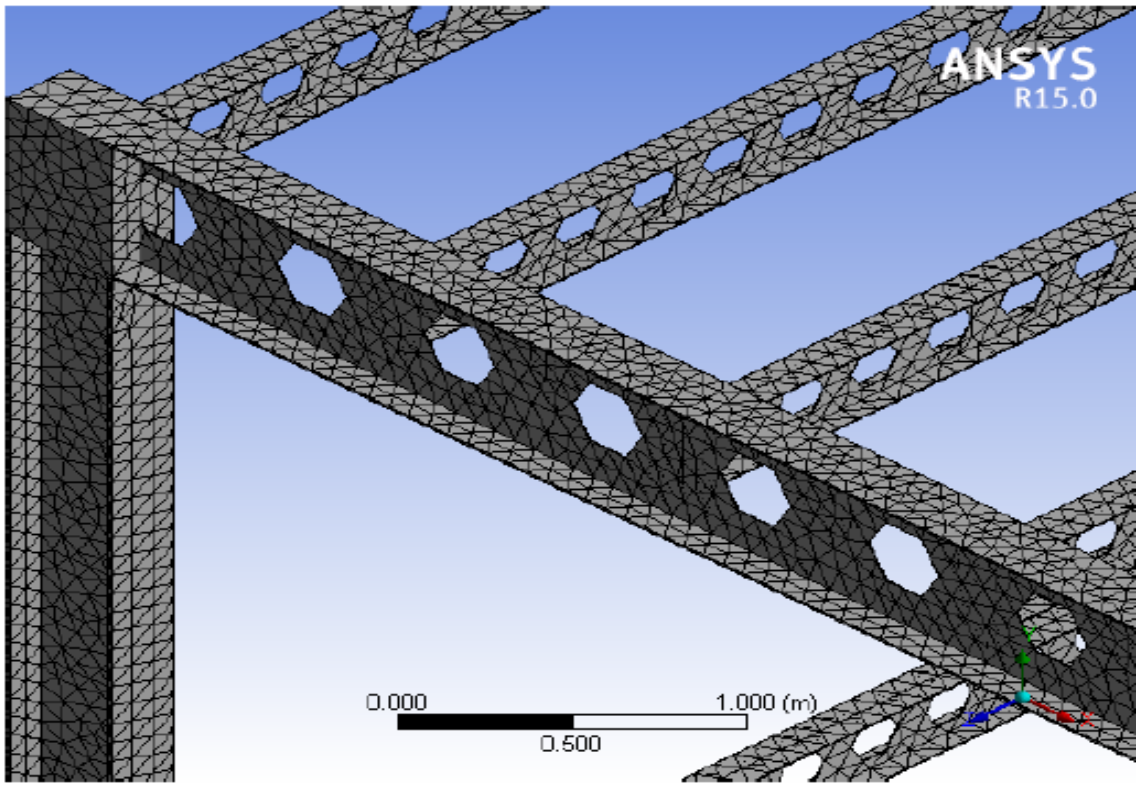


FIGURE 6
Model (A4) > Mesh > Figure 2

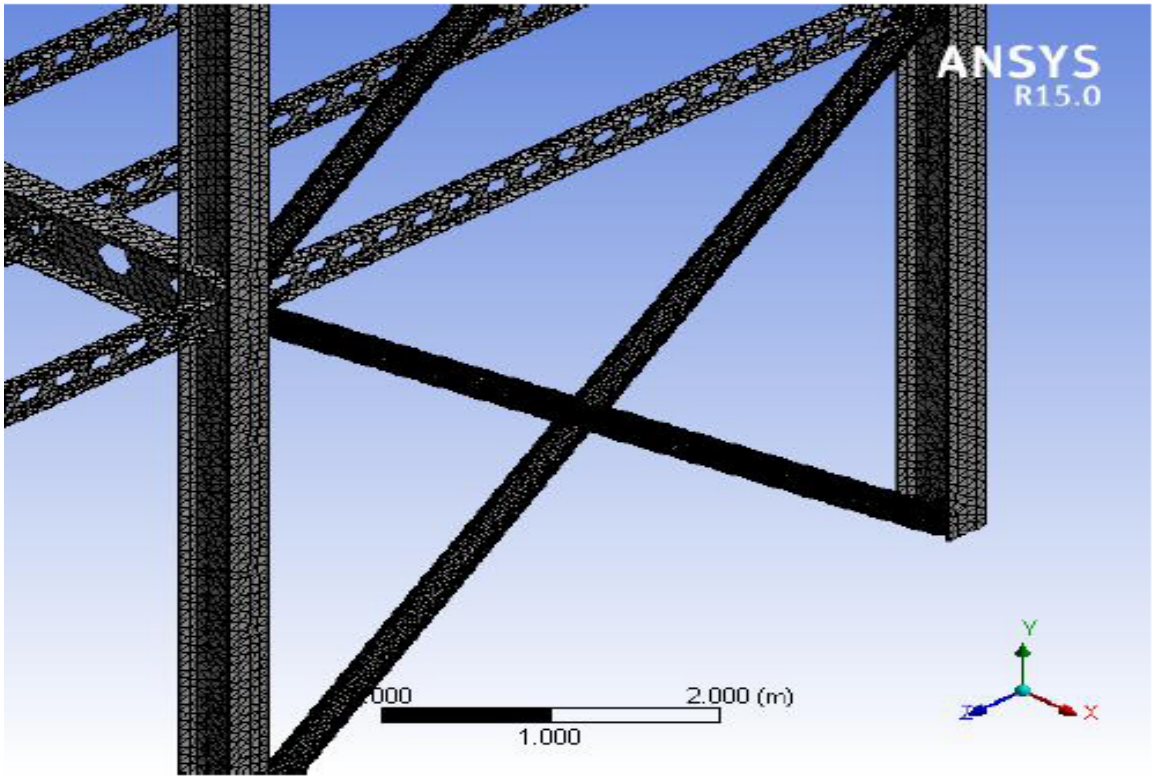
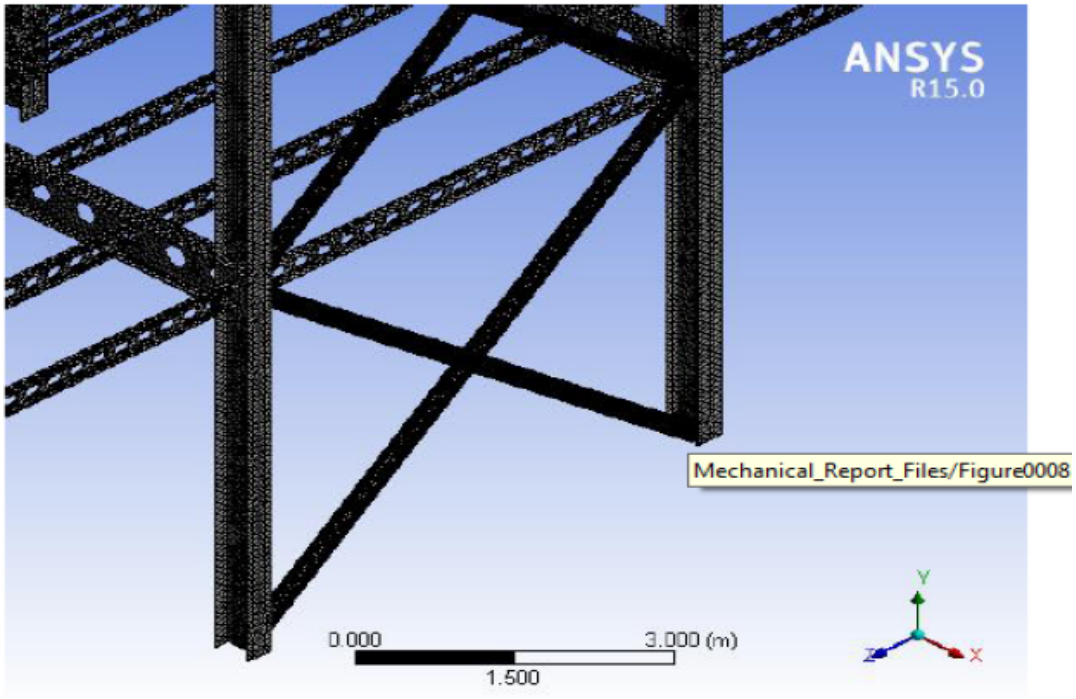


FIGURE 7
Model (A 4) > Mesh > Figure 3



NAMED SELECTIONS

TABLE 6
Model (A4) > Named Selections > Named Selections

Object Name	*1st*
State	Fully Defined
Scope	
Scoping Method	Geometry Selection
Geometry	78 Faces
Definition	
Send to Solver	Yes
Visible	Yes
Program Controlled Inflation	Exclude
Statistics	
Type	Manual
Total Selection	78 Faces
Suppressed	0
Used by Mesh Worksheet	No

STATIC STRUCTURAL (A5)

TABLE 7
Model (A4) > Analysis

Object Name	*Static Structural (A5)*
State	Not Solved
Definition	
Physics Type	Structural
Analysis Type	Static Structural
Solver Target	Mechanical APDL
Options	
Environment Temperature	22. °C
Generate Input Only	No

TABLE 8
Model (A4) > Static Structural (A5) > Analysis Settings

Object Name	*Analysis Settings*
State	Fully Defined
Step Controls	
Number Of Steps	1.
Current Step Number	1.
Step End Time	1. s
Auto Time Stepping	Program Controlled
Solver Controls	
Solver Type	Program Controlled
Weak Springs	Program Controlled
Large Deflection	Off
Inertia Relief	Off
Restart Controls	
Generate Restart Points	Program Controlled
Retain Files After Full Solve	No
Nonlinear Controls	
Newton-Raphson Option	Program Controlled
Force Convergence	Program Controlled
Moment Convergence	Program Controlled
Displacement Convergence	Program Controlled
Rotation Convergence	Program Controlled
Line Search	Program Controlled
Stabilization	Off
Output Controls	
Stress	Yes
Strain	Yes
Nodal Forces	No

Contact Miscellaneous	No
General Miscellaneous	No
Store Results At	All Time Points
Analysis Data Management	
Solver Files Directory	C:\Users\Paveen\Desktop\analysis\analysis_files\dp0\SYS\MECH\
Future Analysis	None
Scratch Solver Files Directory	
Save MAPDL db	No
Delete Unneeded Files	Yes
Nonlinear Solution	No
Solver Units	Active System
Solver Unit System	mks

TABLE 9
Model (A4) > Static Structural (A5) > Accelerations

Object Name	*Standard Earth Gravity*
State	Fully Defined
Scope	
Geometry	All Bodies
Definition	
Coordinate System	Global Coordinate System
X Component	0. m/s² (ramped)
Y Component	-9.8066 m/s² (ramped)
Z Component	0. m/s² (ramped)
Suppressed	No
Direction	-Y Direction

FIGURE 8
Model (A4) > Static Structural (A5) > Standard Earth Gravity

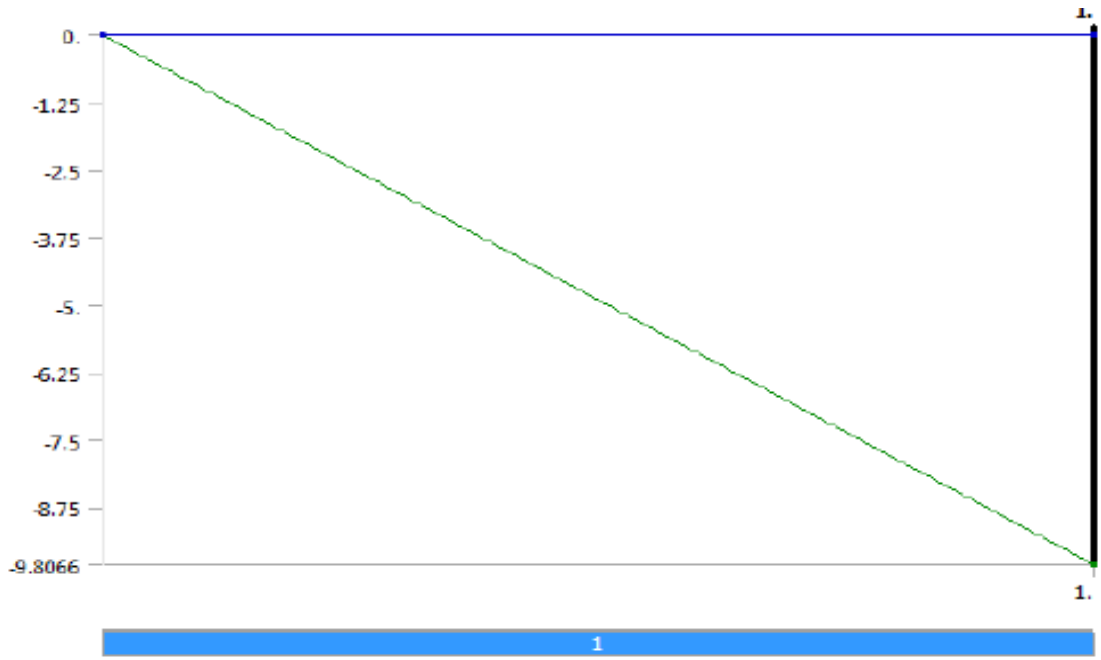


FIGURE 9
Model (A4) > Static Structural (A5) > Standard Earth Gravity > Figure

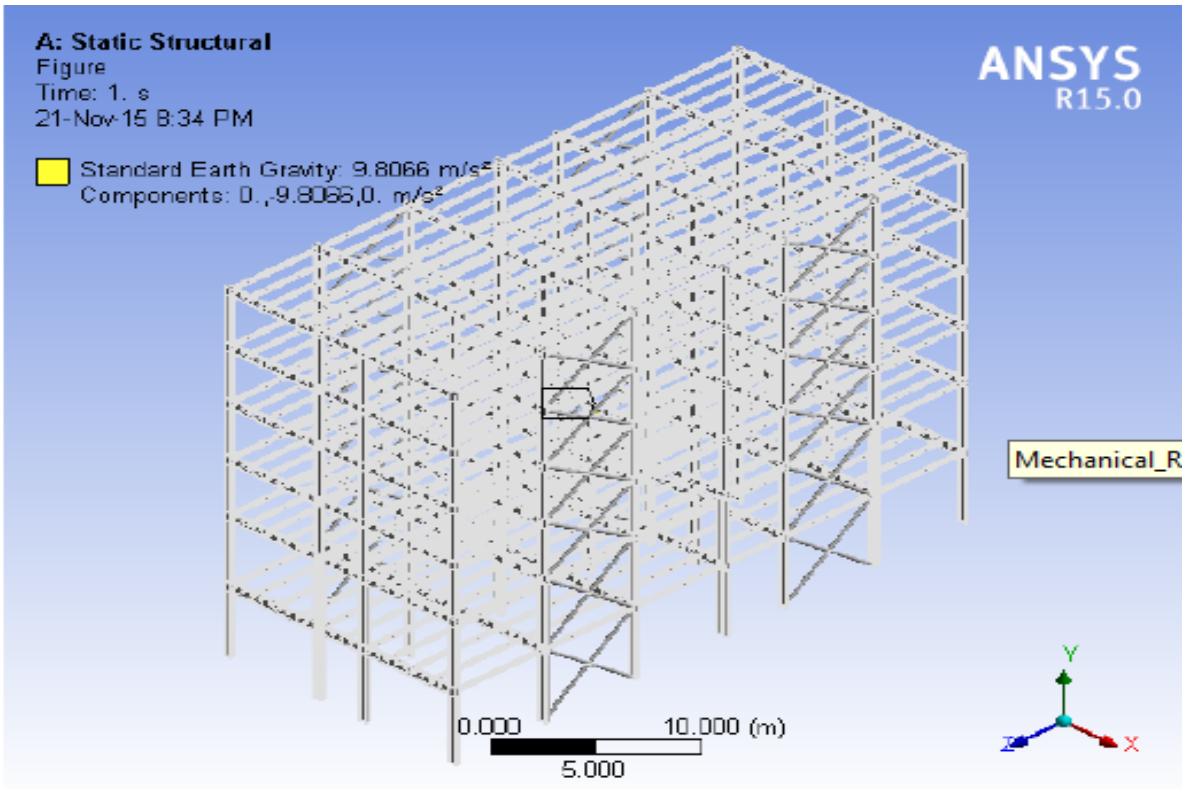


TABLE 10
Model (A4) > Static Structural (A5) > Loads

Object Name	*Pressure*	*Fixed Support*
State	Fully Defined	
Scope		
Scoping Method	Geometry Selection	
Geometry	496 Faces	36 Faces
Definition		
Type	Pressure	Fixed Support
Define By	Components	
Coordinate System	Global Coordinate System	
X Component	0. Pa (ramped)	
Y Component	-800. Pa (ramped)	
Z Component	0. Pa (ramped)	
Suppressed	No	

FIGURE 10
Model (A4) > Static Structural (A5) > Pressure

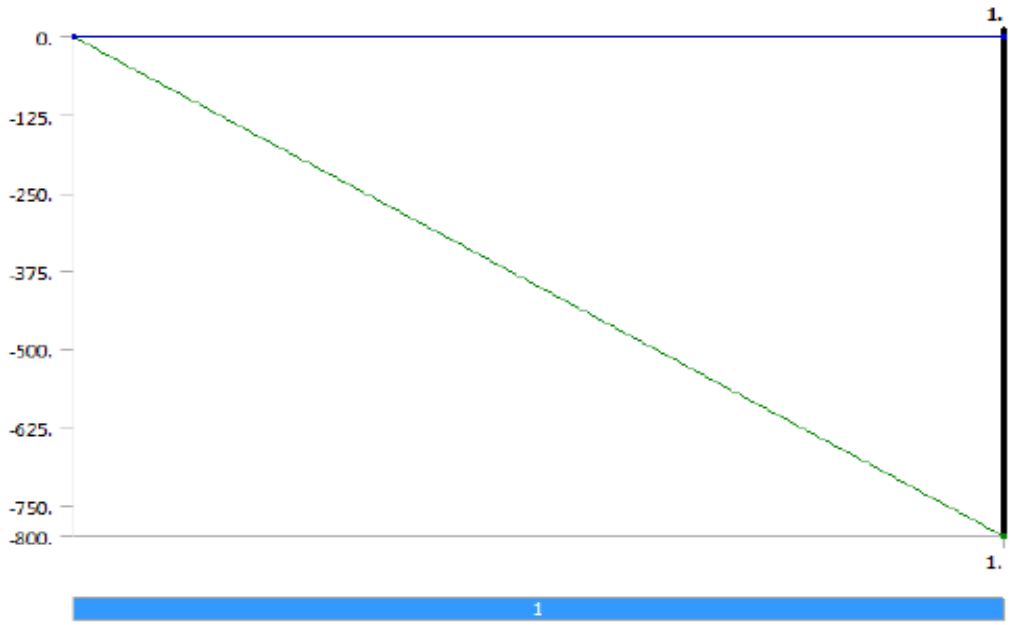


FIGURE 11
Model (A4) > Static Structural (A5) > Pressure > Figure

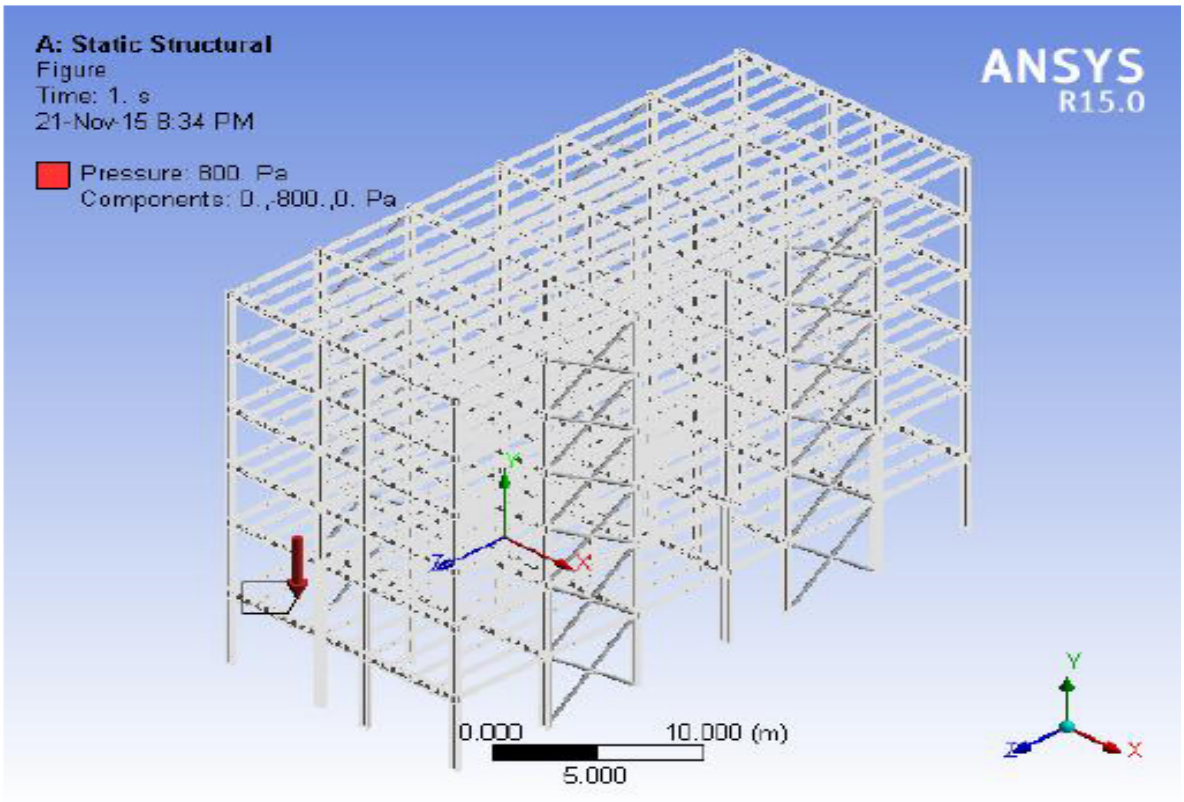
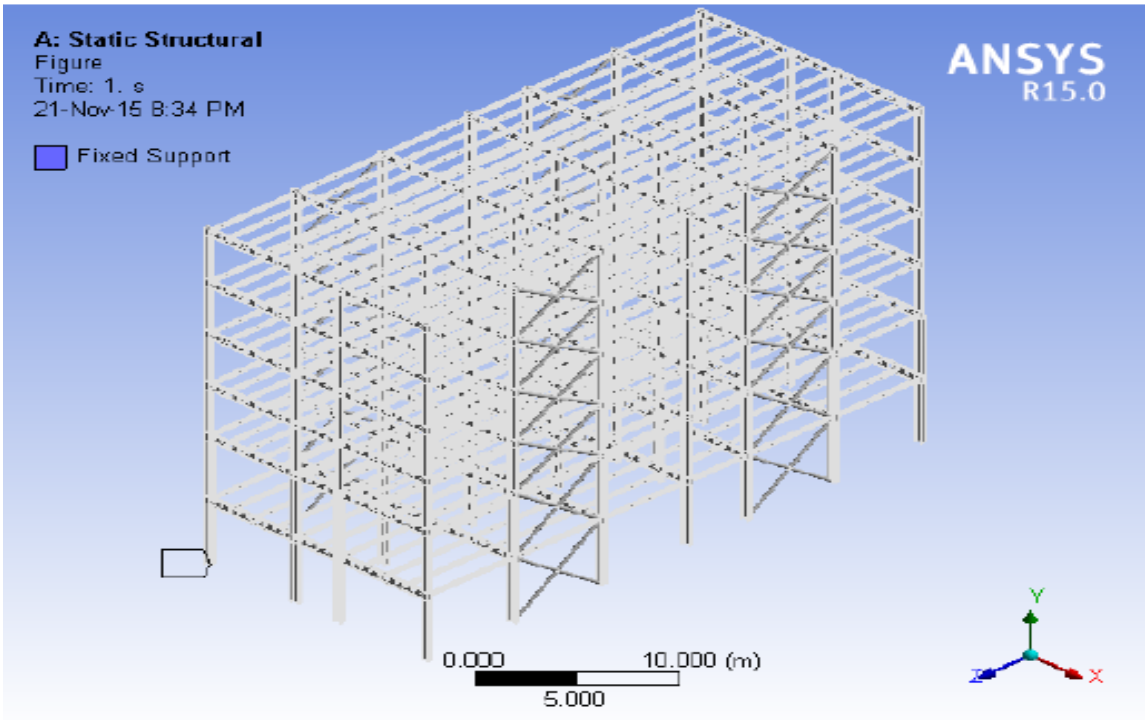


FIGURE 12
Model (A4) > Static Structural (A5) > Fixed Support > Figure



SOLUTION (A6)

TABLE 11
Model (A4) > Static Structural (A5) > Solution

Object Name	*Solution (A6)*
State	Solved
Adaptive Mesh Refinement	
Max Refinement Loops	1.
Refinement Depth	2.
Information	
Status	Solved

TABLE 12
Model (A4) > Static Structural (A5) > Solution (A6) > Solution Information

Object Name	*Solution Information*
State	Solved
Solution Information	
Solution Output	Solver Output
Newton-Raphson Residuals	0
Update Interval	2.5 s
Display Points	All
FE Connection Visibility	
Activate Visibility	Yes
Display	All FE Connectors
Draw Connections Attached To	All Nodes
Line Color	Connection Type
Visible on Results	No
Line Thickness	Single
Display Type	Lines

MATERIAL DATA

STRUCTURAL STEEL

TABLE 14
Structural Steel > Constants

Density	7833.41 kg m^-3
Coefficient of Thermal Expansion	1.2e-005 C^-1
Specific Heat	434 J kg^-1 C^-1
Thermal Conductivity	60.5 W m^-1 C^-1
Resistivity	1.7e-007 ohm m

TABLE 15
Structural Steel > Compressive Ultimate Strength

Compressive Ultimate Strength Pa
0

TABLE 16
Structural Steel > Compressive Yield Strength

Compressive Yield Strength Pa
2.5e+008

TABLE 17
Structural Steel > Tensile Yield Strength

Tensile Yield Strength Pa
2.532e+008

TABLE 18
Structural Steel > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
4.078e+008

TABLE 19
Structural Steel > Isotropic Secant Coefficient of Thermal Expansion

Reference Temperature C
22

TABLE 20
Structural Steel > Alternating Stress Mean Stress

Alternating Stress Pa	Cycles	Mean Stress Pa
3.999e+009	10	0

2.827e+009	20	0
1.896e+009	50	0
1.413e+009	100	0
1.069e+009	200	0
4.41e+008	2000	0
2.62e+008	10000	0
2.14e+008	20000	0
1.38e+008	1.e+005	0
1.14e+008	2.e+005	0
8.62e+007	1.e+006	0

TABLE 21
Structural Steel > Strain-Life Parameters

Strength Coefficient Pa	Strength Exponent	Ductility Coefficient	Ductility Exponent	Cyclic Strength Coefficient Pa	Cyclic Strain Hardening Exponent
9.2e+008	-0.106	0.213	-0.47	1.e+009	0.2

TABLE 22
Structural Steel > Isotropic Elasticity

Temperature C	Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa
	2.05e+011	0.3	1.6667e+011	7.88462e+010

TABLE 23
Structural Steel > Isotropic Relative Permeability

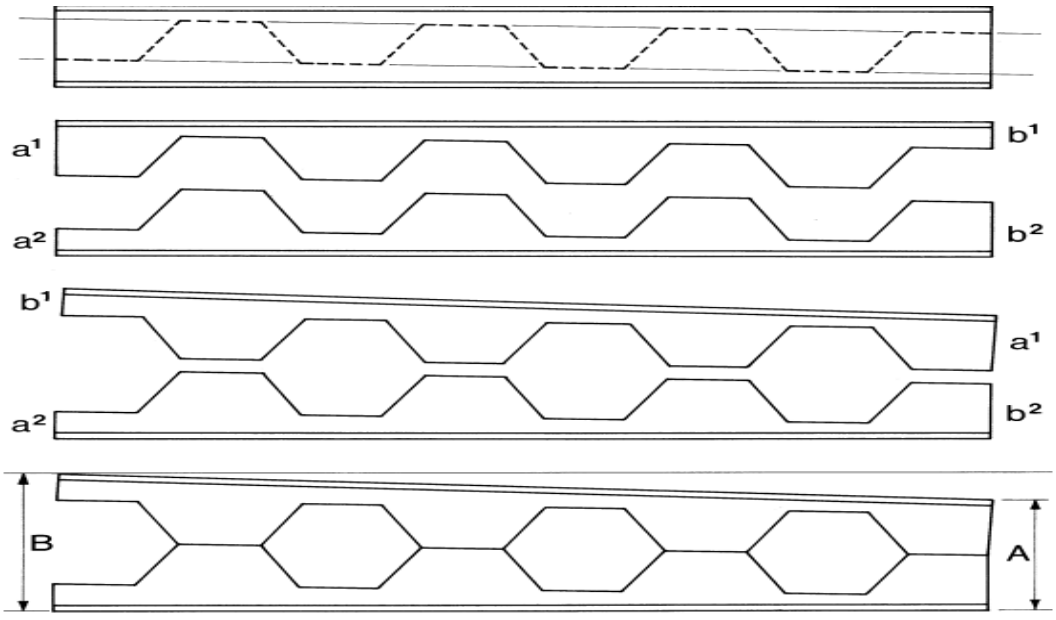
Relative Permeability
10000

3.5 Conclusion

Castellated beams have a number of specific possibilities and advantages. They are light and strong. They are cheap. They have class! Easy to assemble at the construction site. The openings in the web simplify the work of the installer and the electrician, since taking pipes across beams presents no problems. After all, the web of the beam already has many wide openings by nature. Secondary constructional elements such as ceiling systems, can also be installed easily. And castellated beams are ELEGANT. Most architects rate the aesthetic value of a castellated beam highly. Which is why castellated beams are often used in applications where they will be (very) visible.

My favourite part about them is you lose no weight, increase depth (I) and gain lots of strength plus the web openings can be used for other trades

- Castellated beams offer a designer all kinds of opportunities for "cutting to size". For example, in simple straight castellated beams the depth can be determined at will by changing the cutting pattern. In this way, the strength of the beam can be precisely matched to the occurring loads. That's what you call optimum construction
- a castellated beam that tapers in depth can quite easily be made, by setting the cutting pattern not exactly parallel to the length of the castellated beam, but at a slight angle. After cutting, one of the two halves is reversed and the two halves are then welded together lengthwise. At one end both low sides come together, at the other end both high sides



- A third special possibility is the combining of a lighter upper half with a heavier lower half. Obviously, these will be cut from two separate rolled sections. As long as the number of castellated beams to be built is even, no material will be wasted. This last design is attractive, for example, when a subfloor steel beam and a concrete floor are combined. In that case studs are welded to the top flange of the castellated beam in order to ensure firm anchoring of the concrete to the beam