BUILDING WIDTH

Building width is defined as a distance from outside of eave strut of one side wall to outside of eave strut of the opposite side wall.

BUILDING LENGTH

This is defined as a distance between the outside flanges of end wall columns in opposite end walls and is a combination of several bay lengths

END BAY LENGTH

End bay length is the distance from outside of the outer flange of end wall columns to centre line of the first interior frame column.

INTERIOR BAY LENGTH

This is the distance between the centre line of two adjacent interior main frame column. The most common bay spacing are 6m, 7.5m and 9m. Bay length upto 15m are possible.

BUILDING HEIGHT

Building height is the eave height which is usually the distance from the bottom of the main frame column base plate to the top outer point of the eave strut. Eave height upto 30 meter are possible when columns are recessed or elevated from finished floor to top of eave strut.

ROOF SLOPE (X/10)

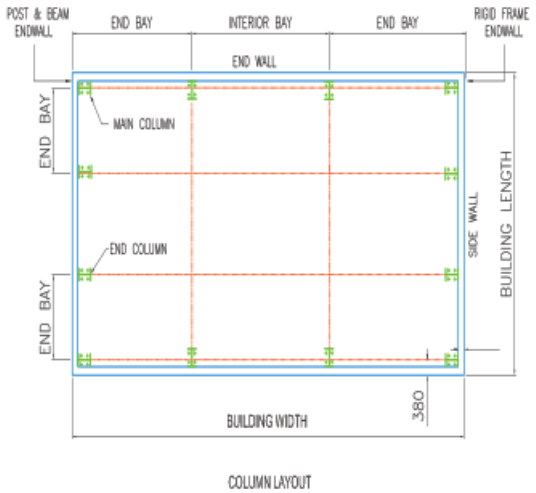
This is the angle of the roof with respect to the horizontal. The most common roof slope is 1/10. However, any practical roof slope is possible.

STEEL LINE

Steel line is defined as distance between center of main frame/gable column to the inside of sheeting line.

BRICK WALL

Generally 2.4m is considered. It can be to any height and the same is not in Metal Scope's scope.



COLUMN LAYOUT

Design & Codes

PRE-ENGINEERED BUILDING

Unless otherwise specified, MSIPL Pre-Engineered Building is designed as per the MBMA standard. Design parameter of earthquake loads, collateral loads, crane loads or any other loads are any other loading conditions and local conditions must be specified when requesting a quotation. Loads are applied in accordance with American codes and standards applicable to pre-engineered building unless otherwise requested at the time of quotation.

Design as per MBMA:

The 2002 Edition of Low Rice Building System Manual of Metal Building Manufacture Association (MBMA).

All applicable loads are as per MBMA

Hot rolled and build up section are designed in accordance with:

Manual of Steel Construction, 9th Edition of American Institue of Steel Construction (AISI).

Cold – Formed members are designed in accordance with:

1996 Edition of Cold-Formed Steel Design Manual of American Iron and Steel Institute (AISI).

Welding is applied in accordance with:

Structural Steel Welding Code of American Welding Society (AWS.D1.98).

Design as per Indian Standard :

IS – 875 (Part I) – 1987 : Code of Practice for Design Dead Loads for Building and Structures.

IS – 875 (Part II) – 1987 : Code of Practice for Design Imposed Loads for Building and Structures.

IS – 875 (Part III) – 1987 : Code of Practice for Design Wind Loads for Building and Structures.

IS – 1893 (Part I) – 2002 : Criteria for Earthquake Resistance Design of Structures.

IS 2062 : 2006 – Steel for general structural purposes.

IS 808 : 1989 – Dimensions for hot rolled steel beams, columns, channels and angles.

Design of prismatic Hot rolled and built up section is in accordance with:

IS – 800 (1984 & 2007) : Code of Practice for General Construction in Steel.

Design of Tapered Built up section is in accordance with : Manual of Steel Construction, 9 th Edition of American Institute of Steel Construction (AISC).

Cold - Formed members are designed in accordance with:

IS – 801 (1975) : Code of Practice for use of Cold – Formed Light Gauge Steel Structure.

Welding is applied in accordance with : Structural Steel Welding code of American Welding Society (AWS D1.1.98)

IS – 816 (1969) : Code of Practice for use of Metal Arc Welding for general construction

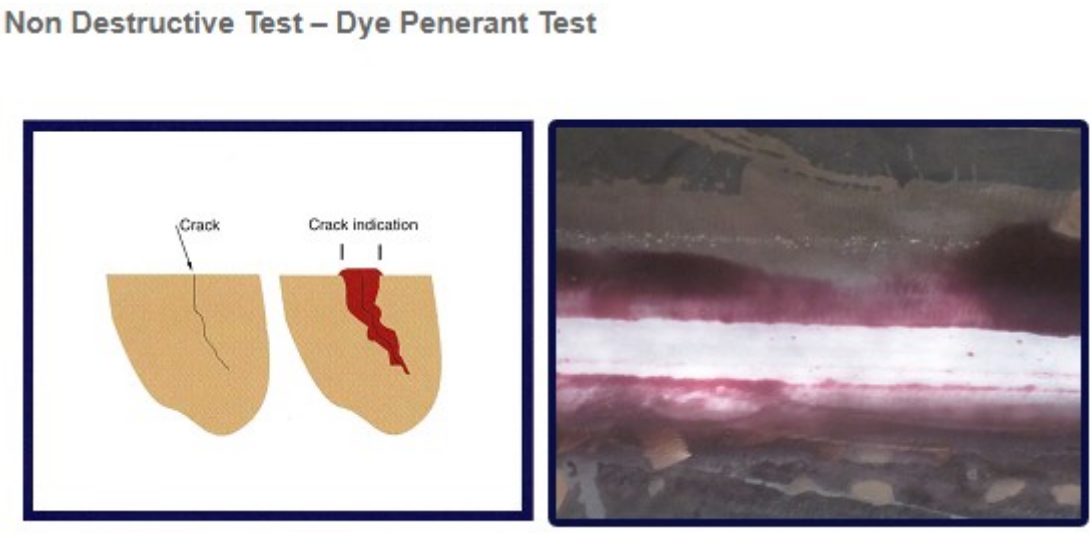
Quality

Quality is Our Commitment

Metal Scope's commitment to ensure quality is taken care by a cognizant workforce guided by the Head Quality Control, duly supported by NDT Level II Engineers. Non Destructive Test like magnetic particle, Dye Penetrant, Ultrasonic & Radiography are used wherever applicable to ensure the delivery of virtually fault-free finished product. Our Quality Management Systems is in Compliance with ISO 9001:2008 standards.

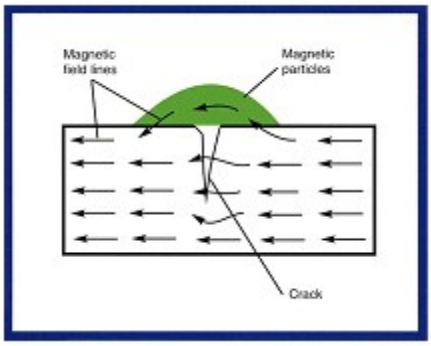
The manufacturing process is streamlined to ensure that at the end of the production cycle each building/bridges is ready for shipment as per the project schedule.

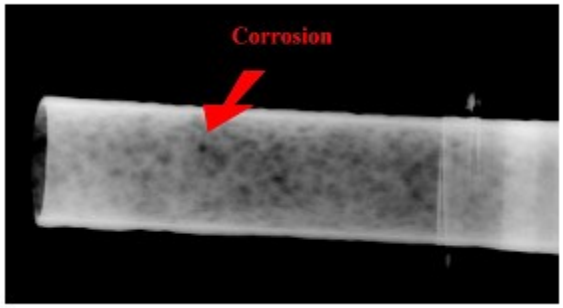
Non Destructive Test – Dye Penerant Test



DPT is used to locate cracks, porosity and other defects that break the surface of a material and weaken the structure

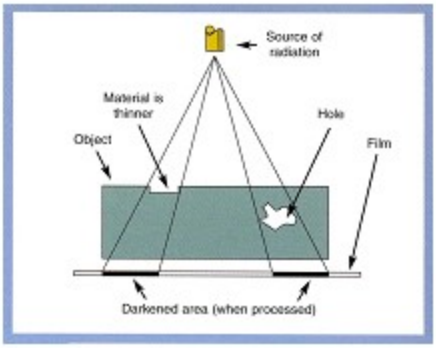
Non Destructive Test – Magnetic Particle Test

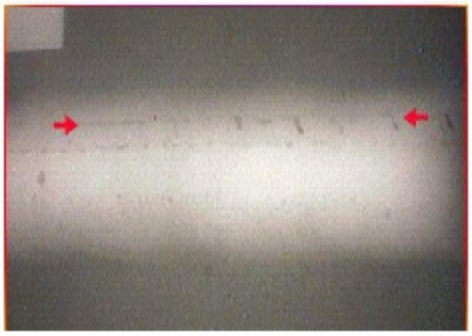




MPT is used to inspect ferromagnetic materials (those that can be magnetized) for defects that result in a transition in the magnetic permeability of a material.

Non Destructive Test – Radiographic Test





Radiographic Test is used to inspect almost any material for surface and subsurface defects. X-rays can also be used to locate and measure internal defects, confirm the location of hidden parts in an assembly and to measure thickness of materials

The Quality of the end product is assured by the above tests.