

B) Steel Structures:

1. Design loads:

It can also be "major" or "main"

1.1 **Basic** design loads including dead and live loads, wind and seismic loads, as for the other design loads such as mechanical equipment (fixed or dynamic) they are considered as secondary loads.

1.2 loads are applied as per the used code; all the loads mentioned here are for the minimum design requirements:

- Roof dead load 0.25kN/m^2
- Pitched roof live load 0.60kN/m^2
- Flat roof live load 0.75kN/m^2
- Additional loads to the roof 0.25kN/m^2
- Wind speed (as per wind load specified in article 54 concerning wind loads'0
- Minimum wind design pressure 1kN/m^2
- Importance factor (1)
- Exposure classification (category C) as per MBMA latest edition
- Crane Loads as per factory specifications
- Thermal load (± 25 degrees Celsius)
- Mezzanine dead load 3kN/m^2
- Mezzanine live load 5kN/m^2

1.3 **Basic** loads for walls and roofs shall be as follows:

- Wind load- shall be calculated according to the wind load specified in the local regulations of the emirate
- Degree of exposure to external environment – category C and D (open and closed)
- Importance factor depends on the use of the building
- All major loads and additional loads shall be defined and indicated in the drawings
- Seismic zone as determined by the local regulations in the emirate
- MBMA according to the latest edition

1.4 Each structural element shall be designed as per the stresses resulting from load overlap and providing the maximum ratio of actual stress to the allowable stress as per the applicable code. The ultimate deflection to each unit shall be as follows:

- $(L/240)$ for deflection due to dead and live loads, for main horizontal and vertical elements.