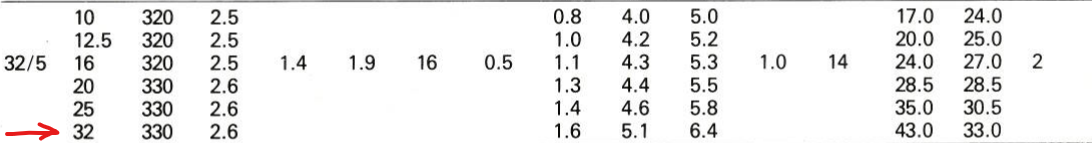
Cranes Loads

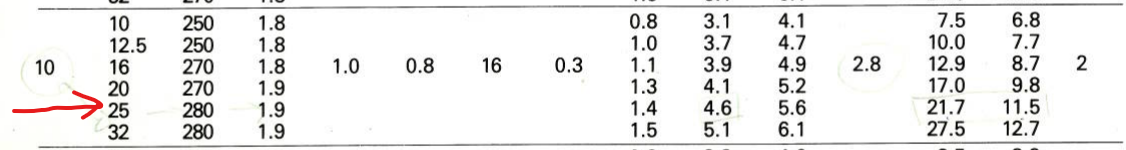
Middle span Crane loads :   
  
  
crane own weight : (43 / 32 ) \* 38 = 51 t  
own weight per wheel = 51 / 4 = 12.75 t  
crane max load = 32 t  
load per wheel = 32 / 2 = 16 t

Total wheel load = 16 + 12.75 = 28.75 t

Impact factor = 1.25

Total wheel load with impact = 36 t

left span crane loads :

  
wheel total load : 11.5 t

Crane Loads Summery :

Middle Span Crane Wheel Load = 36 t

Left Span Crane Wheel Load = 11.5 t

Corrugated Sheets

roof Corrugated sheets :

**Middle span Live load** = 60 – 200/3 \* tan(α) = 60 – 200/3 \* 0.06 = 56 kg / m2  use live load = 100 kg / m­2 , span **2 m**  
use **continuous** corrugated sheet of thickness **0.55 mm**   
  
**side spans live load** = 60 – 200/3 \* tan(α) = 60 – 200/3 \* 0.1 = 53 kg / m2  use live load = 100 kg / m­2 , span **2.5 m**

use **continuous** corrugated sheet of thickness **0.7 mm**side Corrugated sheets :

**level > 10 m , Wind load =** Ce \* K \* q = 0.8 \* 1.15 \* 50 = 46 kg / m2

Use wind load = 50 kg / m2 , Span = 2 m

**level < 10 m , wind load =** Ce \* K \* q = 0.8 \* 1.0 \* 50 = 40kg/m2

Use wind load = 50 kg / m2 , Span = 2.5 m

Use **continuous** corrugated sheets for all side of thickness **0.5 mm**

Corrugated Sheets Summery :

Use continuous in **middle span** roof corrugated sheets of **0.7 mm**

Use continuous in **side spans** roof corrugated sheets of **0.55 mm**

Use continuous in **side corrugated** sheets of **0.50 mm**

Mezanin

Flooring = 200 kg/m2

Storage Floor Live Load = 500 Kg/m2

Management Floors Live Load = 400 Kg/m2

Deck span = 2.50 m

Use Metal Deck thickness = 0.8 mm

For **Storage Floor** Use concrete thickness = 8 cm

Dead load = 2500 kg/m3 \* 0.08 = 200 kg/m2

Total ultimate load for storage floor = 1.4 \* (200 + 200 ) + 1.6 \* 500 = 1360 kg/m2

Allowable load for storage floor = 1485 kg/m2

For **management Floor** Use concrete thickness = 7 cm

Dead load = 2500 kg/m3 \* 0.08 = 200 kg/m2

Total ultimate load for mang. floor = 1.4 \* (200 + 175 ) + 1.6 \* 400 = 1165 kg/m2

Allowable load for management floor = 1270 kg/m2

Mezanin Summery :

Use Metal Deck of **0.8 mm**

For Management Floors , Concrete Thickness = **7 cm**

For storage Floor , Concrete Thickness = **8 cm**

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