Fire Load Energy Density: 511 MJ/m² Fire Hazard Category: User De

Fire Cell
- Inside height of firecell, H: m
- Area of vertical Openings, Av: m²
- Floor area of firecell, Af: m²
- Construction Material:
- Thermal inertia for firecell , b: J/m²Cs^.5

Time Equivalent
- Time equivalant, teq: 60 min

Applied load

w* 4.15 kN/m²

(w* must include the floor system self weight)

Slab mesh reinforcement and concrete strength

fc'20	35	MPa
Rib height or depth, hrc	75	mm
Total slab thickness, t0	140	mm
Slab type	Trapezoidal deck profile	

Reinforcement details

Reinforcement layer 2 used? no

	Reinforcement layer 1		Reinforcement layer 2	
fyr20, reinforcement	420	MPa	0	MPa
TOP cover x direction, Cxreo	51	mm	0	mm
TOP cover y direction, Cyreo	45	mm	0	mm
bar spacing in x, Sxreo	150	mm	0	mm
bar diameter in x, dxreo	6	mm	0	mm
bar spacing in y, Syreo	150	mm	0	mm
bar diameter in y, dyreo	6	mm	0	mm
Reinforcement type	Cold-worked mesl		Hot-formed	

Compression Reinforcement

fyr20,cr	0	MPa
cover to bottom, C3	0	mm
bar diameter, dcr	0	mm
Number of bars	0	

Slab panel and support beam dimensions

Lx, slab panel	7.62	m
Ly, slab panel	7.62	m
Lxb, max	7.62	m
Lyb, max	7.62	m

Slab panel edge conditions

Side 1	fixed
Side 3	simple
Side 2	simple
Side 4	fixed

Sides 1 to 4 can be either simple or fixed. Select fixed if the side is able to resist bending moment and that moment capacity is to be included in the slab panel capacity. Select simple otherwise. If the side cannot resist bending moment then select simple. For example, in the diagram shown, slab panel 1 side 3 can resist bending moment across into slab panel 2 and so can be fixed or simple. Sides 1, 2 and 4 are on the edge of the building and cannot resist bending moment so must be selected as simple.

Secondary beam input

Secondary Beam: yes Lookup

Beam direction: Ly (Lx is default)

Top Flange

Beam top flange yield stress, fytfsb20	355	MPa
Beam top flange width, bf,tf	10.1	mm
Beam top flange thickness, tf,tf	8.9	mm

Web

Beam web yield stress, fywsb20	355	MPa
Beam web thickness, tw (set to 0 for continuous web openings)	6	mm
Depth of web openings	0	mm

Bottom Flange

Beam bottom flange yield stress, fybfsb20	355	MPa
Beam bottom flange width, bf,bf	10.1	mm
Beam bottom flange thickness, tf,bf	8.9	mm

Beam depth, d	308	mm
Beam spacing, Ssb	2.54	m
Beam shear capacity, phi Vv	420	kN

Speedfloor joist Input

Joist spacing: 0 m

Interior support bars, x direction

fyr20,isbx	420	MPa
bar diameter	8	mm
bar spacing	150	mm
Top Cover	51	mm

Interior support bars, y direction

fyr20, isby	420	MPa
bar diameter	8	mm
bar spacing	150	mm

Slab reinforcement; deck trough bars

fyr20,dtb	0	MPa
bar diameter	0	mm
bar spacing	0	mm

BOTTOM covers for heat flow calculations

c1	0	mm
c2	0	mm
c3	0	mm

Secondary beam to primary beam connection

No. of bolts in each secondary beam to primary beam connection	3	
Ambient temperature design shear capacity of bolt, (phi Vfn)	90	kN