

Client Sheldon Construction Ltd
 Job Title swwdemo
 Drawing No slabdemo

Date 16/02/2005

Prestressed Floors Calculation (Span/Load Tables)

Floor: 1200mm TEST PS slab

Floor Unit: PS Slab/T08

Unit Properties:

MR = 68.000 kNm

M_{ult} = 96.000 kNm

V_{co} = 136.000 kN

Loading Conditions and Details

Condition = B = Dead wt of floor + Finishes + Lightweight Partitions + UDL

Case = S 1200 = Single Floor Units at 1200mm centres

Imposed Load (UDL) = 1.5 kN/m²

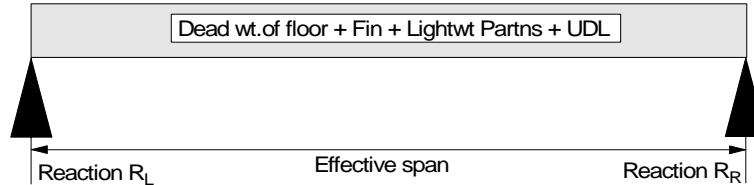
Finishes = 50mm screed 50mm 1.15 kN/m²

ChipBoard 18mm 0.14 kN/m²

Lightwt Parts(UDL) = 1.0 kN/m²

Clear Span = 7500mm

Effective Span = 7600mm



			<u>Service</u>		<u>Ultimate</u>
Dead Loads carried by this Case:					
Floor Unit	1 x 0.180000 x 24.00	=	4.320 kN/m x 1.4	=	6.048 kN/m
Grout	0.000400 x 23.0	=	0.009 kN/m x 1.4	=	0.013 kN/m
Finishes	0.050 x 1.200 x 23.00	=	1.380 kN/m x 1.4	=	1.932 kN/m
	0.018 x 1.200 x 7.50	=	0.162 kN/m x 1.4	=	0.227 kN/m
Lightwt Parts	1.0 x 1.200	=	1.200 kN/m x 1.4	=	1.680 kN/m
Total Dead Loads			<u>7.071 kN/m</u>		<u>9.900 kN/m</u>
Live Loads carried by this Case:					
UDL	1.5 x 1.200	=	1.800 kN/m x 1.6	=	2.880 kN/m
Total Live Loads			<u>1.800 kN/m</u>		<u>2.880 kN/m</u>
Total Loads on single Floor Unit:					
			<u>8.871 kN/m</u>		<u>12.780 kN/m</u>
M _{serv}	= 8.871 x 7.600 ² / 8	=	64.050 kNm	OK	
M _{ult}	= 12.780 x 7.600 ² / 8	=	92.269 kNm	OK	
V	= 12.780 x 7.600 / 2	=	48.563 kN	OK	