



Geometry for (Analysis Beam [Span 1 (M1), 1.2 DLxg + 1.5 LL]): Concrete Fixed-End Beam

Description = 300mm (D) x 1000mm (W) beam
Span (L) = 5000 mm
Span type = F (Simple), (E)xt, (I)nt, (C)ant, (P)rop, (F)ixed, (O)ther
Material type = C (Timber), (S)teel, (C)onc., (SC)comp. steel, (O)ther

I_x = 2250 x 10⁶ mm⁴
A_g = 300000 mm²
Density = 24.516625 kN/2500*9.80665/1000
E = 32668 MPa

Loading

Uniform loads (kN/m)				Point loads (kN)			
Uniform loads	UDL	Partial 1	Partial 2	Point loads	PL 1	PL 2	PL 3
Dead load (wdl) =	70.00			Dead load (pdl) =			
Live load (wll) =				Live load (pll) =			
Start from LHS (mm) =	0			Pos. from LHS (mm) =			
End from LHS (mm) =	5000			Ultimate load (p*) =	0.00	0.00	0.00
S.Wt =	7.35	kN/m					
Ultimate load (w*) =	104.43	0.00	0.00				
				Include S.Wt =	Y (Yes), (N)o		
Live Load type =	Floor (Concrete)			Strength loadcase =	C (Dead Only), (C)omb.		
Short term LL (Ψ _{su}) =	0.70	(Ψ _{sp}) =	1.00				
Long term LL (Ψ _{lu}) =	0.40	(Ψ _{lp}) =	0.60				
Actual LL (Ψ _{sa}) =	0.70	(Ψ _{la}) =	0.40				

Results at 4782mm from LHS

Position of result (x) = 4782 mm

1.35*G analysed							
	Left	At x	Right	Max	At	Min	At
Rdl	193.39		193.39				
Rll	0.00		0.00				
R*	261.07		261.07				
M*	-217.56	-163.17	-217.56	108.78	2500	-217.56	0
V*	261.07	-238.33	-261.07	261.07	0		
δdl	0.00	0.05	0.00	1.71	2500	0.00	0
δll	0.00	0.00	0.00	0.00	0	0.00	0
δdl+Ψ _s *δll	0.00	0.05	0.00	1.71	2500	0.00	0

δPll/δTot.II = 0.000

Graphs

* Deflections are Gross Ig immediate - assessment of long term effects to be considered

