



Queensland University of Technology
Brisbane Australia

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Table 1; properties of the plate element

Property	Numerical value
Young's Modulus (GPa)	207
Poisson's ratio	0.3
Density (Kgm ⁻³)	7738
Length (mm)	250
Height (mm)	300
Thickness(mm)	1

Table 2: comparison of the frequencies from the experiment and the present study
(*- the value is not presented in the experimental study)

P(N)	Experimental Study Frequency(Hz) [22]	Present Study Frequency(Hz)	Difference (%)
0	*	88.011	-
309.4	66.65	66.89	0.36
618.8	64.27	65.3	1.60
928.2	62.52	63.37	1.36
1237.6	57.72	58.12	0.69
1547	54.96	55.52	1.02
1856.4	50.32	51.02	1.39
2165.8	49.43	49.2	-0.47

Table 3: properties of the plate elements

Property	Numerical value
Young's Modulus (GPa)	45
Poisson's ratio	0.2
Density (Kgm ⁻³)	2300
L ₁ (m)	6
L ₂ (m)	4
thickness(m)	0.5

Table 4- material properties of elements

Structural Element	Material Property	Numerical Value
Shear walls of core	Density/(kgm ⁻³)	2400
	Poisson Ratio	0.18
	Young's Modulus /(GPa)	30
stiff shear walls	Density/(kgm ⁻³)	2400
	Poisson Ratio	0.18
	Young's Modulus /(GPa)	45

Table 5; element sizes

Element	Thickness /m
Shear walls of the cores	0.25
Stiff shear walls located at 7 th level	1

Table 6: applied loads on slabs

Levels	Loads on slabs(kPa)			
	Case 1	Case 2	Case 3	Case 4
1 to 6	2	2	2	2
7 and 8	0	2	2	2
9 and 10	0	0	1	2