اعتبار سنجی نرم افزار Auto-Base

Base Plate and Anchor Rod Design

1. Summary

4.7 Example: Large Moment Base Plate Design (Page: 38)

Design a base plate for axial dead and live loads equal to 100 and 160 kips, respectively, and moments from the dead and live loads equal to 1,000 and 1,500 kip-in., respectively .Bending is about the strong axis for a W12.96 wide flange column with d = 12.7 in. and $b_f = 12.2$ in. Conservatively, consider the ratio of the concrete to base plate area is unity ;*F*_y of the base plate is 36 ksi and f_c' of concrete is 4 ksi.

W 12X96

2. Geometry

2.1 Base Plate



Bx: 508 mm By: 508 mm tp=48.26 mm Cover: 38.1 mm Bolt Number: 6 Bolt Diameter: 38.1 mm Bolt Length: 508 mm

2.2 Column Profile





3. Material

Fc=27.579 *N/mm*2 *Fy*=248.211 *N/mm*2 *Fu*=392.266 *N/mm*2 *4. Forces*

P=1672.53 *KN M*2=406.745 *KN.m*

5. Design Type

LRFD

- 6. Results
- 6.1 Finite Element Model



6.2 Deformation



6.3 Base Plate Stress

S11: N-mm (Compare with 1.5 X 0.9 Fy = **335.1 N/mm2**)



S22: N-mm



6.4 Base Reactions





6.5 Anchor Bolt Force

Solver	T (KN)	Error %
Auto-Base	240.98	4.18
AISC 2005	231.31	4.18