

[80 . :2006 5 28]

1 (13 10 , 10)

1. (flexibility method) (stiffness method)

2. (reformation compatibility) (orthogonal effect)

3. Quenching Tempering

4. 500mm (, D10 , $f_y = 400\text{MPa}$, $f_{ck} = 24\text{MPa}$)

5. (5) (30)
(30) (5)

6. 가

7. (surface wave magnitude) 7.0

5.0 가

8. 가 ()

9.

10. (atten plate) 가

11. (mullion)

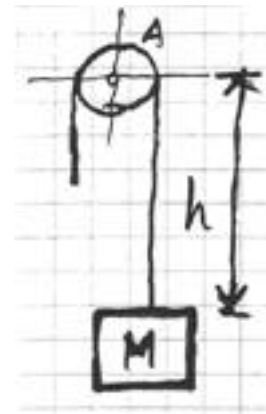
12. V.E (value engineering)

13. snapping

2 (6 4 , 25)

1. 가 $M = 5000\text{kg}$
 $v = 2\text{m/s}$

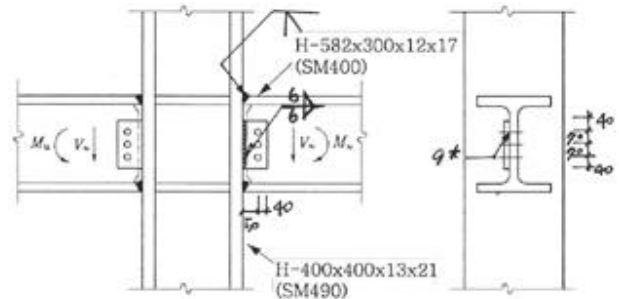
A



(, $= 2.0\text{m}$,
 $A = 16\text{cm}^2$,
 $E = 100\text{GN/m}^2$)

2. $M_u = 450\text{kN} \cdot \text{m}$, $V_u = 225\text{kN}$

: H-400x400x13x21(SM490)
H-582x300x12x17(SM400)
: F10T M20 ,
: 9mm(SM400)

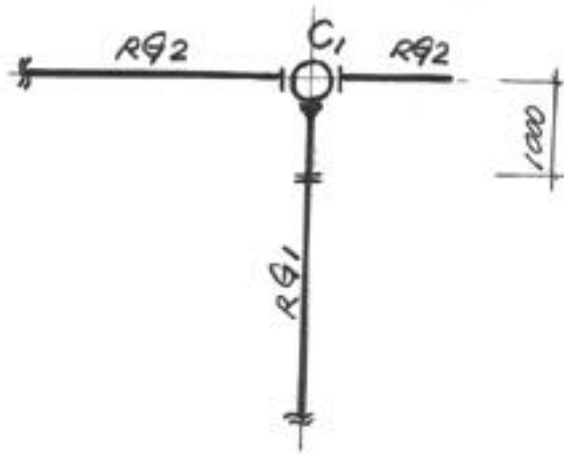


3.

【 】
가. RG1 : H-700 x 300 x 13 x 24(SS400),
RG2 : H-500 x 200 x 10 x 16(SS400)
C1 : -355.6 x 8(STK400)

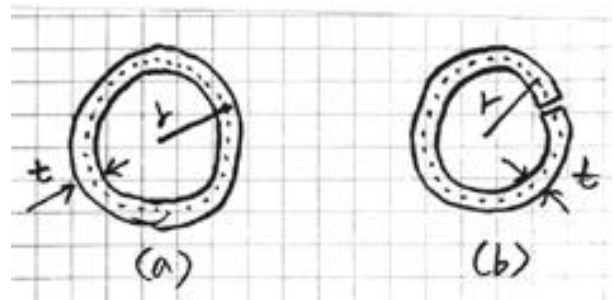
1 F10T

3



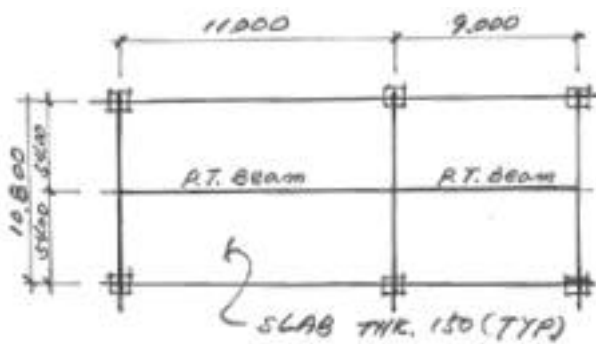
$$\frac{t}{r} = \frac{1}{20}$$

T가



4. Post tensioning Beam

가. Beam 450mm
 3.0kN/m²
 ○ : $f_{ck} = 30\text{N/mm}^2, f_y = 400\text{N/mm}^2, f_{pu} = 1860\text{N/mm}^2, -15.2$



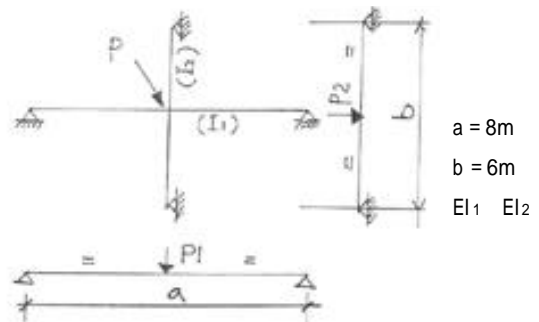
2.

P = 100kN

H

(

,SS400,F10T)



3.

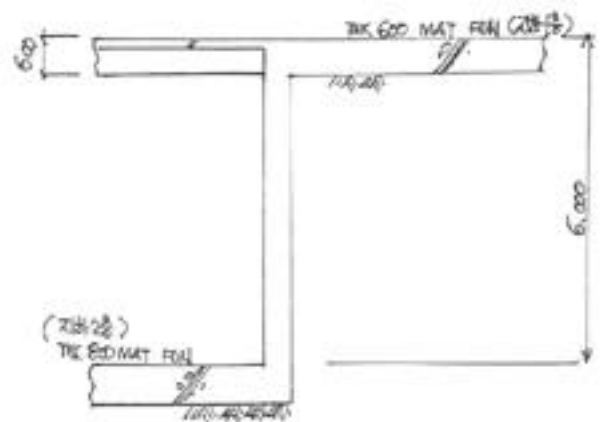
【 】

$f_{ck} = 27\text{MPa}, f_y = 400\text{MPa}, 1$
 150kN/m^2

5. 90m compression ring
 tension ring

6. -600x28(SM490) $P_c = 500\text{t}$ (), $M_t = 40.6\text{tf}\cdot\text{m}$ (), $M_b = 96.2\text{tf}\cdot\text{m}$ ()
 (, $KL_x = KL_y = 400\text{cm}$,
 $f_{ck} = 400\text{kgf/cm}^2$,

$$F_{ym} = F_y + (1.0 + 1.8 \frac{t}{D} \cdot F_y) \times 0.6 f_{ck} \times A_c$$

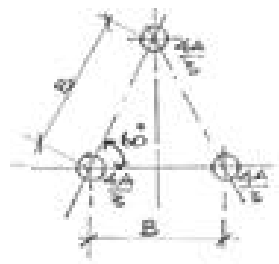
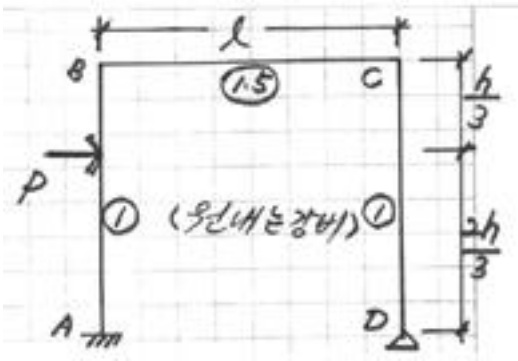


3 (6 4 , 25)

1. (a) (b)

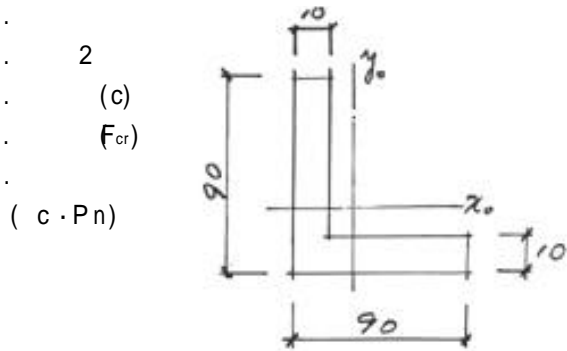
4.

r, t

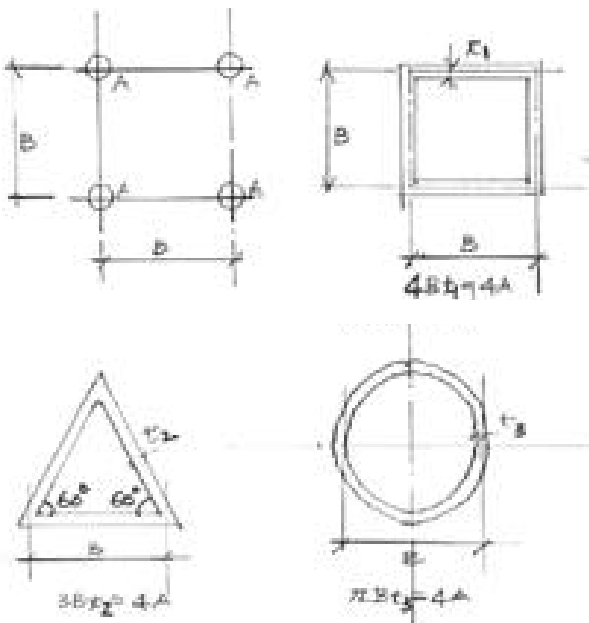


4 (6 4 , 25)

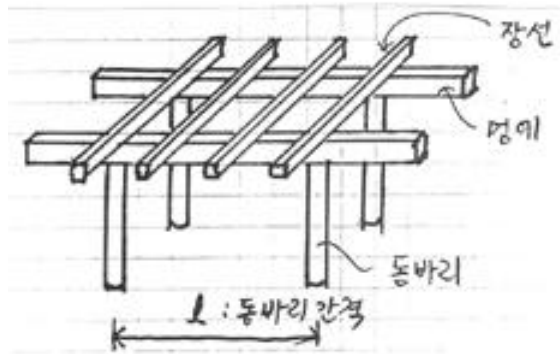
5. 4.0m (L-90×90×10, SS490)
가.



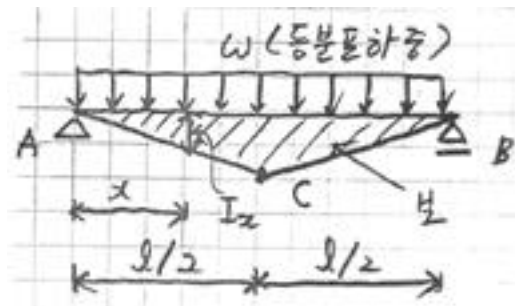
6. A B I (A)



1. 가.
(, 90×90, 1200mm , 가150mm , 가 6mm , 1/270 , $f_b = 13 \text{ N/m}^2$ E = 11000N/mm² 3m , 가 48.6×2.3(E=2.1×10⁵N/mm², Fy=240N/mm²)



2. A E) $I_x = \frac{2}{x}$



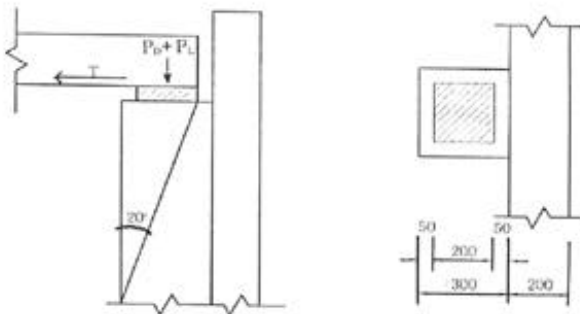
3.

(圖示)

【 】

:PD = 110kN ,
 :PL = 160kN ,
 T = 100kN ()

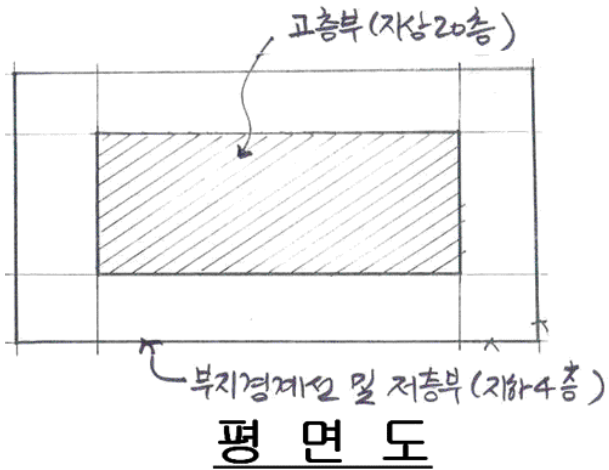
20 ° 가 $f_{ck} = 24\text{MPa}, f_y = 400\text{MPa}$
 D10



4.

Down-Ward
 Check Point

가



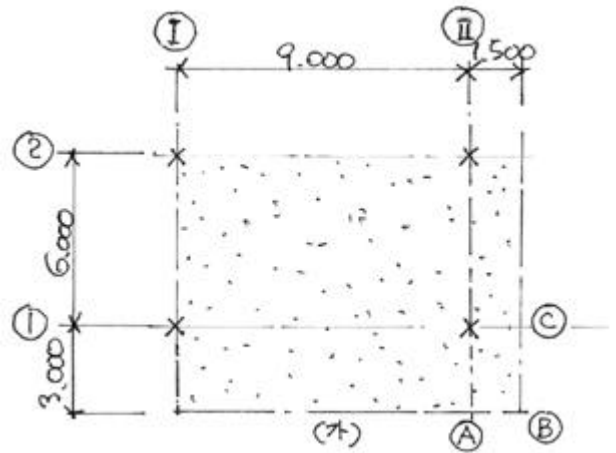
5.

【 】

가.D.L. = 7.5kN/m², L.L. = 5.0kN/m²,
 SS400 H H

.(가)

() ,



6.

