

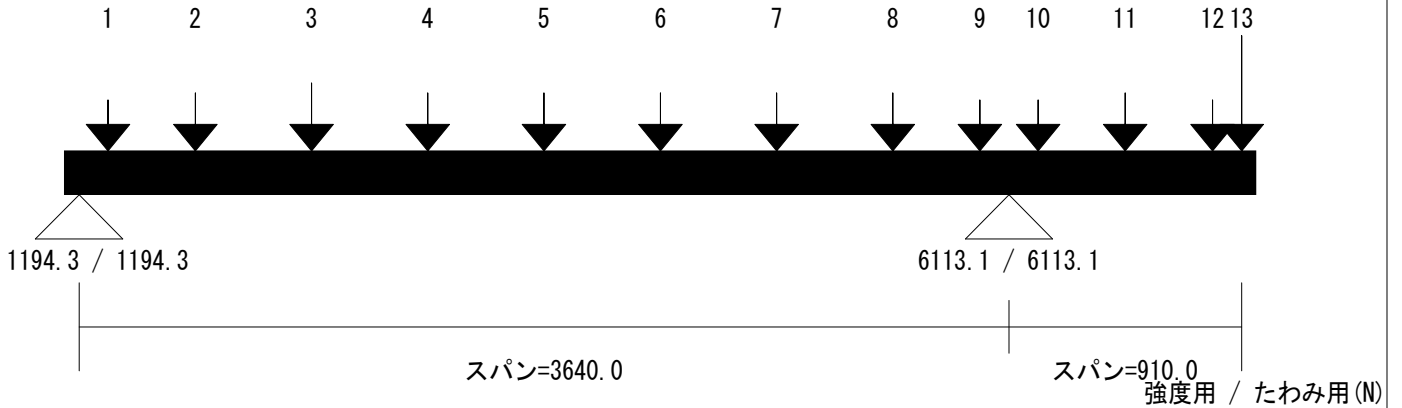
床ばり<2F-12><2>

長期(常時)

S-P-F 甲種2級

2-210

Y3通り X1~X0



- | | |
|---------------------------|------------------------------|
| 1) [113.8] 211.6 / 139.1 | 9) [3526.3] 211.6 / 139.1 |
| 2) [455.0] 423.1 / 278.2 | 10) [3753.8] 211.6 / 139.1 |
| 3) [910.0] 799.9 / 655.0 | 11) [4095.0] 423.1 / 278.2 |
| 4) [1365.0] 423.1 / 278.2 | 12) [4436.3] 211.6 / 139.1 |
| 5) [1820.0] 423.1 / 278.2 | 13) [4550.0] 2699.6 / 2699.6 |
| 6) [2275.0] 423.1 / 278.2 | |
| 7) [2730.0] 423.1 / 278.2 | |
| 8) [3185.0] 423.1 / 278.2 | |

番号) [位置] 強度用 / たわみ用 (N)

[せん断] $F_s = 1.8 \text{ N/mm}^2$, $K_d = 1.10$, $K_z = 1.0$

$$\tau = \frac{1.5 \times 6113.1 (Q)}{17860.00 (A)} = 0.51 \text{ N/mm}^2 \quad f_s = 0.66 \text{ N/mm}^2$$

検定比 = $0.51 / 0.66 = 0.78 \leq 1 \dots \text{OK}$

[曲げ] $F_b = 21.6 \text{ N/mm}^2$, $K_d = 1.10$, $K_z = 0.68$, $K_s = 1.00$

$$\sigma = \frac{2841649.8 (M)}{699510.00 (Z)} = 4.06 \text{ N/mm}^2 \quad f_b = 5.39 \text{ N/mm}^2$$

検定比 = $4.06 / 5.39 = 0.75 \leq 1 \dots \text{OK}$

[たわみ] $I = 8219.3$, $E = 960.0 \text{ kN/cm}^2$

許容たわみ量 = 0.91 cm (スパンの 1/ 400) かつ 1.00 cm 以下

最大たわみ量 = 0.0500 cm

$0.0500 / 0.91 = 0.05 \leq 1 \dots \text{OK}$

[はね出し]

許容たわみ量 = 0.46 cm (スパンの 1/ 200) かつ 2.00 cm 以下

最大たわみ量 = 0.2613 cm

$0.2613 / 0.46 = 0.57 \leq 1 \dots \text{OK}$

[平成12建告1459号]

許容たわみ量 = 1.46 cm (スパンの 1/ 250) cm 以下

最大たわみ量 = 0.1933 cm

$0.1933 / 1.46 = 0.13 \leq 1 \dots \text{OK}$

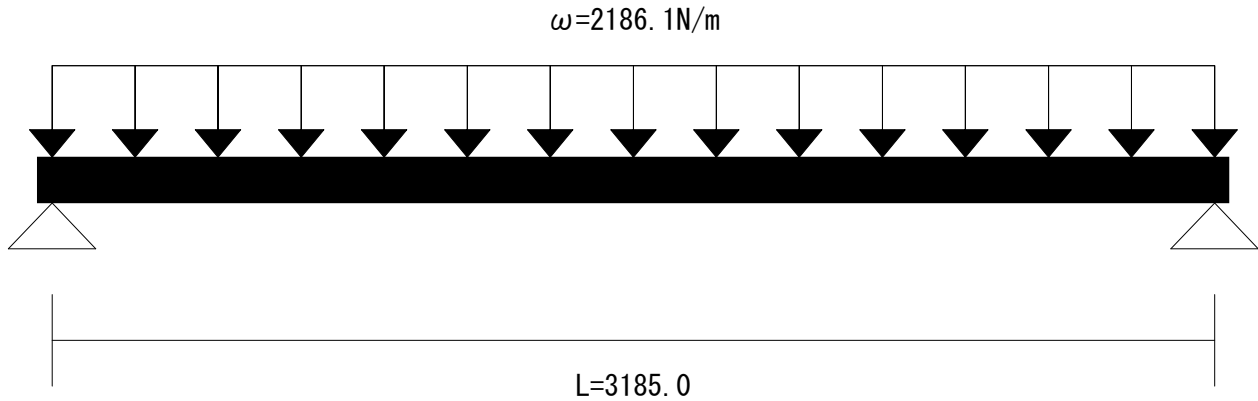
床ばり<2F-27>

140E 1級65V-55H

410

Y8通り X2~X:5.5

耐風ばりの計算

基準風速 $V_0=34.0\text{m/s}$, 地表面粗度区分Ⅲ

建築物の高さ7.71m, 軒の高さ5.7m, はりの高さ3.24m

 $W=848.97\text{N/m}^2$, $W=q \times C_f$, $q=931.2\text{N/m}^2$, $C_f=0.91$, $K_z=0.89$, 上階見付幅=2.45m/2, 下階見付幅=2.70m/2 $\omega=W \times \text{見付幅}=848.97 \times ((2.45+2.70)/2)=2186.11$ [せん断] $F_s=3.6\text{N/mm}^2$, $K_d=2.0$, $K_z=1.0$, $Q=\omega L/2$

$$\tau = \frac{1.5 \times 3481.4(Q)}{20915.00(A)} = 0.25\text{N/mm}^2 \quad f_s = 2.40\text{N/mm}^2$$

検定比 = $0.25 / 2.40 = 0.10 \leq 1 \dots \text{OK}$ [曲げ] $F_b=39.0\text{N/mm}^2$, $K_d=2.0$, $K_z=1.00$, $K_s=1.00$, $M=(\omega \times L^2)/8$

$$\sigma = \frac{2772045.6(M)}{310230.00(Z)} = 8.94\text{N/mm}^2 \quad f_b = 26.00\text{N/mm}^2$$

検定比 = $8.94 / 26.00 = 0.34 \leq 1 \dots \text{OK}$ [たわみ] $I=1380.6$, $E=1400$, $\delta=(5 \times \omega \times L^4)/(384 \times E \times I)$

許容たわみ量 = 1.59 cm(スパンの 1/200) かつ 2.00 cm以下

最大たわみ量 = 1.5155 cm

 $1.5155 / 1.59 = 0.95 \leq 1 \dots \text{OK}$