

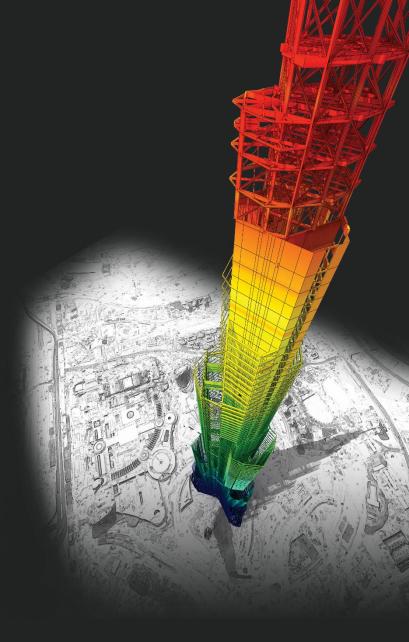
天車梁似乎沒考量弱軸應力





Integrated Design System for Building and General Structures





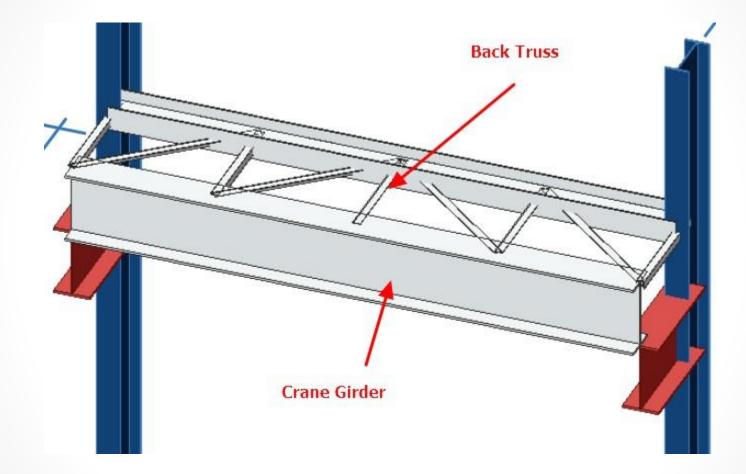


DESIGN OF General Structures

Integrated Design System for Building and General Structures



因為您勾選 Back Truss,所以沒考量弱軸應。



MIDAS



| Start Page | Member Member List | | | | | | ▼ × | Report | | | | | | | | |
|-------------------------------------|--------------------|---|--|-----------------------|-----------|---------------|--------|--|---------------------------------------|------------------|--------------|---------------------------|---------------------|----------------------------------|--|--|
| General | | | Truss | | | | | 100% | Print | Save R | eport Option | Summary Repo | rt 🗸 🗹 Ir | ndude Input Data | | |
| Member Name | ??6M-30T | Double click to Zoom | 218.70 | 0 cm ² Asx | | 112.000 cm | 2 | 7. Design | Force | | | | | | | |
| Apply this Member to Dwg & Report ~ | | BACK TRUSS | Xbar 20.000 cm Asy 52.000 cm | | | | | | Vertical Dir. | | Horizon | tal Dir. | I Dir. Running Dir. | | | |
| Material | | | Ybar 20.00 | 0 cm Sx | | 3330.000 cm | 3 | 1 | Vu,max | Rmax | Mu,max | Mu | Vu | Fx | | |
| Material | SN490 ~ | | Ix 66600.00 | 00 cm4 Sy | | 1120.000 cm | 3 | 37 | .68tonf | 37.68tonf | 43.83tonf·m | 43.38tonf·m | 14.47tonf | 92.54tonf | | |
| | | | Iy 22400.00 | 00 cm4 Zx | | 3670.000 cm | 3 | | | | | | | | | |
| Section | | | J 273.000 cm ⁴ Zy 1700.000 cm | | | | 13 | 8. Slenderness & Width-Thickness Ratio | | | | | | | | |
| Shape | H Section V | | ix 17.50 | 00 cm Cw | 80 | 040000.000 cm | 16 | | Slenderness | | | BTR | | DTR | | |
| 🗹 Use DB | H 400x400x13/21 $$ | | iy 10.10 | 0 cm Ixy | | 0.000 cm | 14 | | 59.4 | 1 | | 9.524 | | 24.15 | | |
| н | 40.00 cm 🔨 | | 9. Check Axial Capacity | | | | | | | | | | | | | |
| В | 40.00 cm | BRACKET | Calculation Result | Calculation Result | | | | | | | | | | | | |
| tw | 1.30 cm | | Serviceability & Stiffener | ⊖ st | rength (| Design F | 」右 | Mom | ont N | linor | Avic (V) | | | | | |
| tf | 2.10 cm | | Check Item | Value | Ratio | Rema 🖊 | く月 | 🗍 Moment Minor Axis (Y) 🚃 | | | | | | | | |
| r | 2.20 cm 🗸 | | W | idth-Thickness | Ratio | | | | ession onengr | | | 0.18 | 60 0.70 0.80 0.90 | 1.00 1.10 1.20 1.30 1.40 | | |
| | | Section View OWheel View | h/w | 24.15 | | | | | P _u (tonf) | Qs | | | Pn (tonf) | P _u / øP _n | | |
| Cover Plate | | Crane Information (Wheels) | λmax | 260 | OK(0.093) | | | | 92.54 | 1.00 | 00 1.0 | | 513 | 0.180 | | |
| Thickness | 0.00 cm | No. Dist. (m) Dead (tonf) Live (tonf) | (m) Dead (tenf) tim (tenf) | | | | | | | | | | | | | |
| Girder | | No. Dist. (III) Dead (torii) Live (torii) | Maximum Stress (tonf) | 814 | OK(0.374) | 0.66Fy = 2178 | | 10. Check | Moment Ca | pacity | | | | | | |
| Span | 6.00 m | 1 0.00 4.10 15.00 | Stress Range (tonf) | 814 | OK(0.108) | FSR = 7533 | | [Calcu | lation Summa | ry (Moment Ca | pacity)] | | | | | |
| Rail Width | 15.00 cm | 2 4.30 4.10 15.00 | Web Under Concentrated Force | | | | Width- | Thickness Rati | o (Flange, λp) | | | | 0.99 | | | |
| | | × | Pu,max (tonf) | 37.68 | | | | Width- | Thickness Rati | ο (Flange, λr) | | 0.38 | | | | |
| Back Truss | | Add Delete Insert | Flange Local Bending (tonf) | 40.93 | OK(0.921) | ø = 0.900 | | Width- | Thickness Rati | o (Web, λp) | | 0.25 | | | | |
| Span | 6.00 m | Consider Self Weight | Local Yielding (tonf) | 110 | OK(0.341) | ø = 1.000 | | Width- | Thickness Rati | o (Web, λr) | | 0.47 | | | | |
| Depth | 0.50 m | | Cripping (tonf) | 87.61 | OK(0.430) | ø = 0.750 | | Momen | nt Strength, M | ajor Axis | | 0.42 | | | | |
| Brace Tensio | n Flang | Impact Factor | Side Sway Buckling (tonf) | 717 | OK(0.053) | ø = 0.850 | | Momen | nt Strength, M | inor Axis | 0.00 | | | | | |
| End Stiffener | 二 勾選 Bac | ck Truss 🚟 👘 | Comp. Buckling (tonf) | 62.91 | OK(0.599) | ø = 0.900 | | | Check I | | | 0.20 0.30 0.40 0.56 0 | - | | | |
| Width | 14.3 | Kunnig bir. Ju. 10 | | Stiffener (End | i) | | | | | | | 43.83 | MI | or Axis (Y) 0.000 | | |
| Spacing | 1.50 m | | Vu (tonf) | 37.68 | OK(0.366) | øVn = 103 | | | M _u (ton λ _o | - | _ | 43.03 586, Web : 94.85 | Flance | : 9.586, Web : - | | |
| Thickness | 2.20 cm | Fatigue | BTR | 24.15 | 62.06 | Not required | | | λ _ρ | | - | 5.23, Web : 144 | - | : 25.23, Web : - | | |
| | | No. of Loading Cycles 20000 V | Shear (TFA) (tonf) | 0.000 | OK(0.000) | ø = 0.000 | _ | | Secti | on | | e : Compact | | ge : Compact | | |
| Mid Stiffener | | Deflection | Axial Strength (tonf) | 0.000 | OK(0.000) | ø = 0.000 | | | Condi | | - | : Compact | | Web : - | | |
| Width | 14.30 cm | Criteria for Deflection L / 900 ~ | Stiffener (Mid) | | | | | | ø | | 0.900 | | | 0.900 | | |
| Spacing | 1.50 m | Check Horizontal Deflection | Vu (tonf) | -36.75 | OK(0.357) | øVn = 103 | | | øM _n (tor | nf∙m) | | 103 | | 50.49 | | |
| Thickness | 1.90 cm | Horizontal Criteria L / 400 🗸 | BTR | 24.15 | 62.06 | Not required | ~ | | M _u / ø | Ma | | 0.424 | | 0.000 | | |

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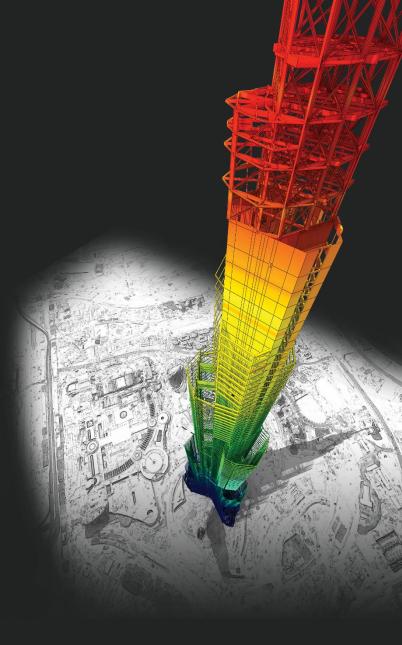
不勾選 "Back Truss"

| Material Sky Sk | ning Dir. Fx '84tonf |
|---|----------------------------|
| Meterial Profestall Profesta | ning Dir. Fx |
| Apply fits Member to Dwg & Report Material Section Section Single Section Shape H 400x400x13/21 July July 2200 cm ² ks 3330.000 cm ³ ks 3330.000 cm ³ ks 3330.000 cm ³ ks Shape H 400x400x13/21 July July 2200 cm ² ks 3570 cm ² ks July 2200 cm ² ks 3570 cm ² ks July 2200 cm ² ks July 2000 cm ³ ks 3000 | Fx |
| Material Swape State | Fx |
| Material Materin an anterin and anterin and anterial formaterin and anterial fo | |
| Meterial Service Image: Service and the service | /84tonf |
| Section Shape H Section Shape H Section M use DB H 400x400x13/21 H 400x400x13/21 W 1.30 orn W 1.30 orn W 1.30 orn M 400x400x13/21 W 1.30 orn W 1.30 orn W 0.00 orn Section Section New Owner Section New Owner Section New Wheel New Cover Plate Cover Plate Section New Wheel New Carder Section New Wheel New No. Dest. (m) Dead (tonf) Live (tonf) Section New Nummer Section New Nummer Section New Carder Section New Wheel New Nummer Section New Nummer Sectin New Nummer Sectin New | |
| Shape H Section ✓ Use D8 H 400x400x13/21 H 40.00 cm M 40.00 cm W 1.33 cm tf 2.20 cm Ø Sector View Wheel View Cover Plate Occurrent Streagth Design f Thickness 0.00 cm 1.30 cm f Moment Capacity Back Truss 0.00 1.000 4.10 15.00 No. Date f Insert Streage F384 0.600 pm Back Truss 0.00 0.50 m Delete Insert Streage Streage p 1.000 5.13 Delete 0.00 5.13 Delete 0.00 0.01 (tm) 0.01 (tm) <t< td=""><td></td></t<> | |
| Back Truss Back Truss Back Truss Solution | |
| Liste bo If HoxeRotaci/izi H 40.00 B 40.00 B 40.00 W 1.30 If 2.10 M 1.30 M 0.00 If 2.20 Span 6.00 Ral Width 15.00 Depth 0.50 no 4.10 Ison 10.00 V Add Depth 0.50 No 10.00 Ison 0.01 No 10.00 No 10.00 V Add Depth 0.50 No 10.00 No 10.00 </td <td>]</td> |] |
| B 40.00 Cm BRACKET Stragth Design f Add Column B 40.00 cm 0.00 cm | |
| B 40.00 cm Column BRACKET Gladation Result Strength Design i f Moment Minor Axis (Y) tf 2.10 cm 0 0.00 0 0.00 | |
| W L.30 cm tf 2.10 cm | |
| th 2.10 cm th r 2.20 cm Section View Wheel View Cover Plate Crane Information (Wheels) Max 260 OK(0.093) Dist. (m) Dead (tonf) Live (tonf) Max 260 OK(0.093) Dist. (m) Dead (tonf) Live (tonf) Max 260 OK(0.093) Dist. (m) Dead (tonf) Live (tonf) Max Dist. (m) Dead (tonf) Live (tonf) Stess Range (tonf) 814 OK(0.374) 0.66Fy = 2178 Stess Range (tonf) 814 OK(0.108) FSR = 7533 Dist. (m) Dead (tonf) Dist. (m) Dist. (m) Dist. (m) Dist. (m) Dist. (m) Stess Range (tonf) 814 OK(0.1374) 0.66Fy = 2178 Stess Range (tonf) Stat Dist. (m) Dist. | |
| r 2.20 cm M M Add Oete Insert Span 6.00 m 2 4.30 4.10 15.00 Span 6.00 m Stress Range (tonf) 814 OK(0.931) 5.784 1.000 1.000 513 Maximum Stress (tonf) 814 OK(0.108) FSR = 7533 Image: Conservation (Winess Ratio) Image: Conservation (Strenger) Moment Capacity) Image: Conservation (Conservation (Strenger) Image: Conservation (Stre | |
| Image: Span 6.00 m Add Delete Insert Span 6.00 m Span 6.00 m Depth 0.50 m | <u> </u> |
| Cover Plate Crane Information (Wheels) Amax 260 OK(0.093) Thickness 0.00 cm frage | 20 1.30 1.40 1.50 |
| Thickness 0.00 cm Girder Span 6.00 m Span 6.00 1 0.00 4.10 15.00 2 4.30 4.10 15.00 Veb Under Concentrated Force Mode Under Concentrated Force Midth-Thickness Ratio (Flange, Ap) Vidth-Thickness Ratio (Flange, Ap) Back Truss 6.00 m Ocional Mathematication (Concentrated Force) Pu,max (tonf) 37.68 Midth-Thickness Ratio (Flange, Ap) Vidth-Thickness Ratio (Flange, Ap) Vidth-Thickness Ratio (Flange, Ap) Vidth-Thickness Ratio (Flange, Ap) Vidth-Thickness Ratio (Web, Ar) Vidth |)113 |
| | 115 |
| Grider Gride Grider Grider | |
| span 0.00 m Rail Width 15.00 mail Width 15.00 mail Width 15.00 Back Truss Add Span 6.00 Span 0.50 mart Eactor mart Eactor Moment Strength, Major Axis Moment Strength, Major Axis | |
| Rail Width 15.00 cm Back Truss Add Delete Insert Span 6.00 m Consider Self Weight 110 OK(0.341) Ø = 0.900 Depth 0.50 moart Eactor Torping (tonf) 37.61 OK(0.430) Ø = 0.750 | |
| Back Truss Add Delete Insert Span 6.00 m Depth 0.50 m | |
| Span 6.00 m Depth 0.50 Impart Eactor | |
| Depth 0.50 m Impact Eactor Cripping (tonf) 87.61 OK(0.430) Ø = 0.750 | |
| impact Eactor | |
| | |
| | 0 1.30 1.40 1.50 |
| □ End Stiffener 不勾選 Back Truss |) |
| Width 14.30 cm Runnin Dir. 10.40 | |
| Spacing 1.50 m Flange : 9.586, Web : 94.85 Flange : 9.586 | |
| Thickness 2.20 cm Fatigue BTR 24.15 62.06 Not required Thickness 2.20 cm Fatigue 20000 0.000 | eb : - |
| No. of Loading Cycles 20000 Shear (TFA) (tonf) 0.000 OK (0.000) Ø = 0.000 Section Flange : Compact Flange : Compact Flange : Compact | |
| Mid Stiffener Deflection Axial Strength (tonf) 0.000 OK(0.000) Ø = 0.000 Condition Web : Compact Web : | /eb : - |
| Width 14.30 Criteria for Deflection L / 900 Stiffener (Mid) Ø 0.900 0.900 0.900 | /eb : - |
| Spacing 1.50 Occupient Vu (tonf) -36.75 OK(0.357) øVn = 103 øMn (tonf·m) 103 50.49 | /eb : - |
| Thickness 1.90 cm Horizontal Criteria L / 400 BTR 24.15 62.06 Not required V Mu / øMn 0.424 0.859 | /eb : - |
| 11. Check Interaction of Combined Strength | /eb : - |
| Design(F4) Check(F5) Report Apply(F3) | /eb : - |

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Thank You





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