

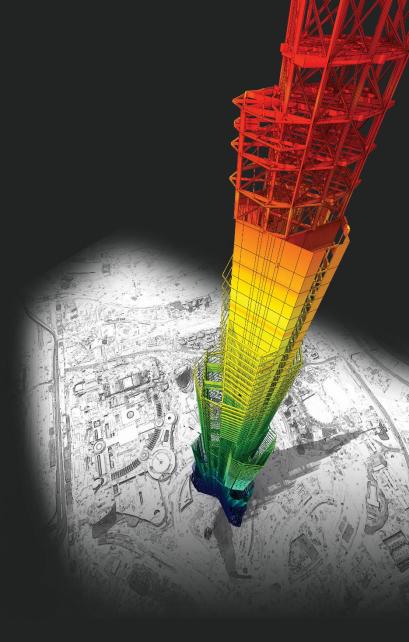
# 天車梁似乎沒考量弱軸應力





Integrated Design System for Building and General Structures





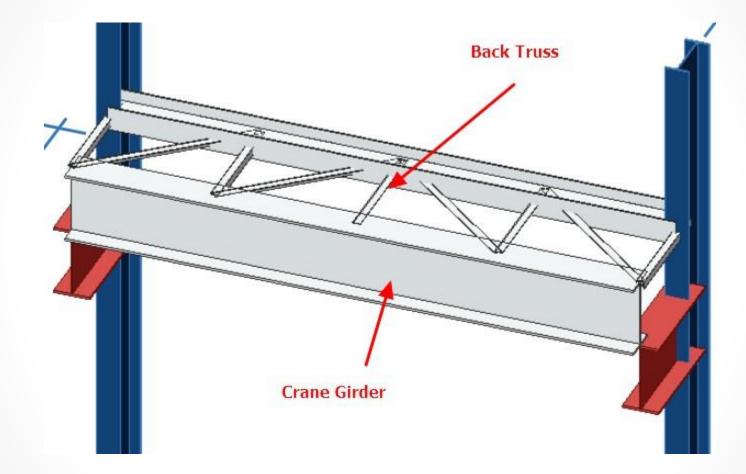


## **DESIGN OF General Structures**

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 <sup>2</sup> 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 <sup>4</sup> 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)	<del></del>				
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 <sub>u</sub> (tonf)	Qs			Pn (tonf)	P <sub>u</sub> / øP <sub>n</sub>		
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 <sub>u</sub> (ton λ <sub>o</sub>	-	_	43.03 586, Web : 94.85	Flance	: 9.586, Web : -		
Thickness	2.20 cm	Fatigue	BTR	24.15	62.06	Not required			λ <sub>ρ</sub>		-	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 <sub>n</sub> (tor	nf∙m)		103		50.49		
Thickness	1.90 cm	Horizontal Criteria L / 400 🗸	BTR	24.15	62.06	Not required	~		M <sub>u</sub> / ø	Ma		0.424		0.000		

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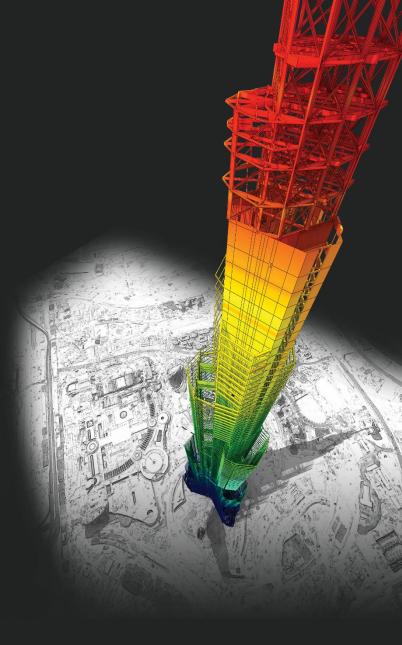
## 不勾選 "Back Truss"

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 <sup>2</sup> ks       3330.000 cm <sup>3</sup> ks       3330.000 cm <sup>3</sup> ks       3330.000 cm <sup>3</sup> ks         Shape       H 400x400x13/21       July       July       2200 cm <sup>2</sup> ks       3570 cm <sup>2</sup> ks       July       2200 cm <sup>2</sup> ks       3570 cm <sup>2</sup> ks       July       2200 cm <sup>2</sup> ks       July       2000 cm <sup>3</sup> 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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