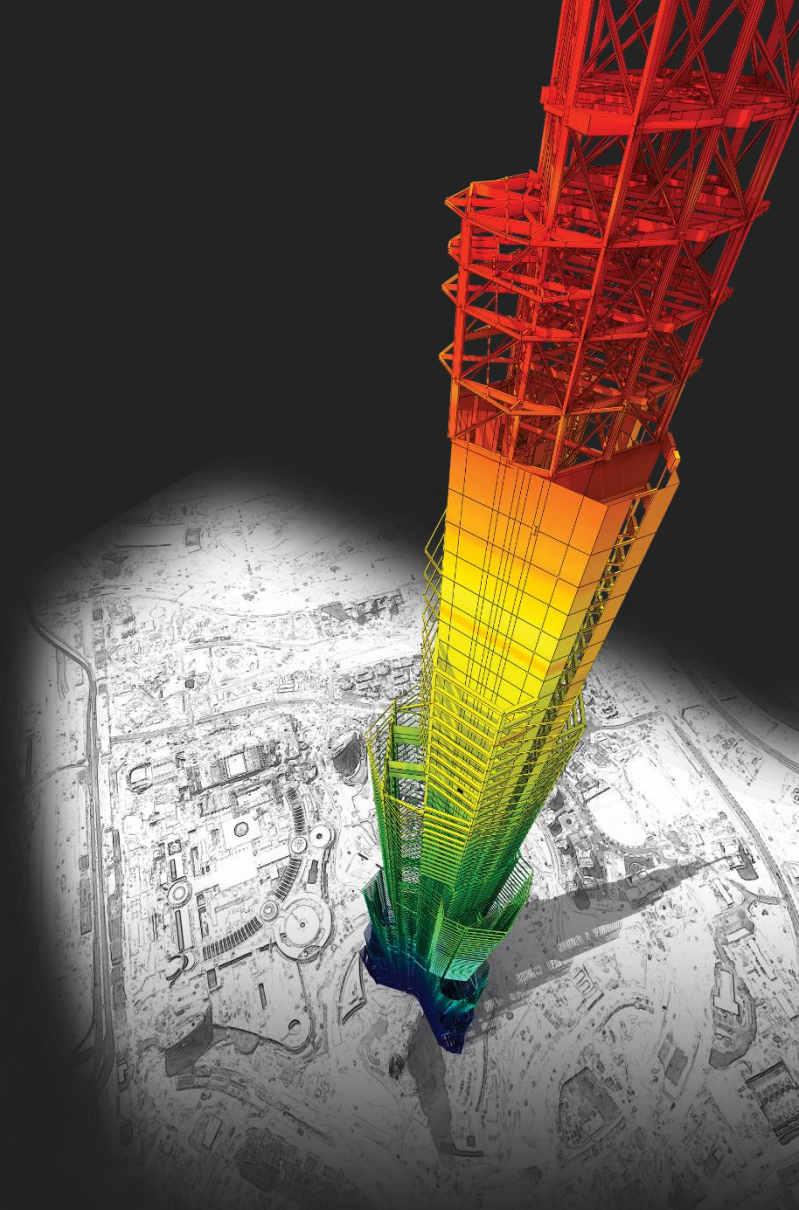


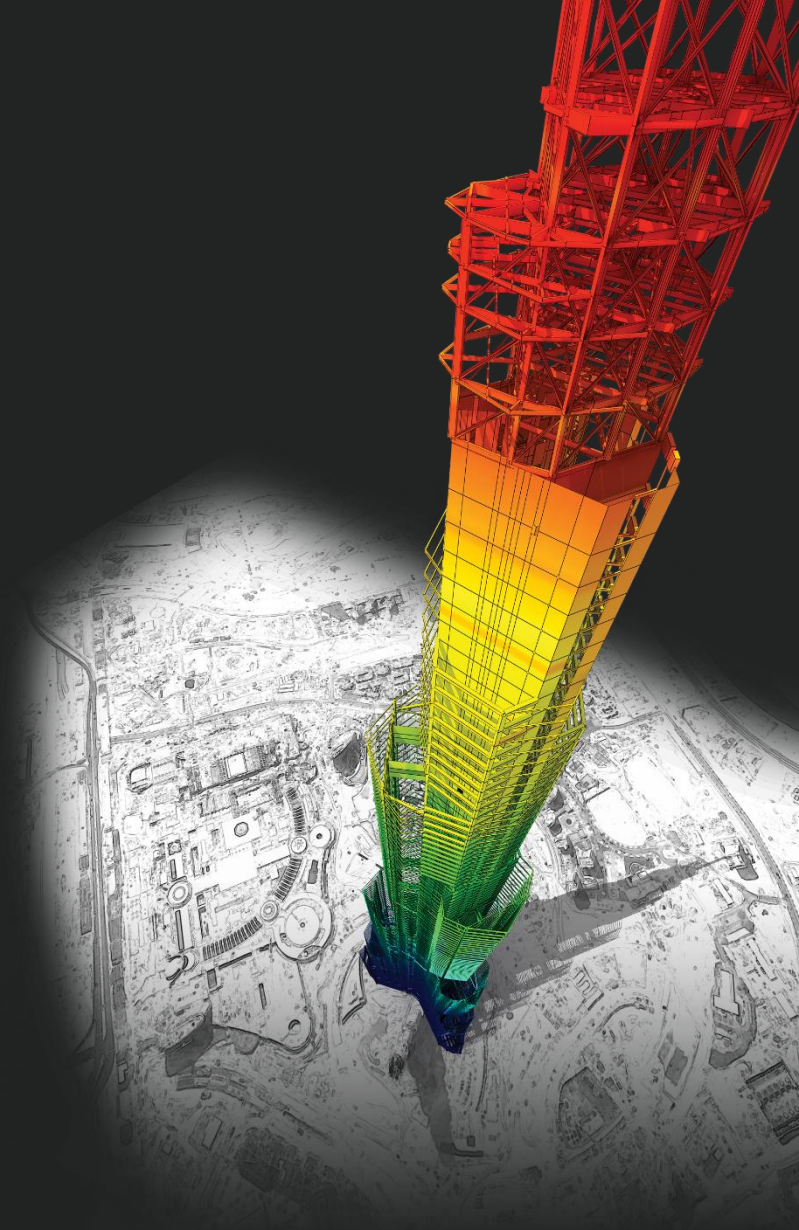
如何看 Calculation Report 的 Force



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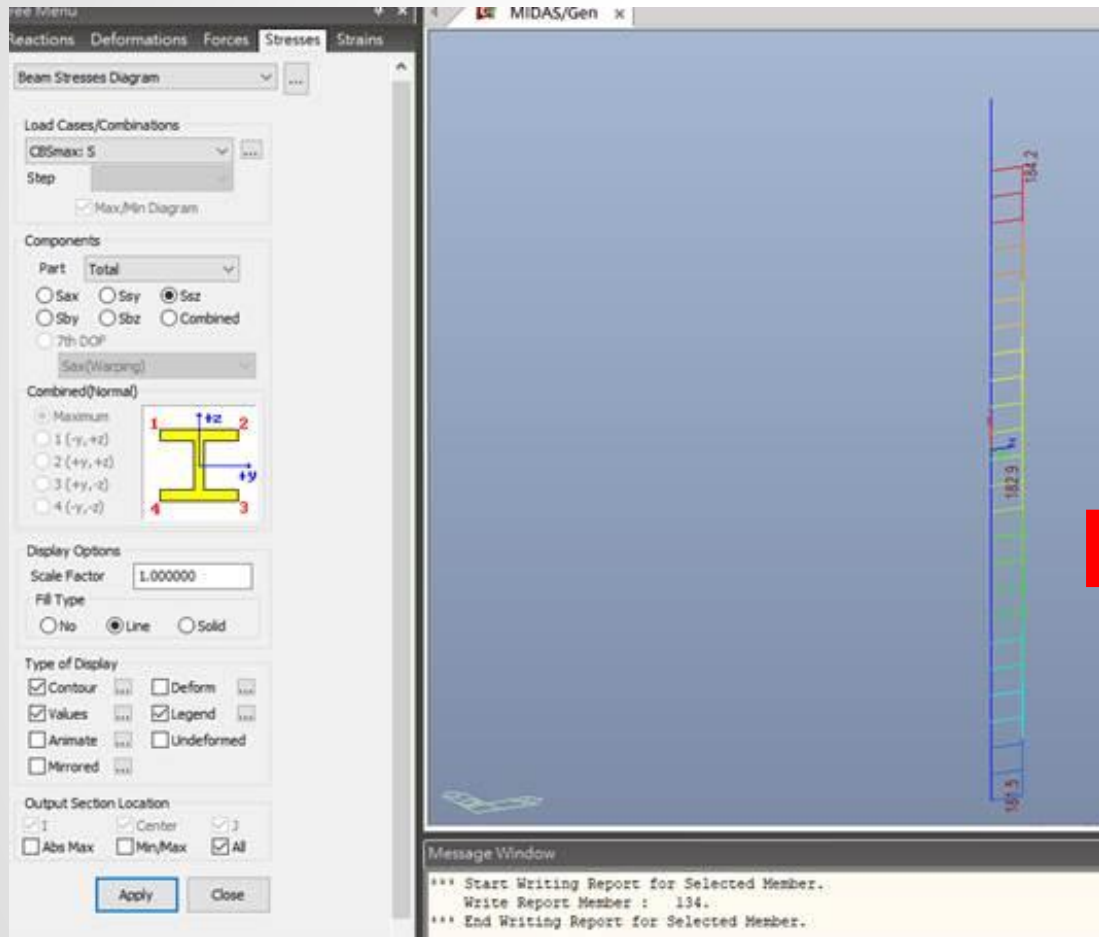
問題



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下圖的桿件為梁剪應力圖(Ssz)



圖上的應力值怎麼跟報表計算的不相同

```

=====
[[[*]]] CHECK SHEAR STRESSES.
=====

midas Gen - Steel Code Checking [ TWN-ASD96 ] Gen 2023
=====

( ). Calculate allowable shear stress in local-y direction (Fvy).
[ TWN-ASD96 Specification 7.5 ]
-. Fvy = 0.40*Fy = 10124.205 tonf/m^2.

( ). Calculate shear stress in local-y direction (fvy).
( LCB = 37, POS = J )
-. Applied shear force : Fyy = -4.62 tonf.
-. fvy = Fyy / Asy = 132.405 tonf/m^2.

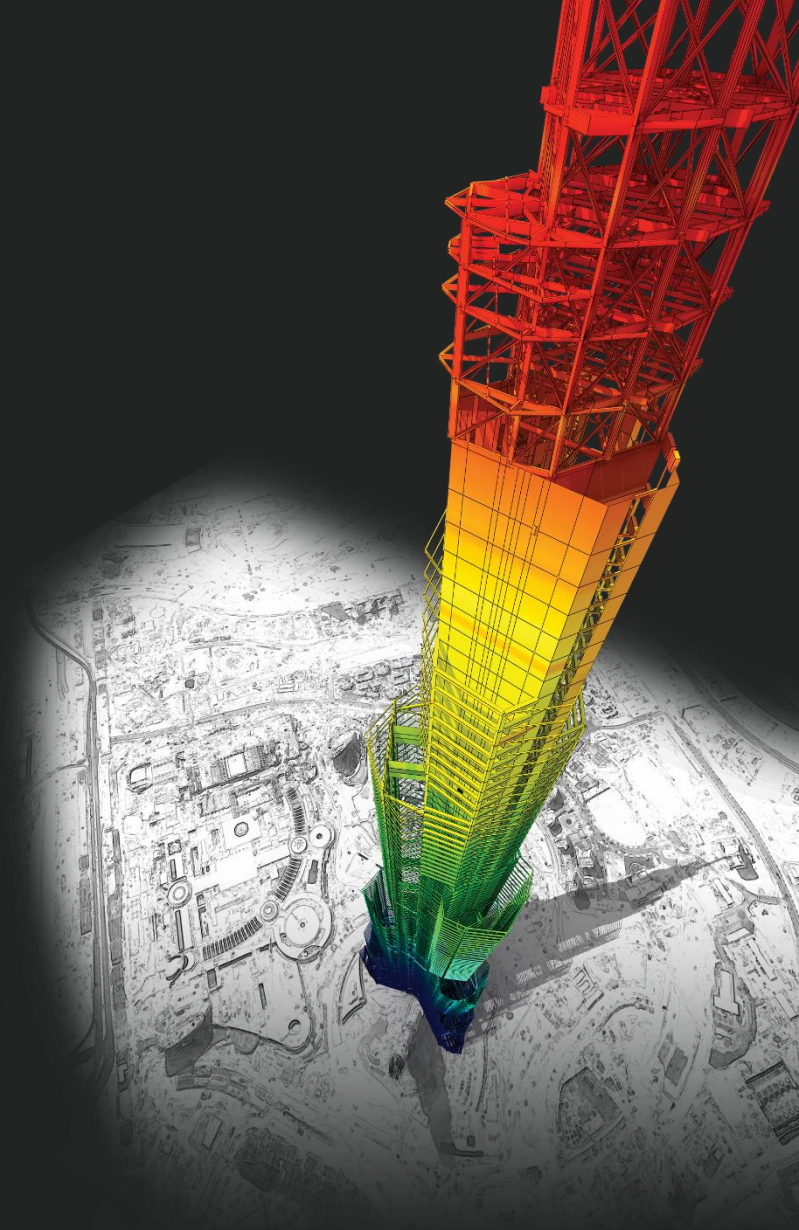
( ). Check ratio of shear stress (fvy/Fvy).
fvy      132.405
----- = ----- = 0.013 < 1.000 ----> 0.K.
Fvy      10124.205

( ). Calculate allowable shear stress in local-z direction (Fvz).
[ TWN-ASD96 Specification 7.5 ]
-. DTR = h/tw = 48.33 < 100/SQRT[Fy] ----> (7.5-1)
-. Fvz = 0.40*Fy = 10124.205 tonf/m^2.

( ). Calculate shear stress in local-z direction (fvz).
( LCB = 5, POS = J )
-. Applied shear force : Fzz = 9.21 tonf.
-. fvz = Fzz / Asz = 264.469 tonf/m^2.

( ). Check ratio of shear stress (fvz/Fvz).
fvz      264.469
----- = ----- = 0.026 < 1.000 ----> 0.K.
Fvz      10124.205
    
```

回答



DESIGN OF General Structures

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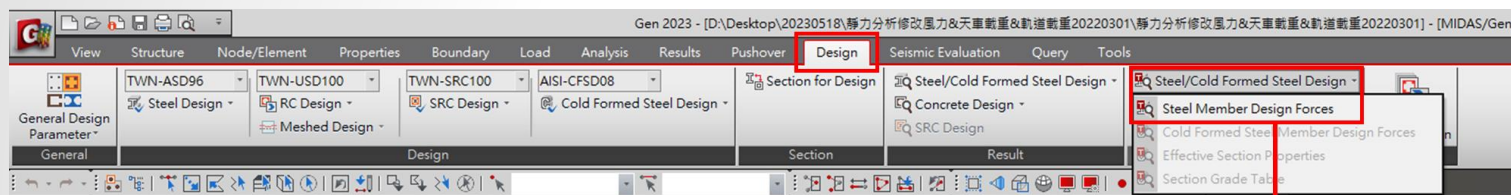
如果您要看 Member 的 Design Force，您不能看 Beam Stress Diagram 的 Value。

在 Design > Force/Property > Steel/Cold Formed Design > Steel Member Design Force，您可以看 Member 的 Design Force。

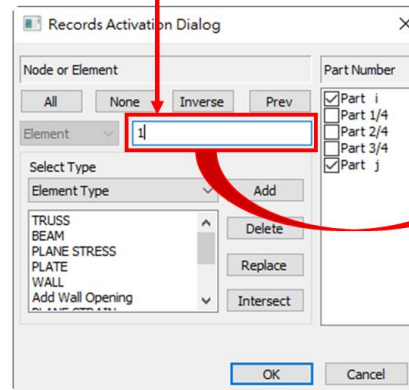
比如說，我要看 Element 1 的 Design Force。

所以在 Design > Force/Property > Steel/Cold Formed Design > Steel Member Design Force > 輸入 Element 1 > 按 OK。

您可以看 Steel Code Check Detail Calculation 的 Value 跟 Steel Member Design Force 的 Value 一樣。



輸入 Element 1。

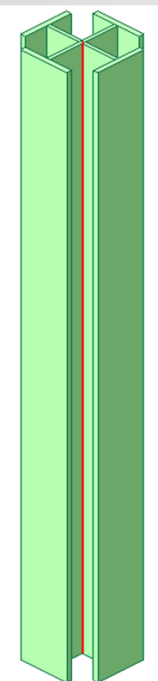


The 'Steel Member Design Forces' table is shown. A red box highlights the first row of data, which corresponds to Element 1.

Memb	Part	LCom Name	Type	Fx (tonf)	Fy (tonf)	Fz (tonf)	Mx (ton*fcm)	My (ton*fcm)	Mz (ton*fcm)
1	J	sLCB1	Max	-278.1056	-2.6849	-17.9580	0.0000	5882.6591	1180.7388
1	J	sLCB1	Max	-284.3778	-2.6849	-17.9580	0.0000	-3378.2646	-313.9314
1	J	sLCB2	Max	-57.3348	-2.1974	0.7557	0.0000	3557.2208	831.9265
1	J	sLCB2	Max	-65.6070	-1.7461	0.9641	0.0000	4000.6655	-265.7681
1	J	sLCB3	Max	-54.4270	-2.1847	1.0916	0.0000	3516.0668	833.3300
1	J	sLCB3	Max	-62.6993	-1.7334	1.2999	0.0000	4132.6989	-257.2671
1	J	sLCB4	Max	-347.9698	-3.6327	-35.2037	0.0000	7775.6498	1220.9640
1	J	sLCB4	Max	-356.2420	-3.1814	-35.5023	0.0000	-10455.8894	-678.6629
1	J	sLCB5	Max	-345.3915	-3.6258	-35.1925	0.0000	7772.9121	1205.7386
1	J	sLCB5	Max	-353.6638	-3.1745	-35.4911	0.0000	-10452.8609	-687.1354
1	J	sLCB6	Max	-121.6720	-2.4931	-17.2528	0.0000	5639.1629	246.4937
1	J	sLCB6	Max	-129.9443	-2.7180	-17.6720	0.0000	-3366.2051	-1204.0059
1	J	sLCB7	Max	-121.6720	-2.4931	-17.2528	0.0000	5639.1629	246.4937
1	J	sLCB7	Max	-129.9443	-2.7180	-17.6720	0.0000	-3366.2051	-1204.0059
1	J	sLCB8	Max	-382.1865	-3.4718	-17.2225	0.0000	5774.3794	2436.5506
1	J	sLCB8	Max	-390.4587	-3.2636	-17.6406	0.0000	-3215.0599	561.7364
1	J	sLCB9	Max	-382.1865	-3.4718	-17.2225	0.0000	5774.3794	2436.5506
1	J	sLCB9	Max	-390.4587	-3.2636	-17.6406	0.0000	-3215.0599	561.7364
1	J	sLCB10	Max	-103.4554	-2.0719	6.8411	0.0000	2820.7093	1172.0359
1	J	sLCB10	Max	-111.7276	-2.0719	6.8411	0.0000	6348.6836	18.6162
1	J	sLCB11	Max	-110.4324	-2.2105	6.2949	0.0000	3001.4309	1230.7907
1	J	sLCB11	Max	-118.7047	-2.2105	6.2949	0.0000	6247.7078	0.1992
1	J	sLCB12	Max	5.0646	-2.1175	-12.3808	0.0000	4929.2749	-628.9625
1	J	sLCB12	Max	-3.2077	-2.1175	-12.3808	0.0000	-1455.5033	-1807.7564
1	J	sLCB13	Max	-1.9124	-2.2561	-12.9270	0.0000	5109.9964	-570.2077
1	J	sLCB13	Max	-10.1847	-2.2561	-12.9270	0.0000	-1556.4791	-1628.1734
1	J	sLCB14	Max	-422.6962	-3.6032	-33.8187	0.0000	7578.9674	1610.8163
1	J	sLCB14	Max	-430.9684	-3.6032	-33.8187	0.0000	-9861.3285	-395.6877
1	J	sLCB15	Max	-429.6732	-3.7418	-34.3649	0.0000	7759.6890	1669.5710
1	J	sLCB15	Max	-437.9454	-3.7418	-34.3649	0.0000	-9962.3043	-413.5046
1	J	sLCB16	Max	-530.1674	-3.6035	-16.4653	0.0000	5691.3708	3344.5655
1	J	sLCB16	Max	-538.4397	-3.6035	-16.4653	0.0000	-2799.7594	1338.5227
1	J	sLCB17	Max	-537.1444	-3.7421	-17.0115	0.0000	5872.0923	3403.3203
1	J	sLCB17	Max	-545.4167	-3.7421	-17.0115	0.0000	-2900.7352	1320.1058
1	J	sLCB18	Max	-205.8379	-2.4961	-9.3406	0.0000	4581.1962	1157.2880
1	J	sLCB18	Max	-214.1102	-2.4961	-9.3406	0.0000	-235.7425	-232.3060
1	J	sLCB19	Max	-300.5714	-2.9984	-23.7569	0.0000	6270.9065	1203.4016

Steel Code Check Detail Calculation

Design > Force/Property > Steel/Cold Formed Design > Steel Member Design Force



Element No. 1

MIDAS/Text Editor - [静力分析修改風力&地震載重&軌道載重20220301.acs]

File Edit View Window Help

midas Gen - Steel Code Checking [TWN-ASD96] Gen 2023

Load Comb = 17

* MEMBER NO = 1, ELEMENT TYPE = Beam
 * LOADCOMB NO = 17, MATERIAL NO = 2, SECTION NO = 128

* SECTION PROPERTIES : Designation = CT 445x550x35x55
 Shape = H2T - Section. (Built-up)
 Part I >
 Depth = 92.000, Flg Width = 55.000
 Web Thick = 3.500, Flg Thick = 5.500
 Part I <
 Depth = 44.500, Flg Width = 55.000
 Web Thick = 3.500, Flg Thick = 5.500

Area = 1.76650e+03, Asy = 7.25333e+02, Asz = 7.27083e+02
 Ybar = 4.62500e+01, Zbar = 4.60000e+01, Qyb = 1.39534e+03, Qzb = 1.40295e+03
 Syy = 3.13263e+04, Szz = 3.15030e+04, Zyy = 4.04647e+04, Zzz = 4.06856e+04
 Iyy = 1.44101e+06, Izz = 1.45702e+06, Iyz = 0.00000e+00
 ry = 2.85612e+01, rz = 2.87194e+01
 J = 1.46304e+04, Cwp = 5.73868e+08

* DESIGN PARAMETERS FOR STRENGTH EVALUATION :
 Ly = 5.95700e+02, Lz = 5.95700e+02, Lu = 5.95700e+02
 Ky = 1.00000e+00, Kz = 1.00000e+00

* MATERIAL PROPERTIES :
 Fy = 2.53105e+00, Es = 2.03890e+03, MATERIAL NAME = A36

* FORCES AND MOMENTS AT (J) POINT :
 Axial Force Fxx = -5.37144e+02
 Shear Forces Fyy = -3.74208e+00, Fzz = -1.70115e+01
 Bending Moments My = 5.87209e+03, Mz = 3.40332e+03
 End Moments Myi = -2.90074e+03, Myj = 5.87209e+03 (for Lb)
 Myi = -2.90074e+03, Myj = 5.87209e+03 (for Ly)
 Mzi = 1.32011e+03, Mzj = 3.40332e+03 (for Lz)

Memb	Part	LCom Name	Type	Fx (tonf)	Fy (tonf)	Fz (tonf)	Mx (tonfcm)	My (tonfcm)	Mz (tonfcm)
1	J	sLCB1	Max	-276.1056	-2.6849	-17.9580	0.0000	5882.6591	1180.7388
1	I	sLCB1	Max	-284.3778	-2.6849	-17.9580	0.0000	-3378.2646	-313.9314
1	J	sLCB2	Max	-57.3348	-2.1974	0.7557	0.0000	3557.2208	831.9265
1	I	sLCB2	Max	-65.6070	-1.7461	0.9641	0.0000	4000.6655	-265.7681
1	J	sLCB3	Max	-54.4270	-2.1847	1.0916	0.0000	3516.0668	833.3300
1	I	sLCB3	Max	-62.6993	-1.7334	1.2999	0.0000	4132.6989	-257.2671
1	J	sLCB4	Max	-347.9698	-3.6327	-35.2037	0.0000	7775.6498	1220.0640
1	I	sLCB4	Max	-356.2420	-3.1814	-35.5023	0.0000	-10455.8894	-687.1354
1	J	sLCB5	Max	-345.3915	-3.6258	-35.1925	0.0000	7772.9121	1205.7386
1	I	sLCB5	Max	-353.6638	-3.1745	-35.4911	0.0000	-10452.8609	-687.1354
1	J	sLCB6	Max	-121.6720	-2.4931	-17.2528	0.0000	5639.1629	246.4937
1	I	sLCB6	Max	-129.9443	-2.7180	-17.6720	0.0000	-3366.2051	-1204.0059
1	J	sLCB7	Max	-121.6720	-2.4931	-17.2528	0.0000	5639.1629	246.4937
1	I	sLCB7	Max	-129.9443	-2.7180	-17.6720	0.0000	-3366.2051	-1204.0059
1	J	sLCB8	Max	-382.1885	-3.4718	-17.2225	0.0000	5774.3794	2436.5506
1	I	sLCB8	Max	-390.4587	-3.2636	-17.6406	0.0000	-3215.0599	-561.7364
1	J	sLCB9	Max	-382.1885	-3.4718	-17.2225	0.0000	5774.3794	2436.5506
1	I	sLCB9	Max	-390.4587	-3.2636	-17.6406	0.0000	-3215.0599	-561.7364
1	J	sLCB10	Max	-103.4554	-2.0719	6.8411	0.0000	2820.7093	1172.0359
1	I	sLCB10	Max	-111.7276	-2.0719	6.8411	0.0000	6348.6836	18.6162
1	J	sLCB11	Max	-110.4324	-2.2105	6.2949	0.0000	3001.4309	1230.7907
1	I	sLCB11	Max	-118.7047	-2.2105	6.2949	0.0000	6247.7078	0.1992
1	J	sLCB12	Max	5.0646	-2.1175	-12.3808	0.0000	4929.2749	-628.9625
1	I	sLCB12	Max	-3.2077	-2.1175	-12.3808	0.0000	-1455.5033	-1807.7564
1	J	sLCB13	Max	-1.9124	-2.2561	-12.9270	0.0000	5109.9964	-570.2077
1	I	sLCB13	Max	-10.1847	-2.2561	-12.9270	0.0000	-1556.4791	-1828.1734
1	J	sLCB14	Max	-422.6962	-3.6032	-33.8187	0.0000	7578.9674	1610.8162
1	I	sLCB14	Max	-430.9684	-3.6032	-33.8187	0.0000	-9861.3285	-395.0877
1	J	sLCB15	Max	0.0000	0.0000	0.0000	0.0000	7759.6890	1669.5710
1	I	sLCB15	Max	0.0000	0.0000	0.0000	0.0000	-9662.3043	-413.5046
1	J	sLCB16	Max	0.0000	0.0000	0.0000	0.0000	5691.3708	334.5655
1	I	sLCB16	Max	0.0000	0.0000	0.0000	0.0000	-2790.7594	1338.5227
1	J	sLCB17	Max	-537.1444	-3.7421	-17.0115	0.0000	5872.0923	3403.3203
1	I	sLCB17	Max	-545.4167	-3.7421	-17.0115	0.0000	-2900.7352	1320.1058
1	J	sLCB18	Max	-205.8379	-2.4961	-9.3406	0.0000	4581.1962	1157.2880
1	I	sLCB18	Max	-214.1102	-2.4961	-9.3406	0.0000	-235.7425	-232.3060
1	J	sLCB19	Max	-300.5714	-2.9984	-23.7569	0.0000	6270.9065	1203.4016

看 Load Combination 17

Axial Force (Fx): -537.144 tonf (at J-end)

Shear Force (Fy): -3.742 tonf (at J-end)

Myi = -2900.74 tonf.cm Myj = 5872.09 tonf.cm

Mzi = 1320.11 tonf.cm Mzj = 3403.32 tonf.cm

I-end:

Axial Force (Fx): -545.417 tonf

Shear Force (Fy): -3.742 tonf

Myj = -2900.74 tonf.cm

Mzj = 1320.11 tonf.cm

J-end:

Axial Force (Fx): -537.144 tonf

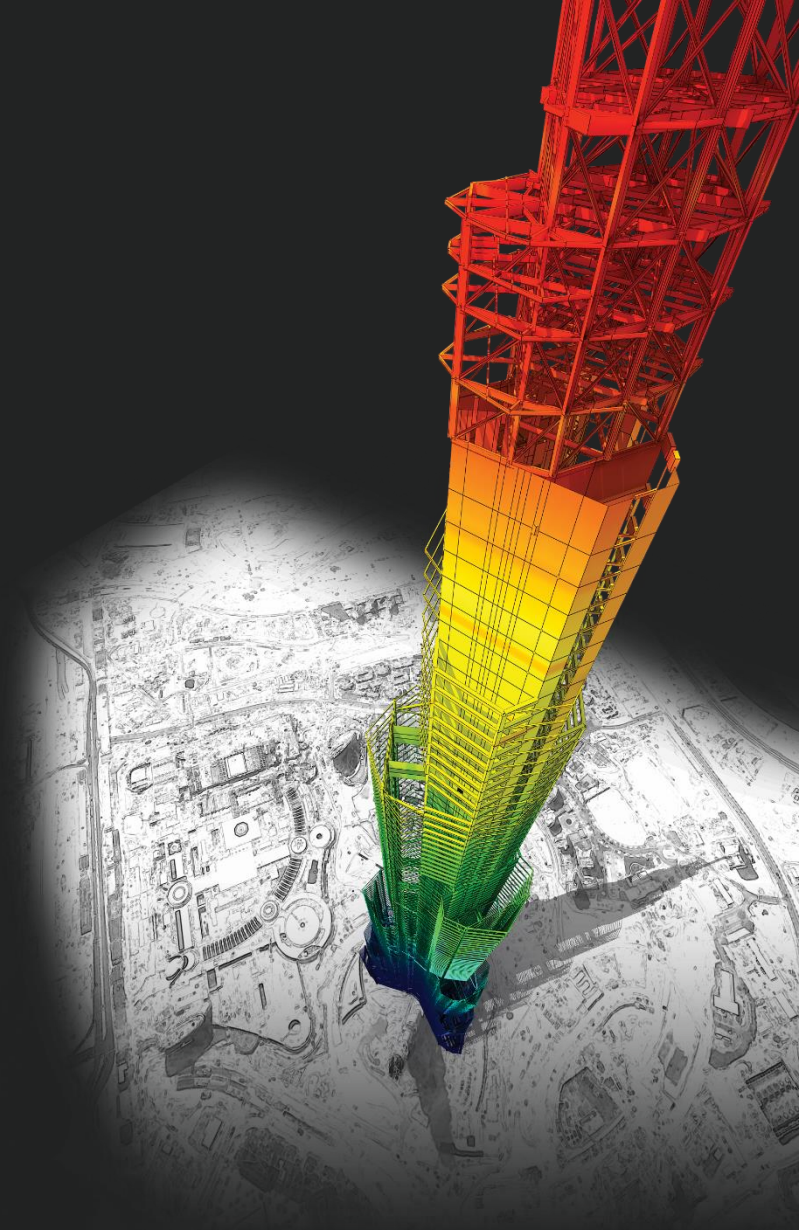
Shear Force (Fy): -3.742 tonf

Myj = 5872.09 tonf.cm

Mzj = 3403.32 tonf.cm

Force 的 Value 一樣。

Thank You



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