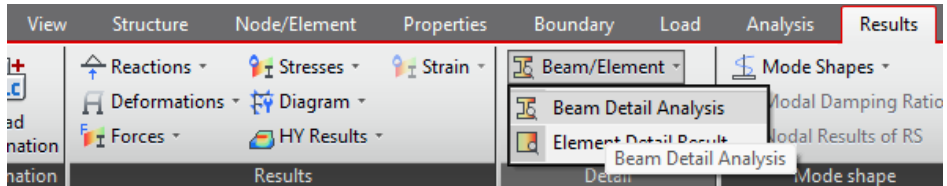




How to Plot additional stress point on a section, and how to get the results? Is my way correct?



Your additional stress points plotting are correct, but in order to access the results, you can access your stress point results at Results>Beam/Element>Beam Detail Analysis as seen below



After that you can select “Section” Tab below to access your stress value on both Stress Points and Additional Stress Points.

Position	Stress	x coord.
Sig_I	1.67186e+09	-
Sig_J	1.67186e+09	0.00000e+00
Sig_max	1.67186e+09	0.00000e+00
Sig_min	5.19331e+08	0.00000e+00
Sig_user	-3.34372e+09	0.00000e+00

Position	Stress	y coord.	z coord.
max	1.67186e+09	1.75000e+02	-9.69179e+02
min	4.38464e+08	4.27941e+02	2.50821e+02
Pos-1	7.43179e+08	-1.25000e+03	4.30821e+02
Pos-2	7.43179e+08	1.25000e+03	4.30821e+02
Pos-3	1.67186e+09	1.75000e+02	-9.69179e+02
Pos-4	1.67186e+09	-1.75000e+02	-9.69179e+02
Pos-5	6.66750e+08	-1.75000e+02	2.50821e+02
Pos-6	6.66750e+08	1.75000e+02	2.50821e+02
Pos-7	5.40738e+08	-1.75000e+02	0.00000e+00
Pos-8	5.40738e+08	1.75000e+02	0.00000e+00
Pos-9	6.66750e+08	-1.75000e+02	2.50821e+02
Pos-10	6.66750e+08	1.75000e+02	2.50821e+02
Add-1	7.43179e+08	0.00000e+00	4.30800e+02
Add-2	5.42078e+08	0.00000e+00	0.00000e+00
Add-3	1.67186e+09	0.00000e+00	-9.69200e+02

You can also change the desired stress section with the explanation as seen below.

Normal: Stress in the element's local x-direction (σ_{xx}), Axial stress + Bending stresses due to My and Mz

Tau-xy: Shear stress in the element's local y-direction (τ_{xy})

Tau-xz: Shear stress in the element's local z-direction (τ_{xz})

von-Mises

$$\text{von-Mises Stress} = \sqrt{\sigma_1^2 - \sigma_1\sigma_2 + \sigma_2^2}$$

where,

σ_1 : Maximum principal stress

σ_2 : Minimum principal stress

Tresca

$$\text{Tresca Stress} = \frac{\sqrt{\sigma_{xx}^2 + 4(\tau_{xy}^2 + \tau_{xz}^2)}}{2}$$

Princ.(max): Maximum principal stress

Princ.(min): Minimum principal stress

The reason why you cannot see the value of your additional stress points in Beam Stresses(PSC) is that the default placement shown below only included points in figure seen below, in which the middle point (the additional stress points) are not present.

