

Reverse X axis in order to be consistent with positive moment (M_x is positive when pointing in the positive X direction).

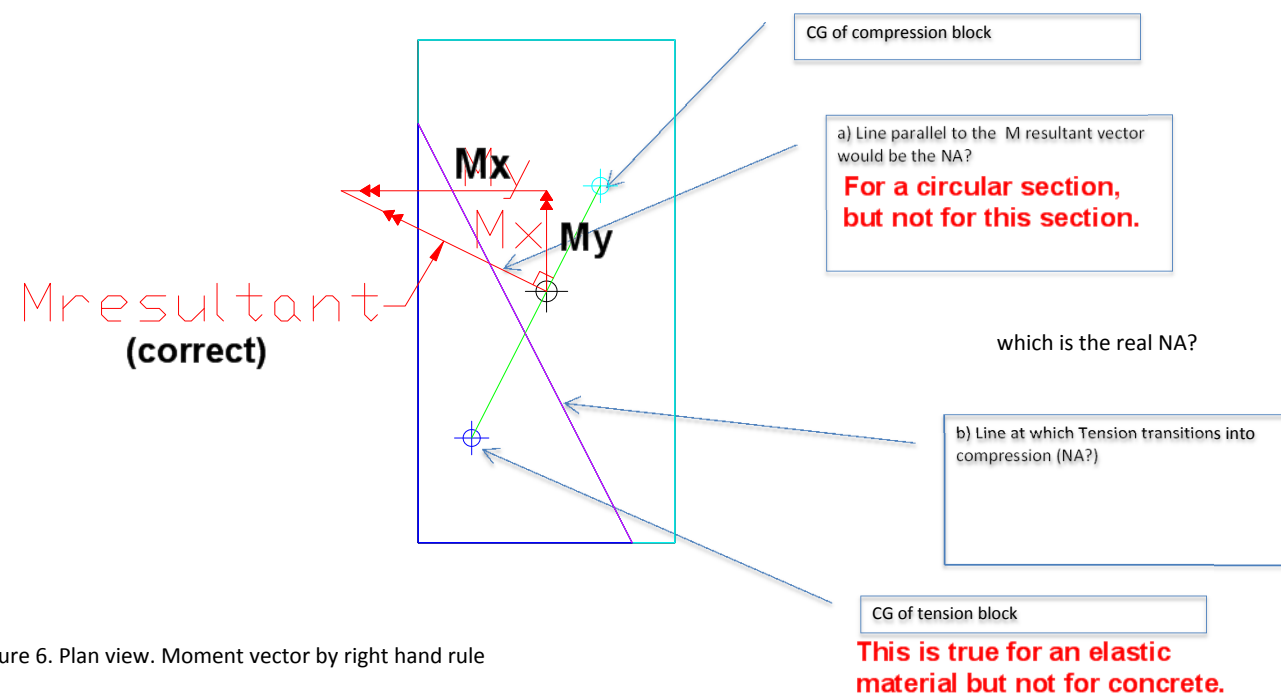
$$f = P/A \pm (M_x/I_x)y \pm (M_y/I_y)x$$

| | |
|--------------|---------------------------|
| P= | 800 kN |
| A= | 0.72 m ² |
| M_x = | 480 kN-m |
| I_x = | 0.0864 m ⁴ |
| M_y = | 240 kN-m |
| I_y = | 0.0216 m ⁴ |
| f_{+x+y} = | 7778 kPa Compression |
| x= | 0.3 m |
| y= | 0.6 m |
| f_{-x+y} = | 1111 kPa |
| x= | -0.3 m |
| y= | 0.6 m |
| f_{-x-y} = | -5556 kPa |
| x= | -0.3 m |
| y= | -0.6 m |
| f_{+x-y} = | 1111 kPa |
| x= | 0.3 m |
| y= | -0.6 m |

Moments (by right hand rule)

| | P | | ex or ey | |
|---------|-----|-----|----------|---|
| | kN | m | | kN-m |
| M_x = | 800 | 0.3 | | 240 |
| M_y = | 800 | 0.6 | | -480 negative cause the thumb points left |

Omit this



The green line that joins both CG's is normal to the NA which makes sense, but then is it not the magenta line the NA?

Figure 6. Plan view. Moment vector by right hand rule