

Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

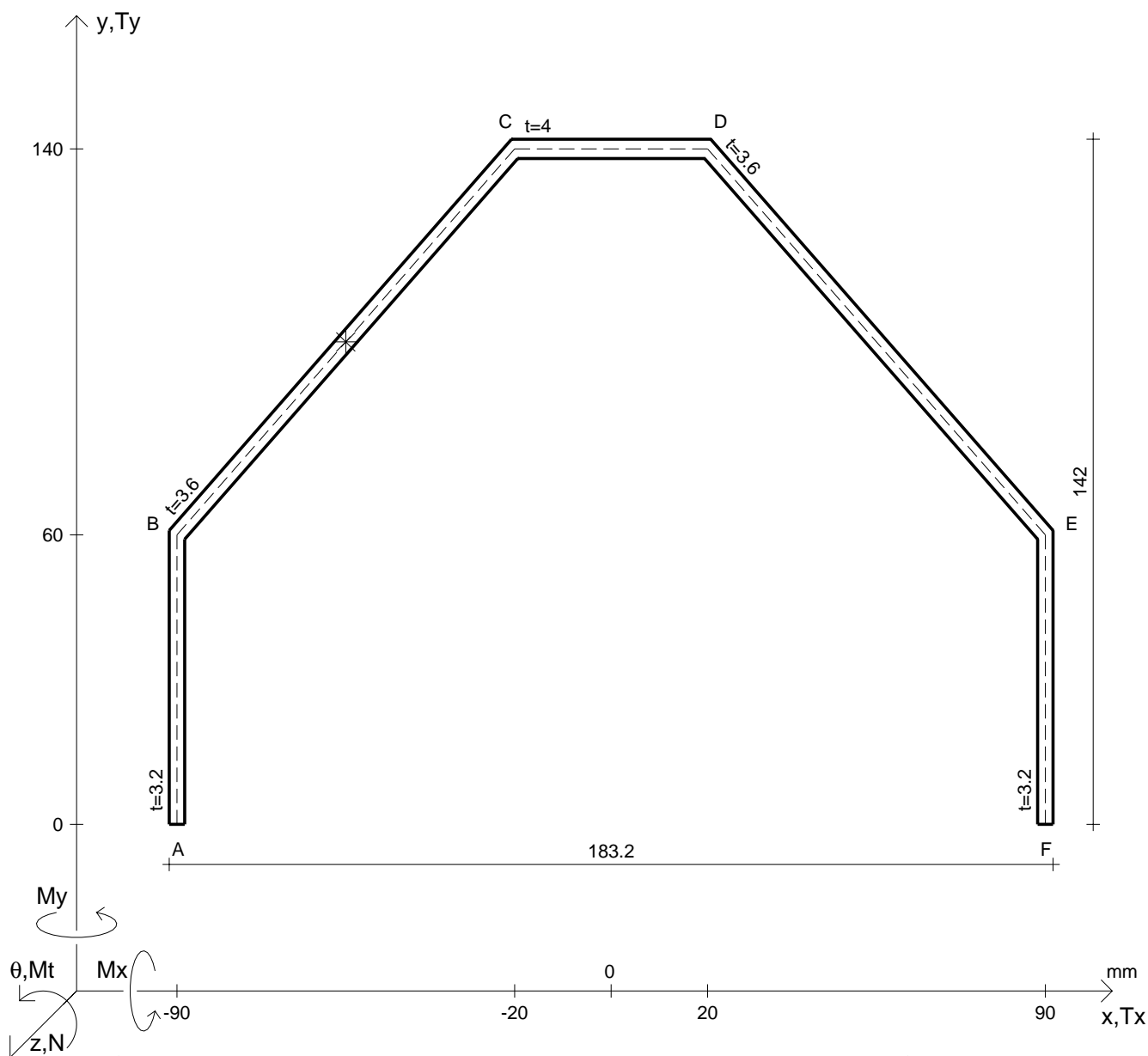
Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 65200 \text{ N}$	$M_x$	$= -1950000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 43700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 114000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		









Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

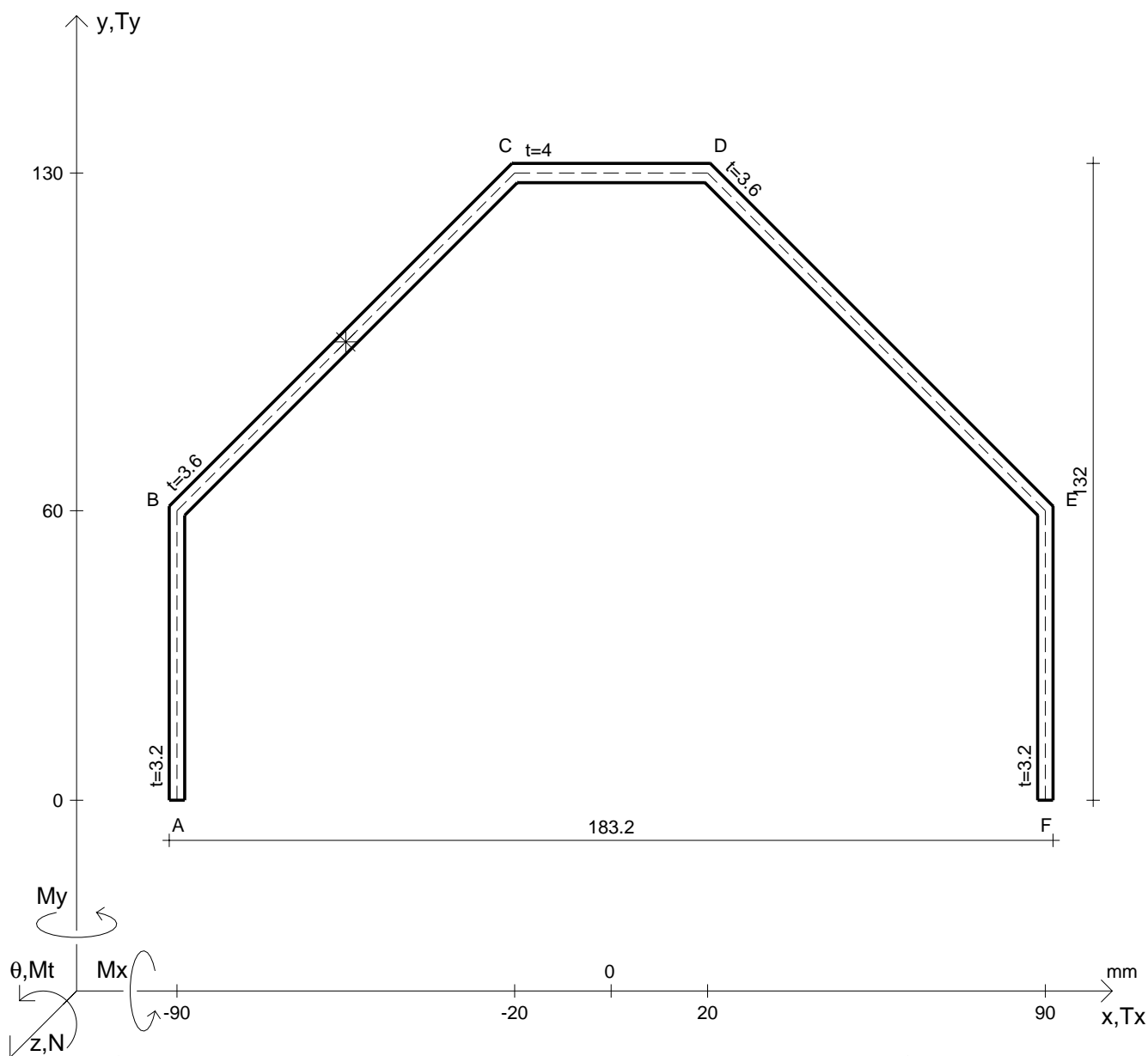
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 75700 \text{ N}$	$M_x$	$= 2340000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 36800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 91400 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

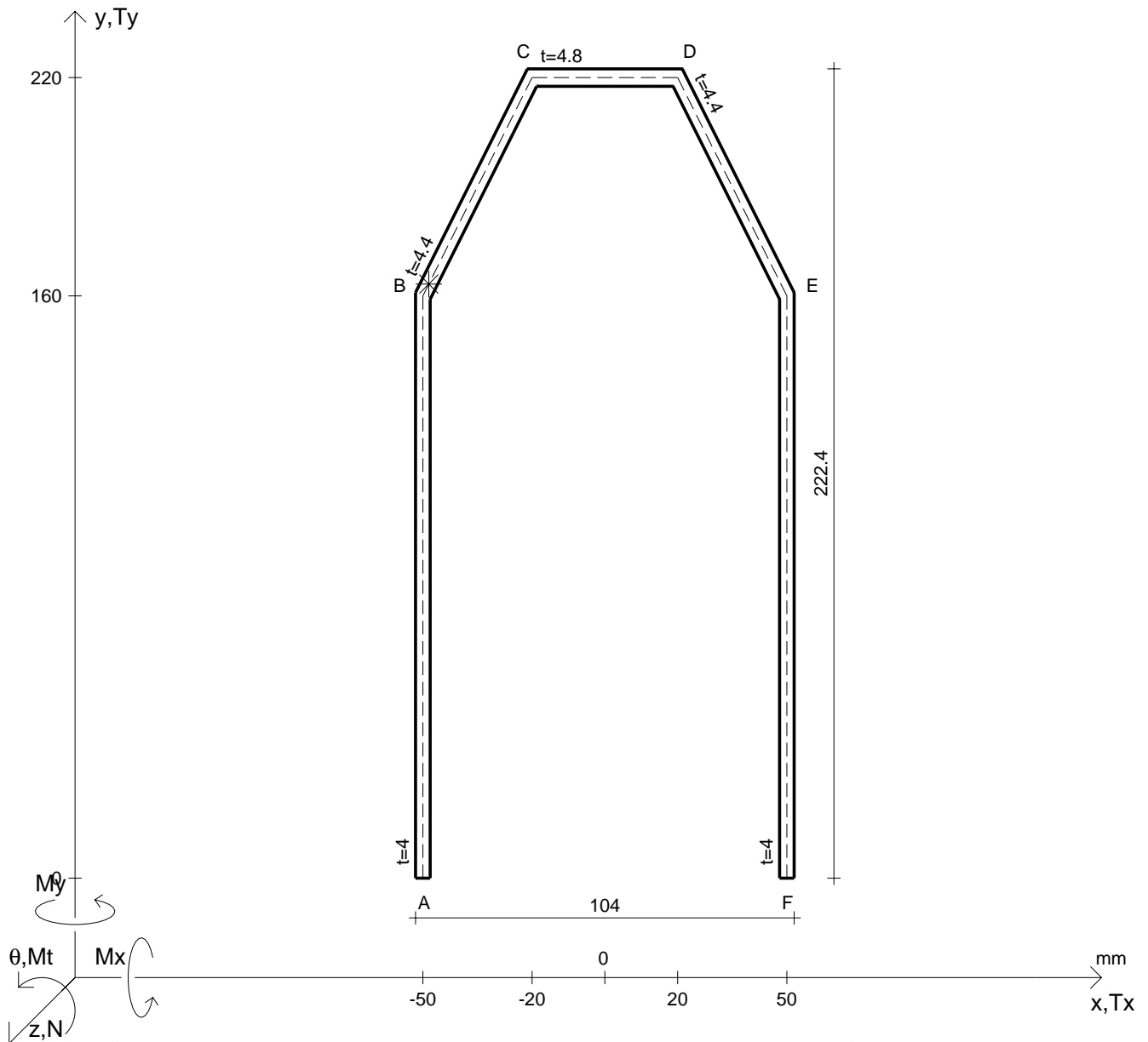
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 54500 \text{ N}$	$M_x$	$= 2270000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 37700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 98400 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

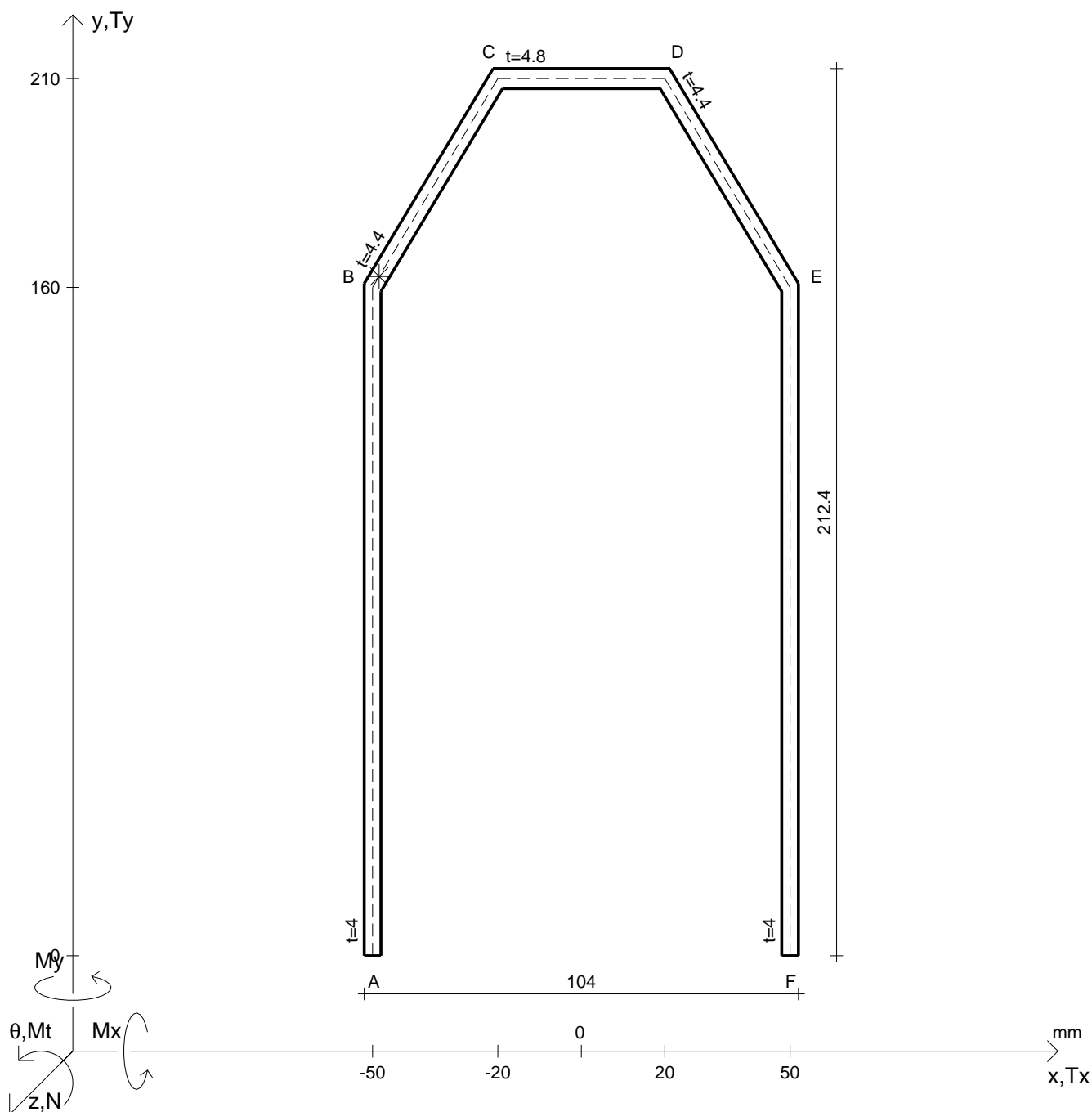
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 98800 \text{ N}$	$M_x$	$= 5350000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 86700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 204000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

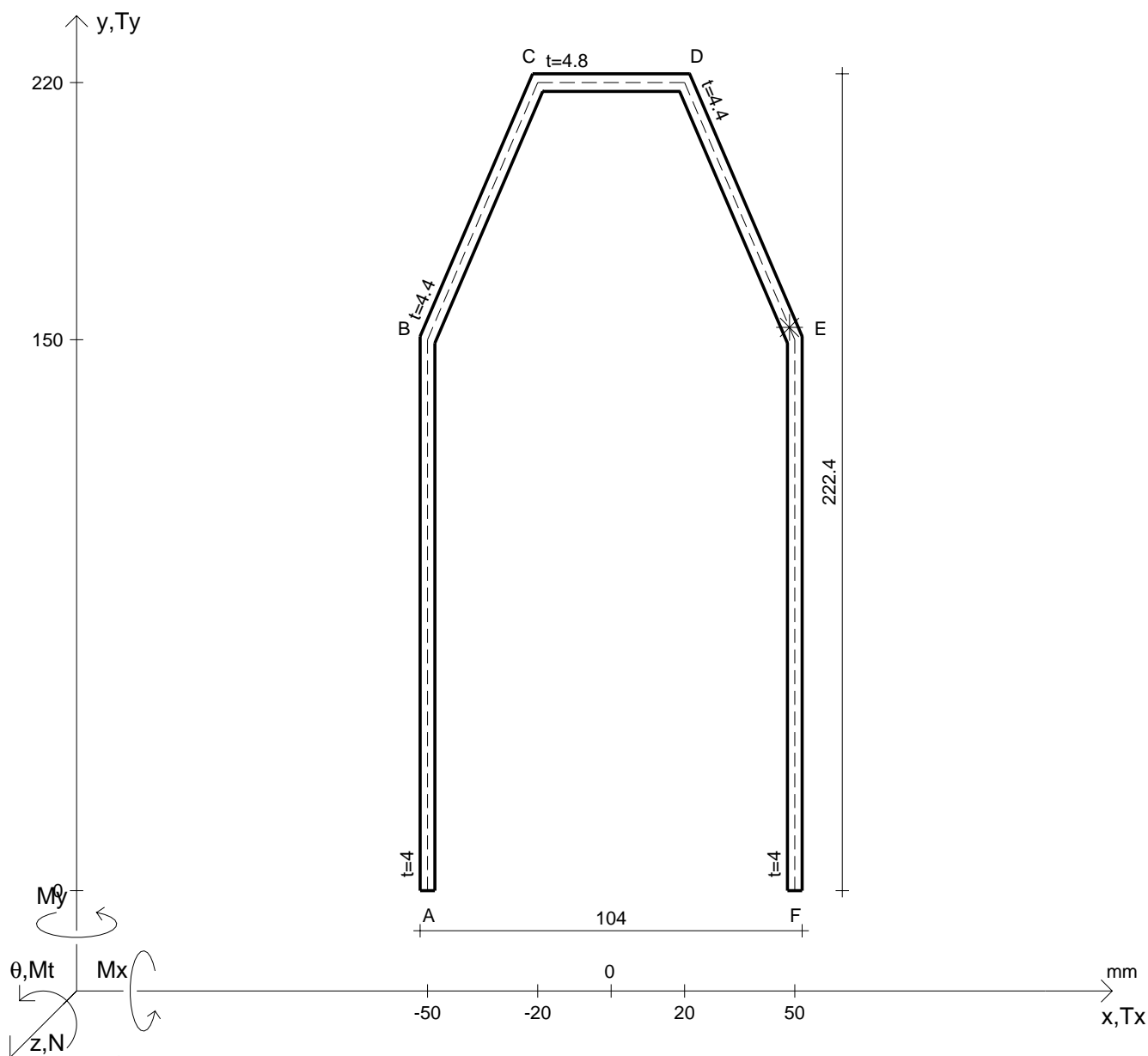
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 104000 N	M <sub>t</sub>	= 144000 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 93400 N	M <sub>x</sub>	= 5480000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A*	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$$\begin{aligned} N &= 120000 \text{ N} \\ T_y &= 67900 \text{ N} \\ M_t &= 172000 \text{ Nmm} \end{aligned}$$

$$y_G =$$

$$u_o =$$

$$v_o =$$

$$A^* =$$

$$S_u =$$

$$C_w =$$

$$J_u =$$

$$J_v =$$

$$J_t =$$

$$\sigma(N) =$$

$$\sigma(M_x) =$$

$$M_x = 6650000 \text{ Nmm}$$

$$\sigma_a = 220 \text{ N/mm}^2$$

$$E = 200000 \text{ N/mm}^2$$

$$\tau(M_t)_d =$$

$$\tau(T_{yc}) =$$

$$\tau(T_{yb})_d =$$

$$\tau(T_y)_s =$$

$$\tau(T_y)_d =$$

$$\sigma =$$

$$\tau_s =$$

$$\tau_d =$$

$$\sigma_{ls} =$$

$$\sigma_{lls} =$$

$$\sigma_{ld} =$$

$$G = 73000 \text{ N/mm}^2$$

$$\sigma_{lld} =$$

$$\sigma_{tresca} =$$

$$\sigma_{mises} =$$

$$\sigma_{st.ven} =$$

$$\theta_t =$$

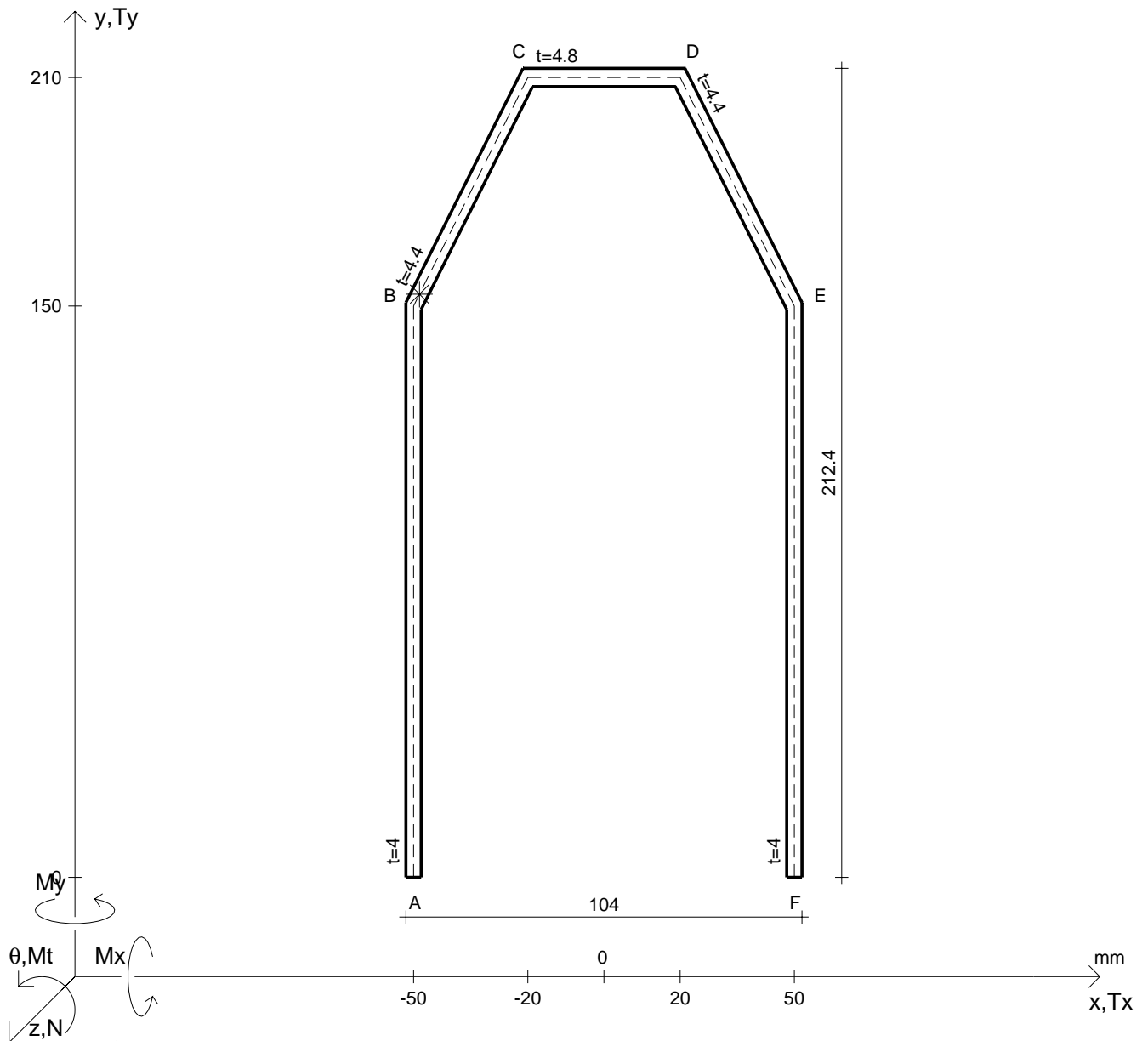
$$r_u =$$

$$r_v =$$

$$r_o =$$

$$J_p =$$





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

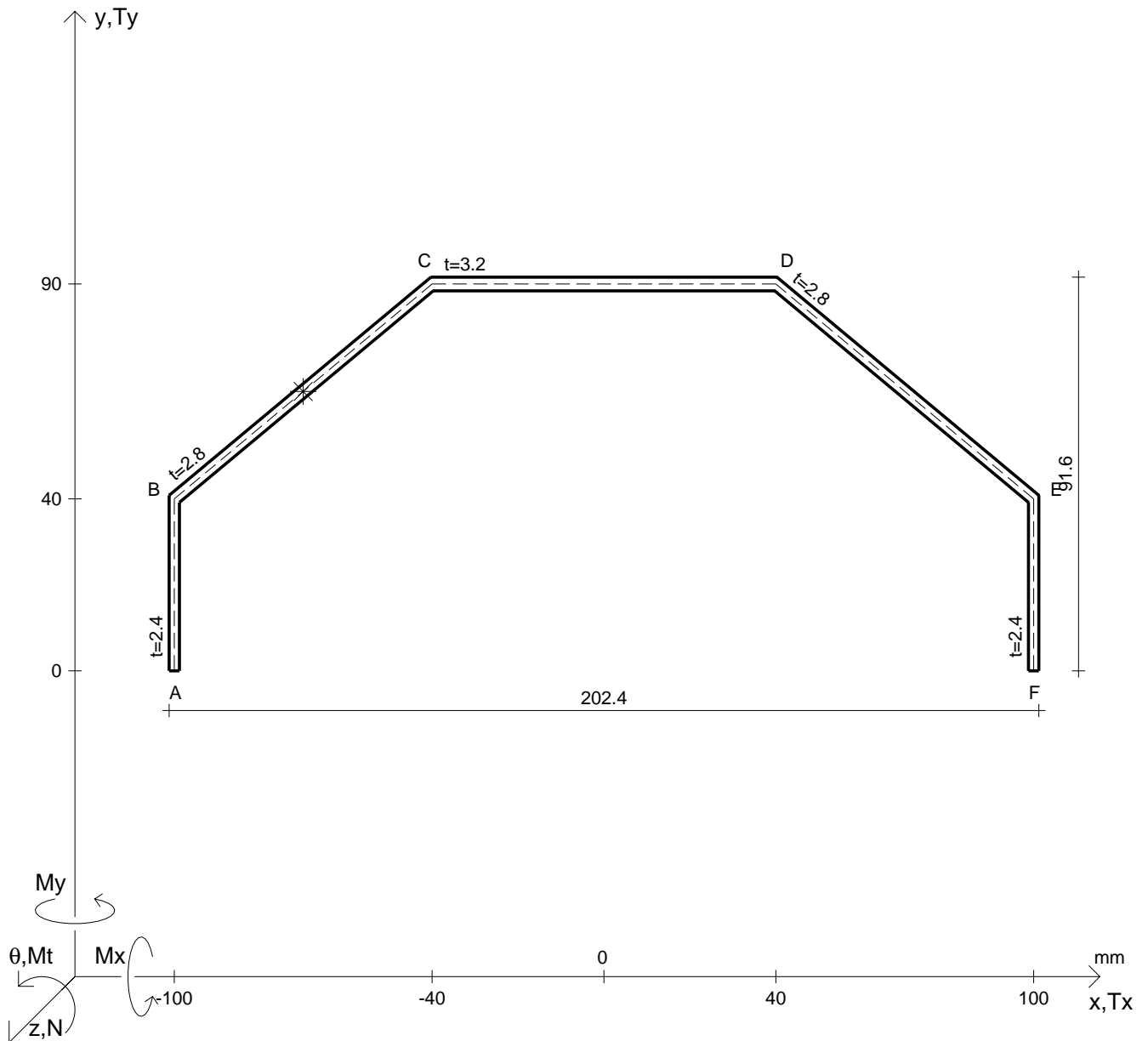
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 85200 \text{ N}$	$M_x$	$= 6650000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 74000 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 181000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

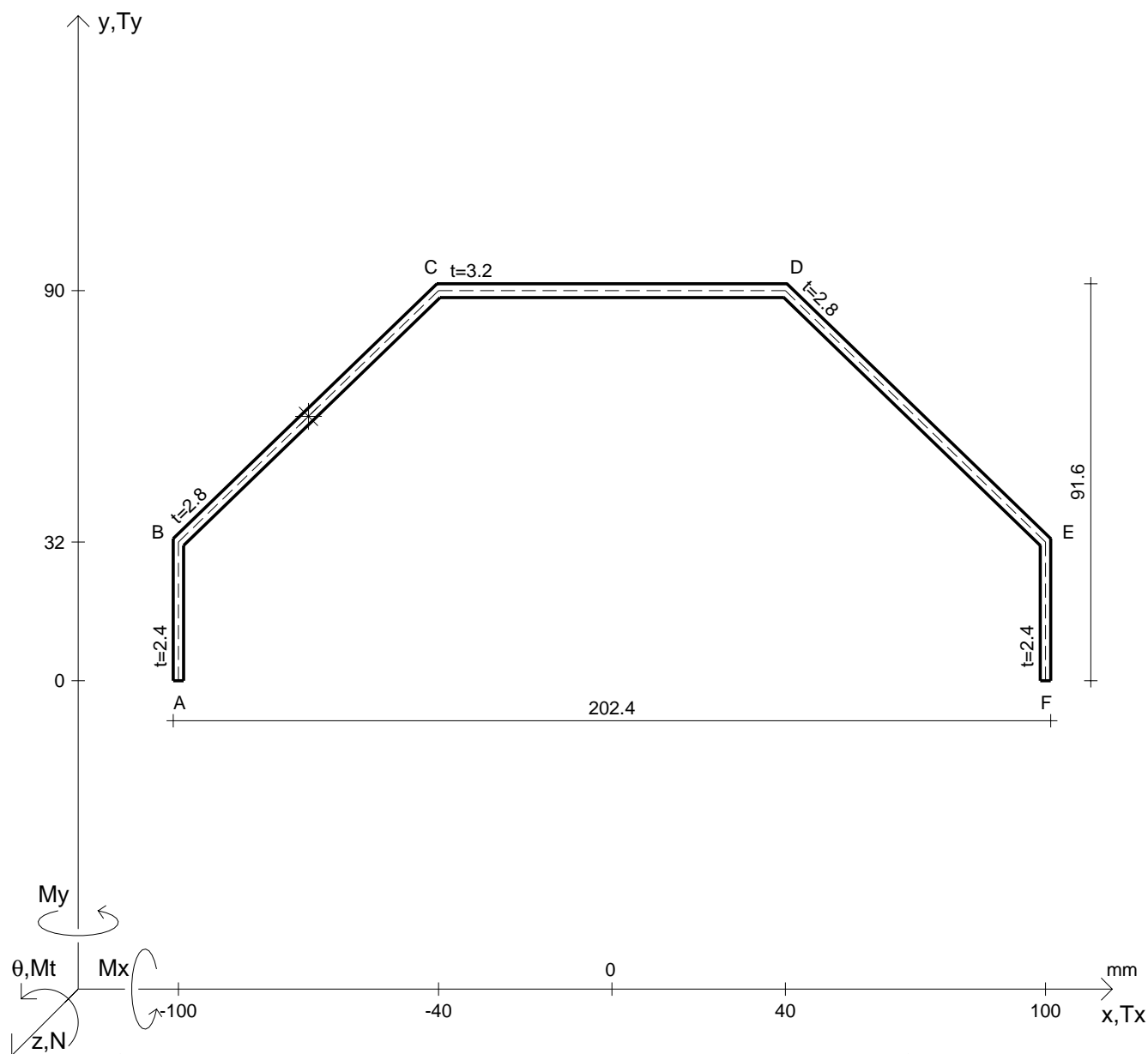
Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 42700 \text{ N}$	$M_x$	$= 729000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 22800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 60900 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		









Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

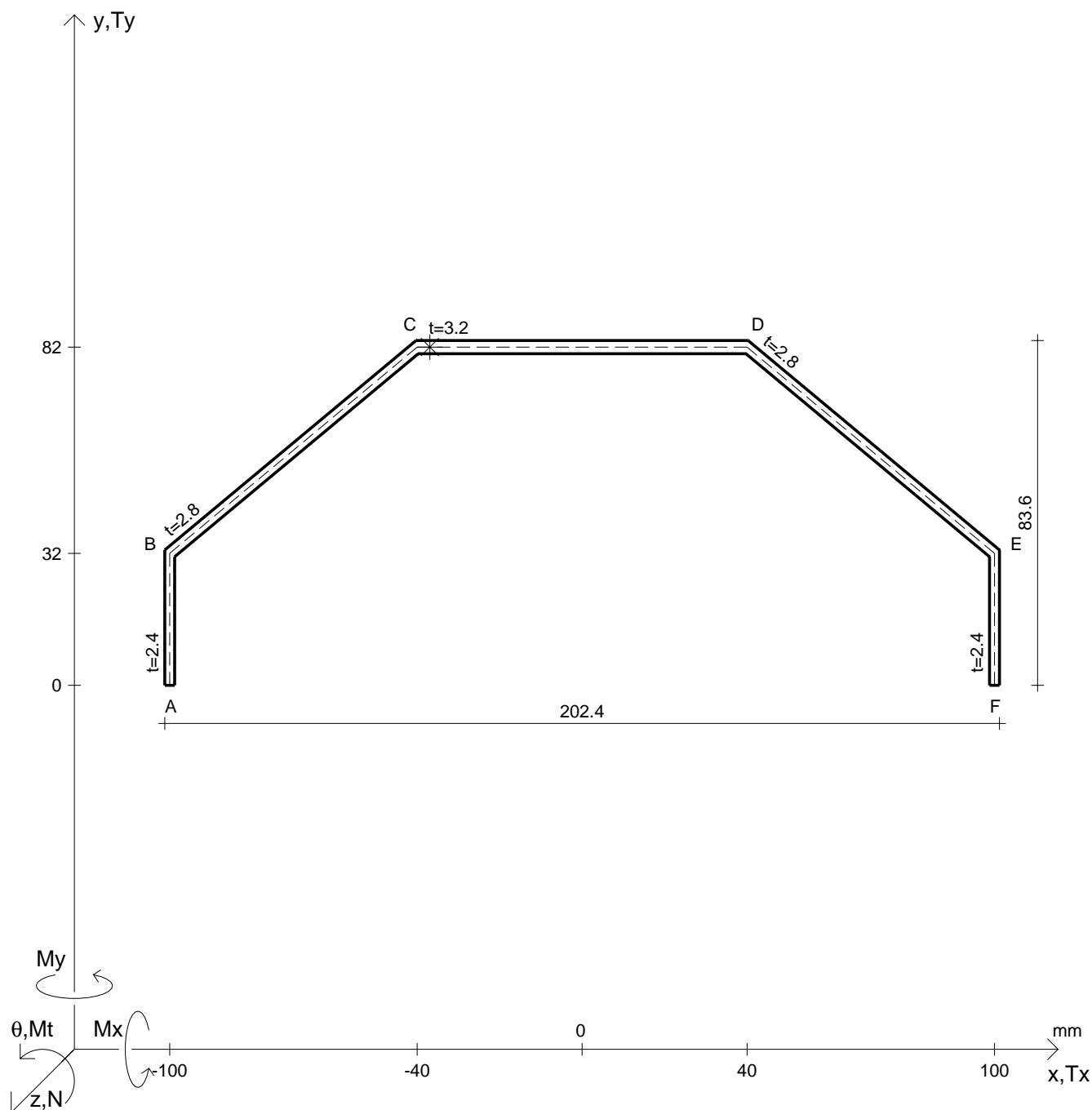
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 51300 \text{ N}$	$M_x$	$= -930000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 18500 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 50500 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u^*$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto C di CD

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

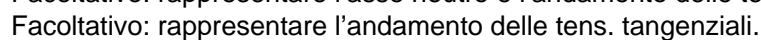
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 38900 N	M <sub>t</sub>	= 57300 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 19800 N	M <sub>x</sub>	= 909000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A <sub>*</sub>	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		

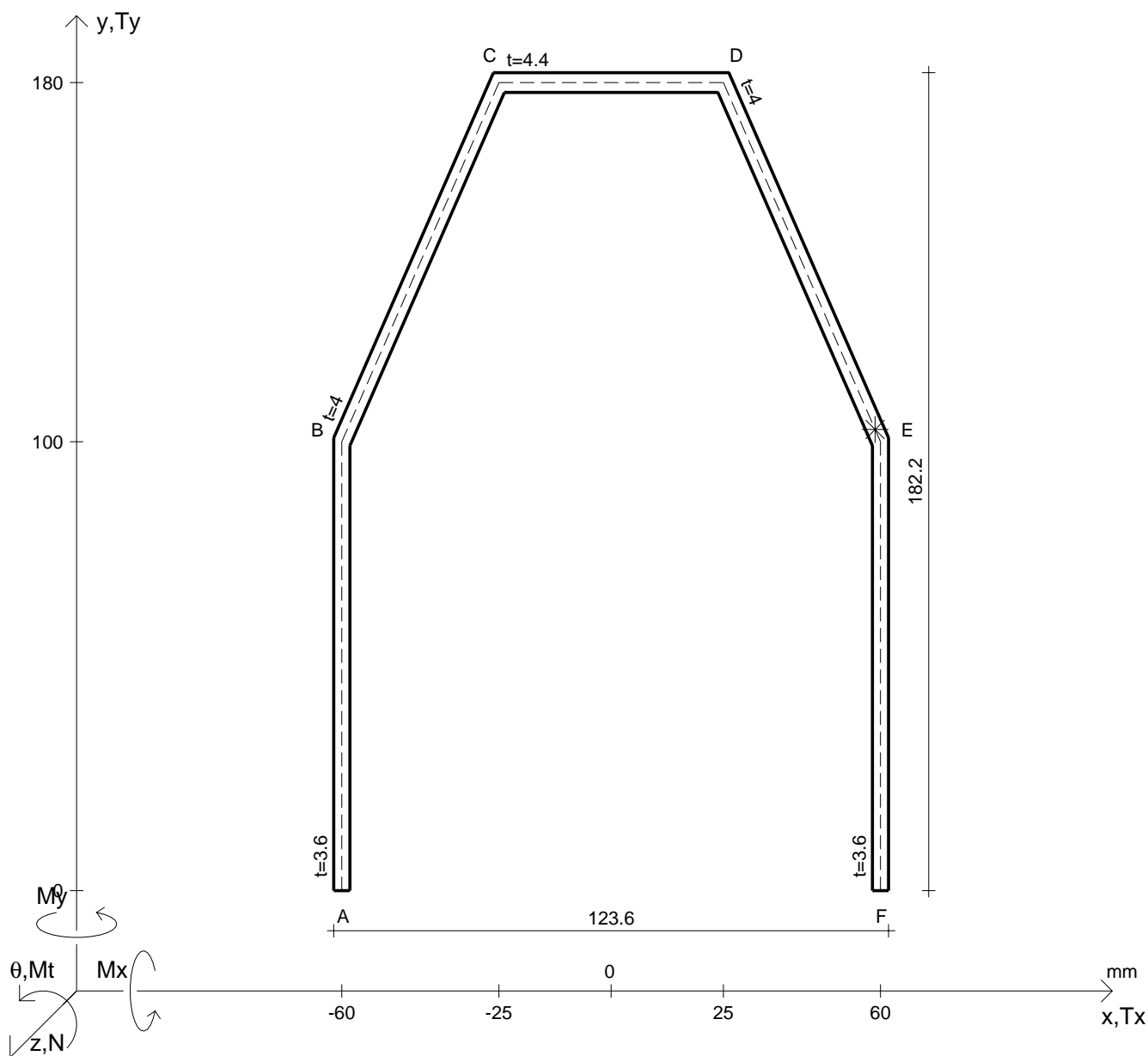






25.05.15





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

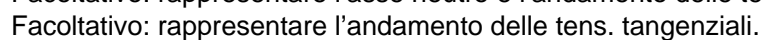
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

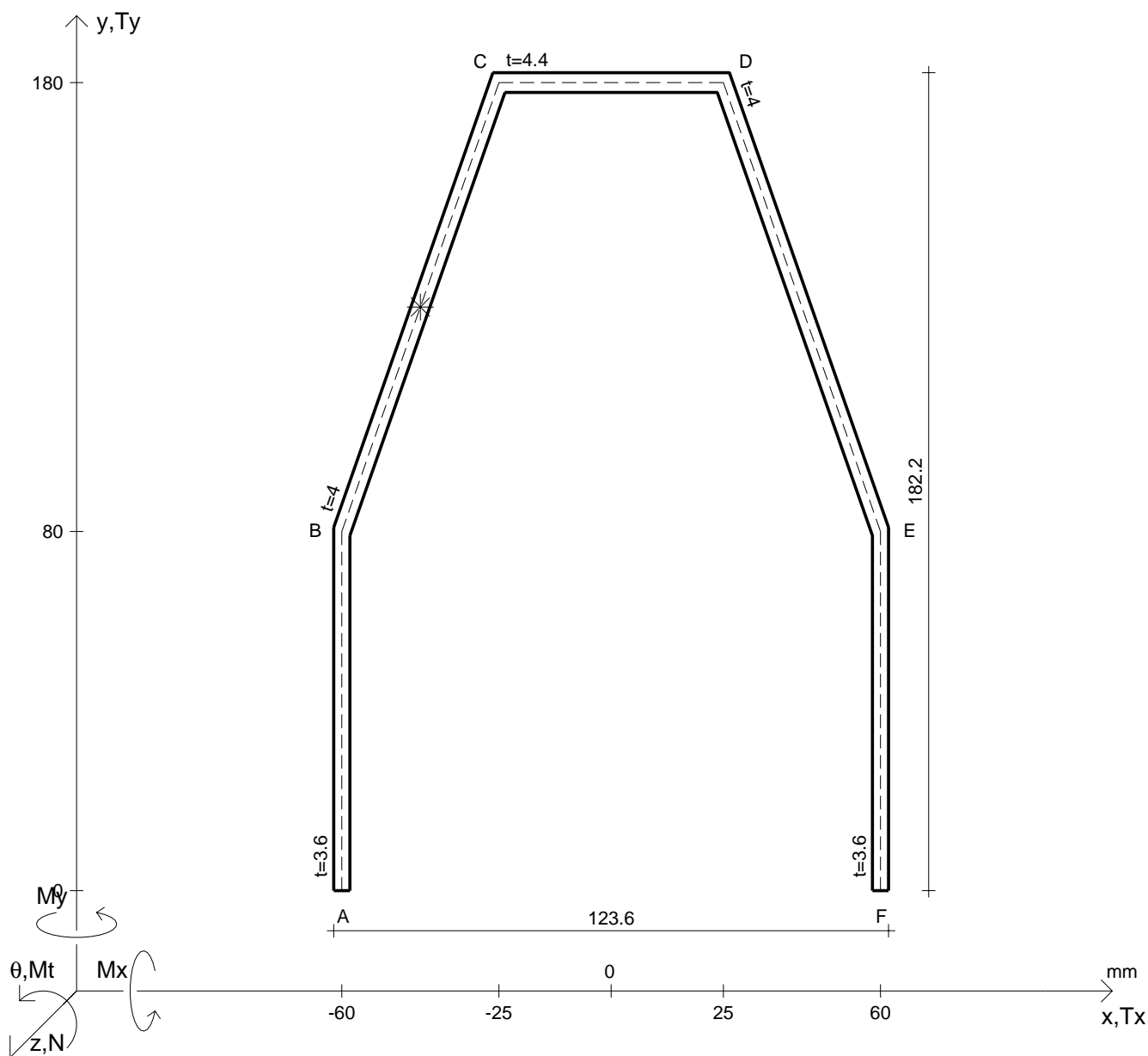
$N$	$= 89700 \text{ N}$	$M_x$	$= -3920000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 67600 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 116000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u^*$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





25.05.15





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$$\begin{aligned} N &= 71300 \text{ N} \\ T_y &= 58200 \text{ N} \\ M_t &= 143000 \text{ Nmm} \end{aligned}$$

$$\begin{aligned} M_x &= 4660000 \text{ Nmm} \\ \sigma_a &= 220 \text{ N/mm}^2 \\ E &= 200000 \text{ N/mm}^2 \end{aligned}$$

$$G = 73000 \text{ N/mm}^2$$

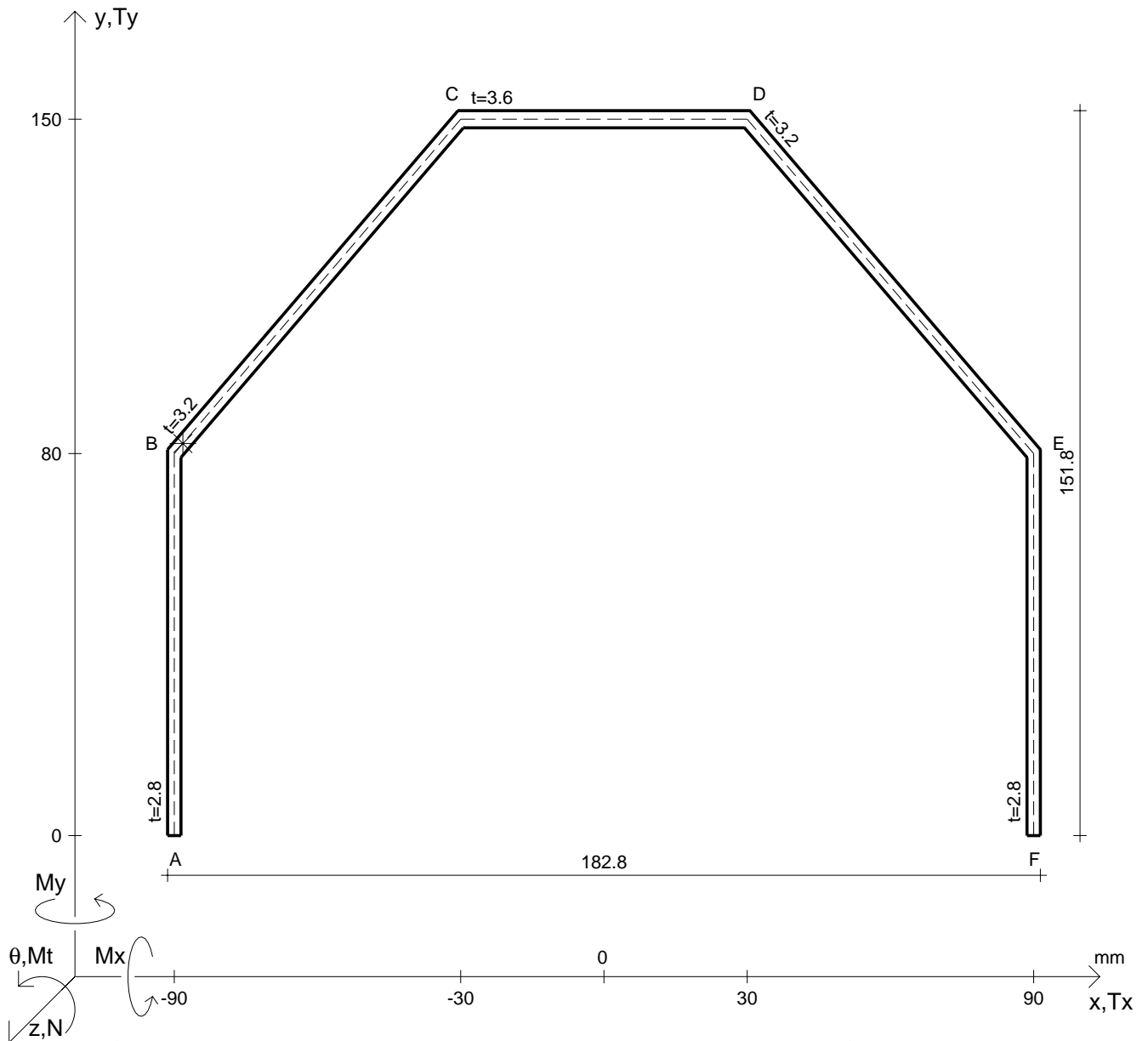
$$\begin{aligned} y_G &= \\ u_o &= \\ v_o &= \\ A^* &= \\ S_u &= \\ C_w &= \\ J_u &= \\ J_v &= \\ J_t &= \\ \sigma(N) &= \\ \sigma(M_x) &= \end{aligned}$$

$$\begin{aligned} \tau(M_t)_d &= \\ \tau(T_{yc}) &= \\ \tau(T_{yb})_d &= \\ \tau(T_y)_s &= \\ \tau(T_y)_d &= \\ \sigma &= \\ \tau_s &= \\ \tau_d &= \\ \sigma_{ls} &= \\ \sigma_{lls} &= \\ \sigma_{ld} &= \end{aligned}$$

$$\begin{aligned} \sigma_{lld} &= \\ \sigma_{tresca} &= \\ \sigma_{mises} &= \\ \sigma_{st.ven} &= \\ \theta_t &= \\ r_u &= \\ r_v &= \\ r_o &= \\ J_p &= \end{aligned}$$







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

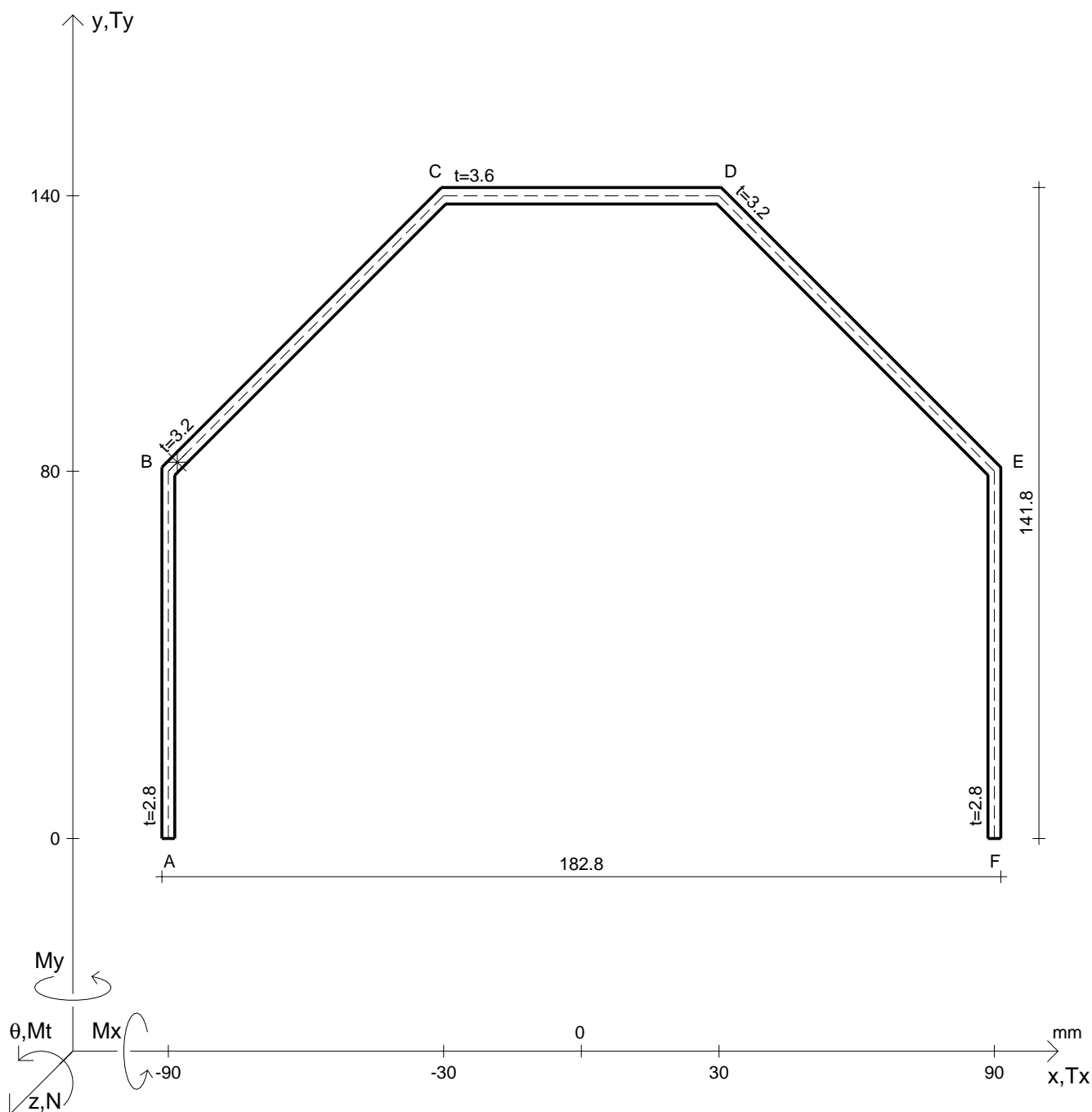
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 62900 \text{ N}$	$M_x$	$= -2070000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 41700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 97300 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi  $u, v$ , ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

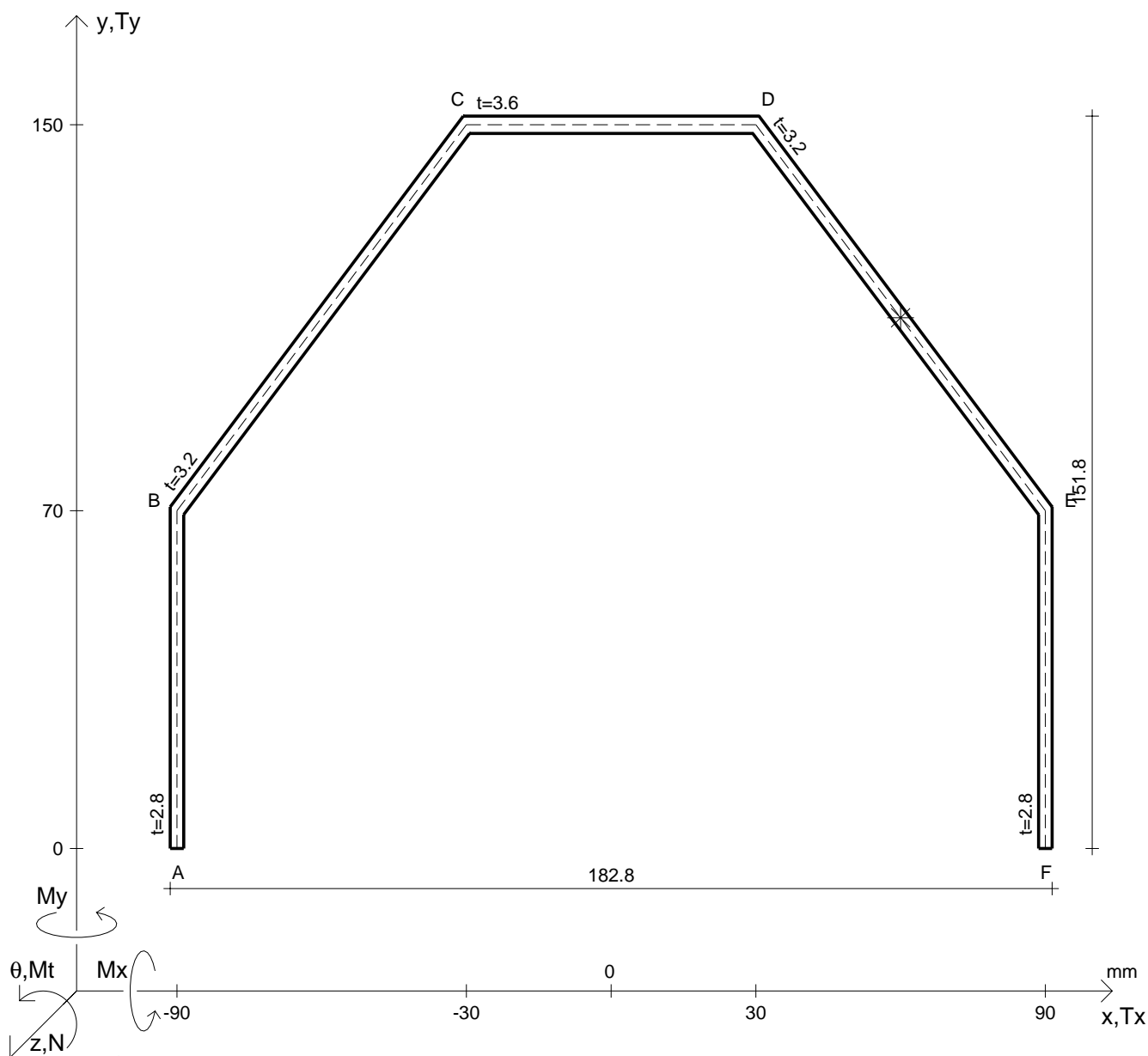
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 67300 \text{ N}$	$M_t$	$= 69400 \text{ Nmm}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 42200 \text{ N}$	$M_x$	$= -2050000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{\text{mises}}$	$=$
$y_G$	$=$	$J_t$	$=$	$\sigma$	$=$	$\sigma_{\text{st.ven}}$	$=$
$u_o$	$=$	$\sigma(N)$	$=$	$\tau_s$	$=$	$\theta_t$	$=$
$v_o$	$=$	$\sigma(M_x)$	$=$	$\tau_d$	$=$	$r_u$	$=$
$A^*$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{\text{Is}}$	$=$	$r_v$	$=$
$S_u$	$=$	$\tau(T_{yc})_d$	$=$	$\sigma_{\text{IIs}}$	$=$	$r_o$	$=$
$C_w$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{\text{Id}}$	$=$	$J_p$	$=$
$J_u$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{\text{IId}}$	$=$		
$J_v$	$=$	$\tau(T_y)_d$	$=$	$\sigma_{\text{tresca}}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

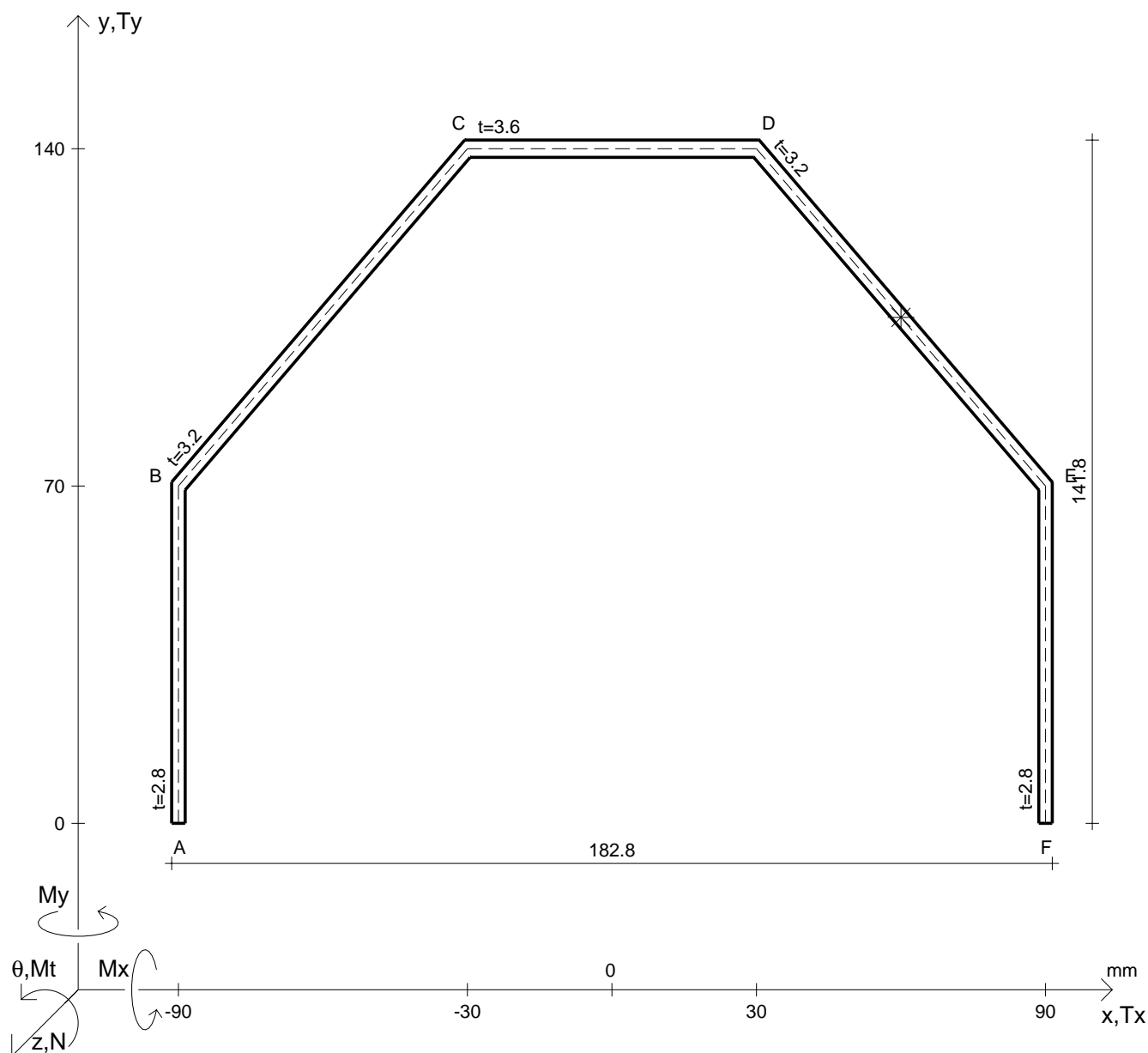
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 74100 \text{ N}$	$M_x$	$= 2510000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 34900 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 79000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

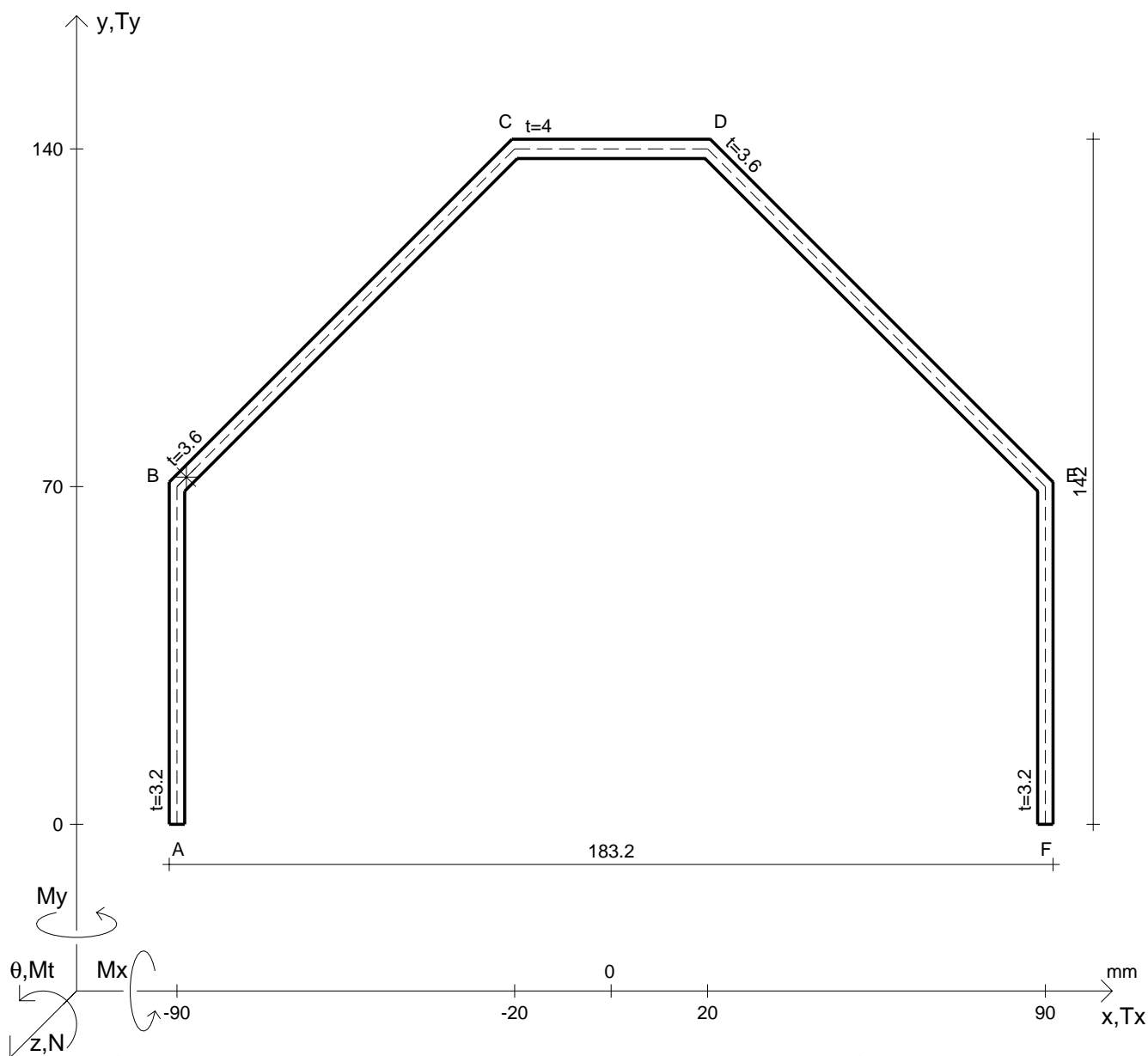
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 53200 \text{ N}$	$M_x$	$= 2450000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 36000 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 84800 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

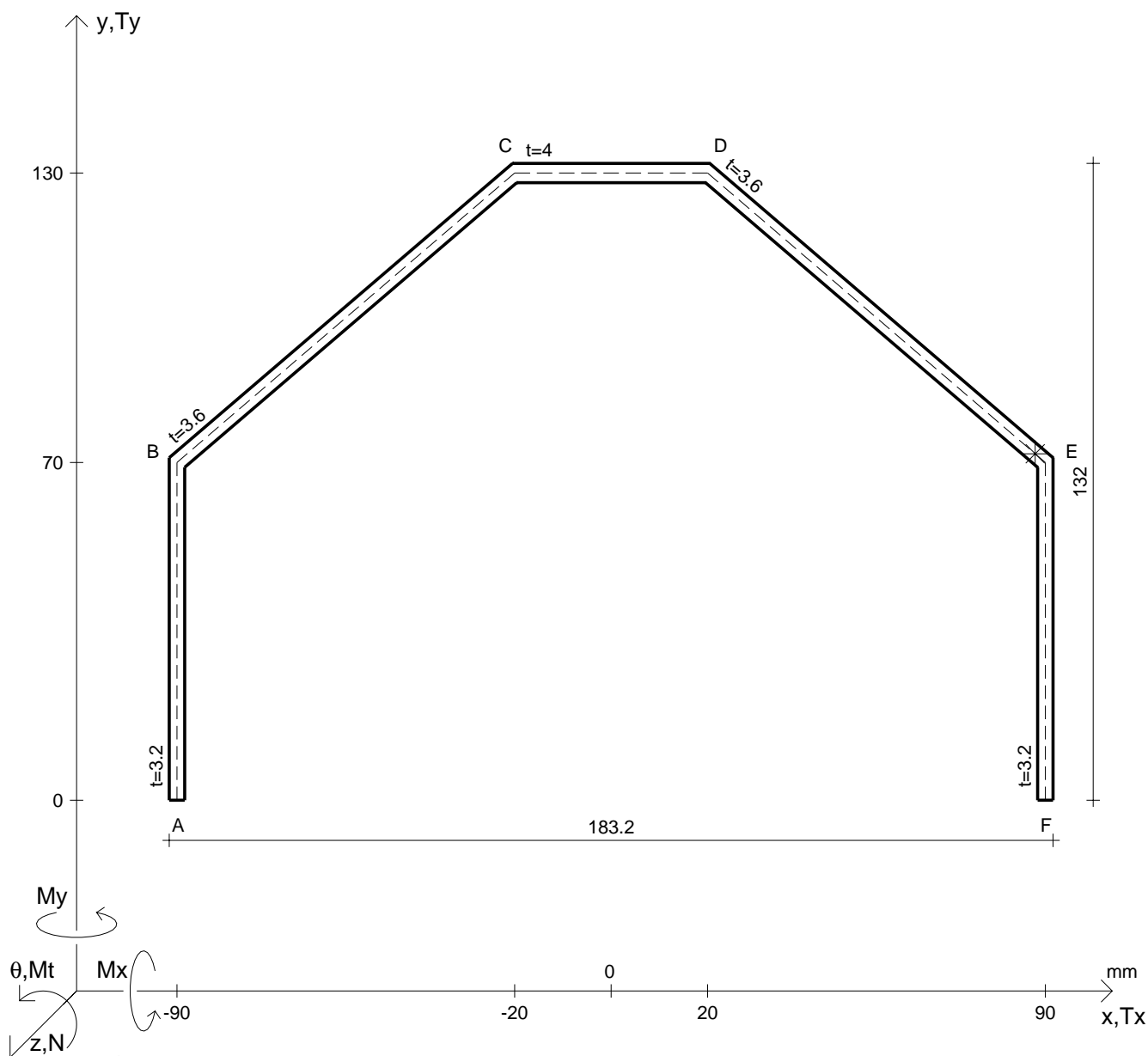
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 65200 \text{ N}$	$M_x$	$= -1950000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 43700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 114000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

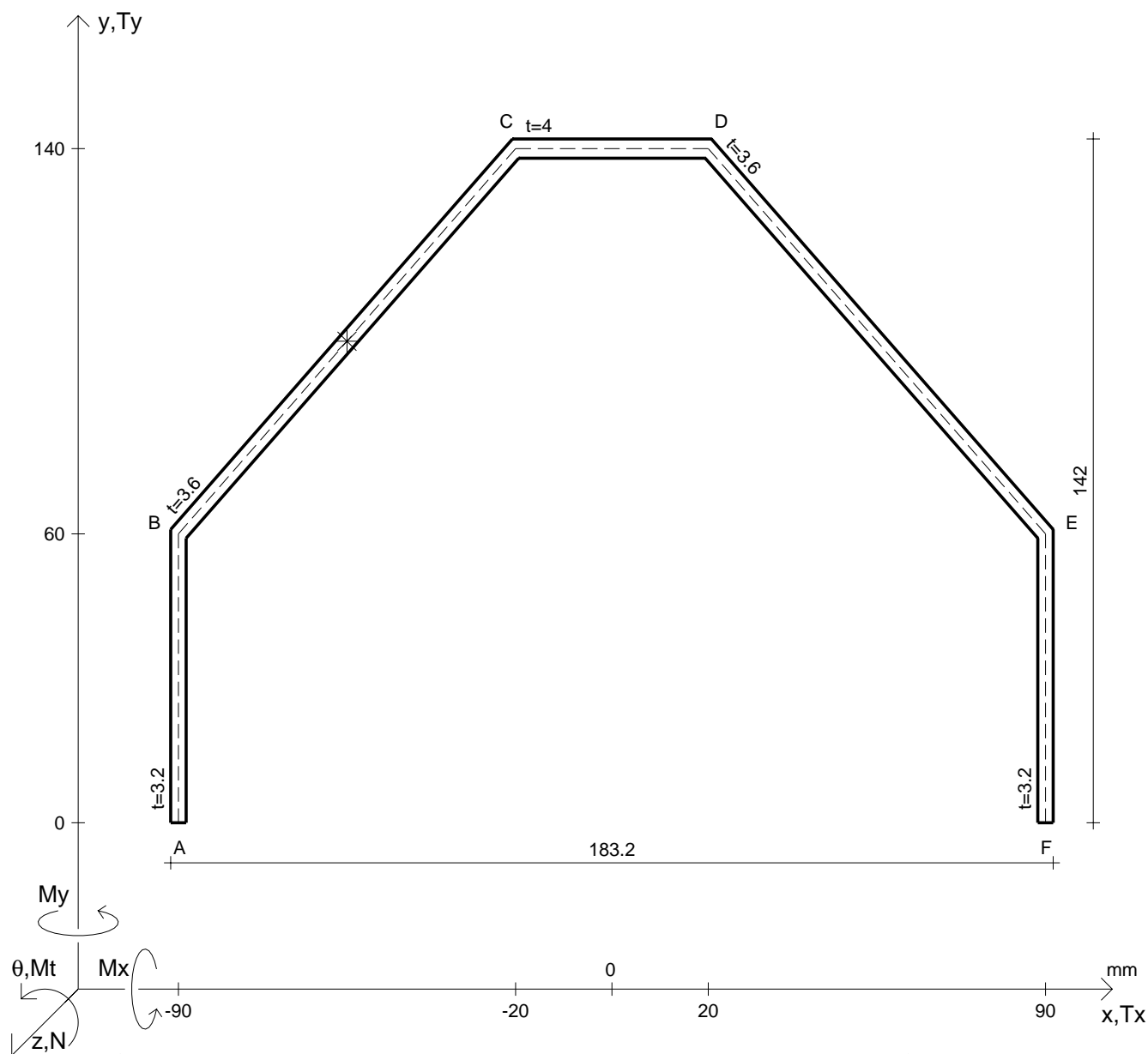
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 69700 \text{ N}$	$M_x$	$= -1910000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 43800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 81600 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

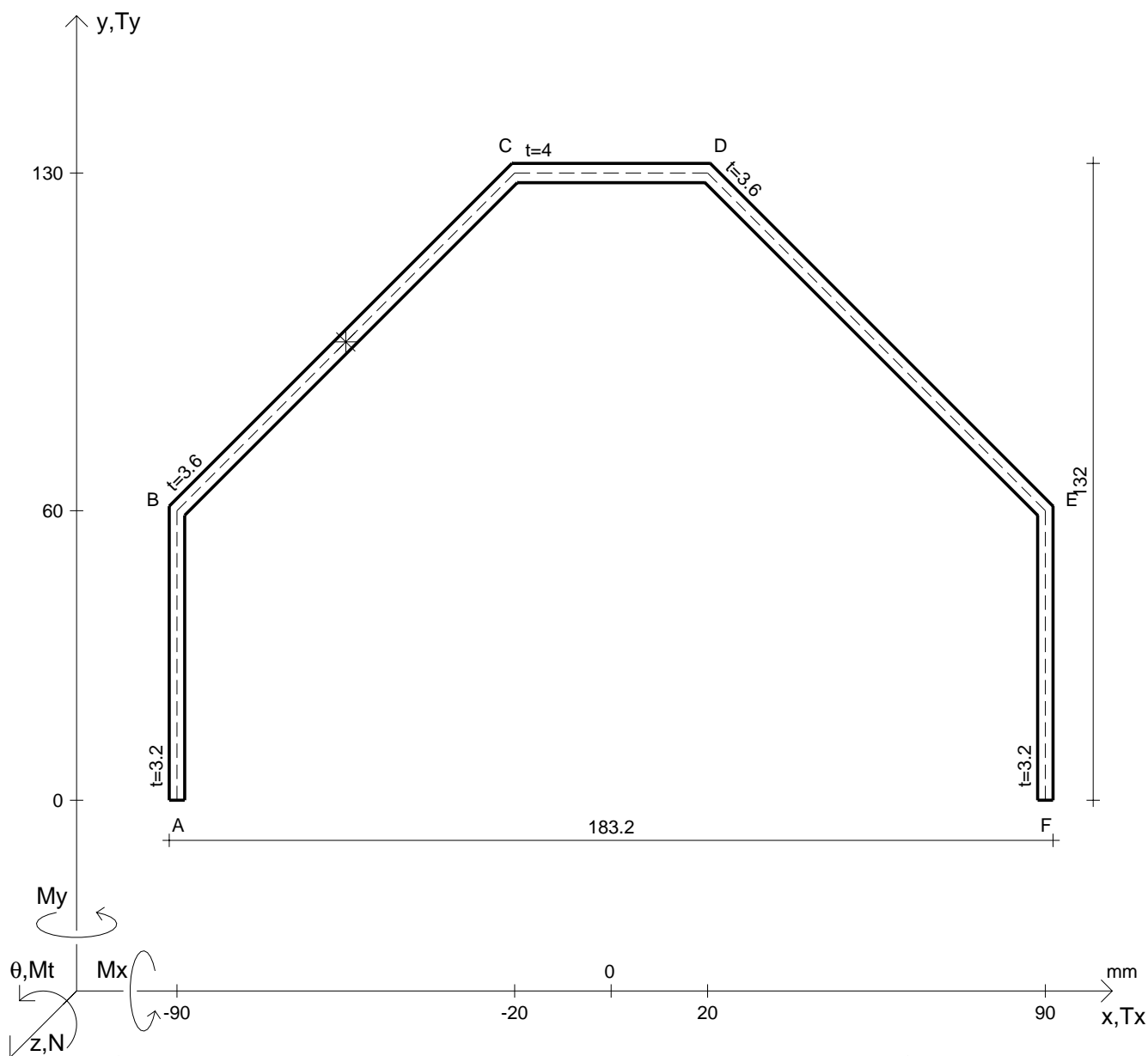
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 75700 \text{ N}$	$M_x$	$= 2340000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 36800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 91400 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

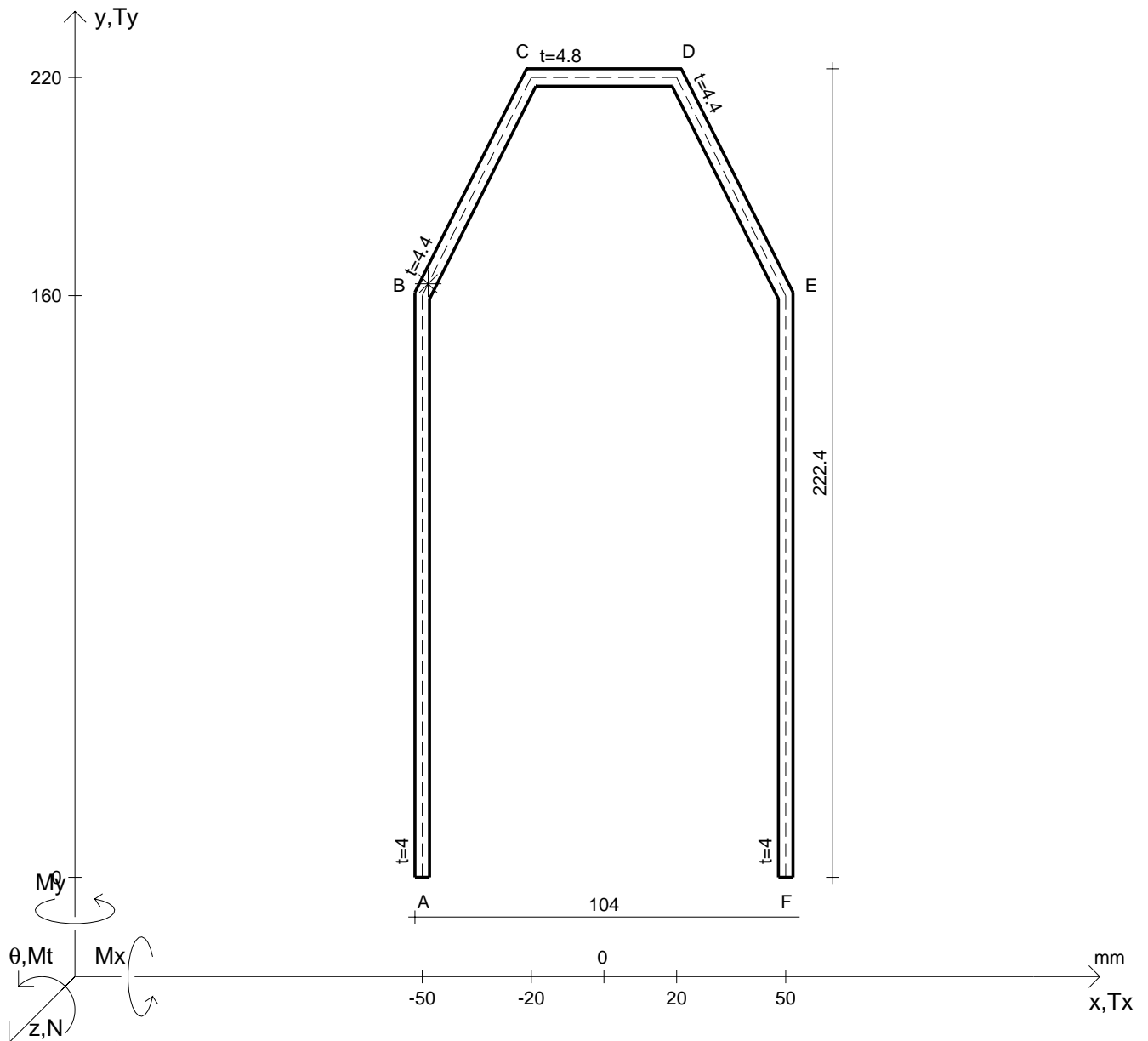
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 54500 \text{ N}$	$M_x$	$= 2270000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 37700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 98400 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

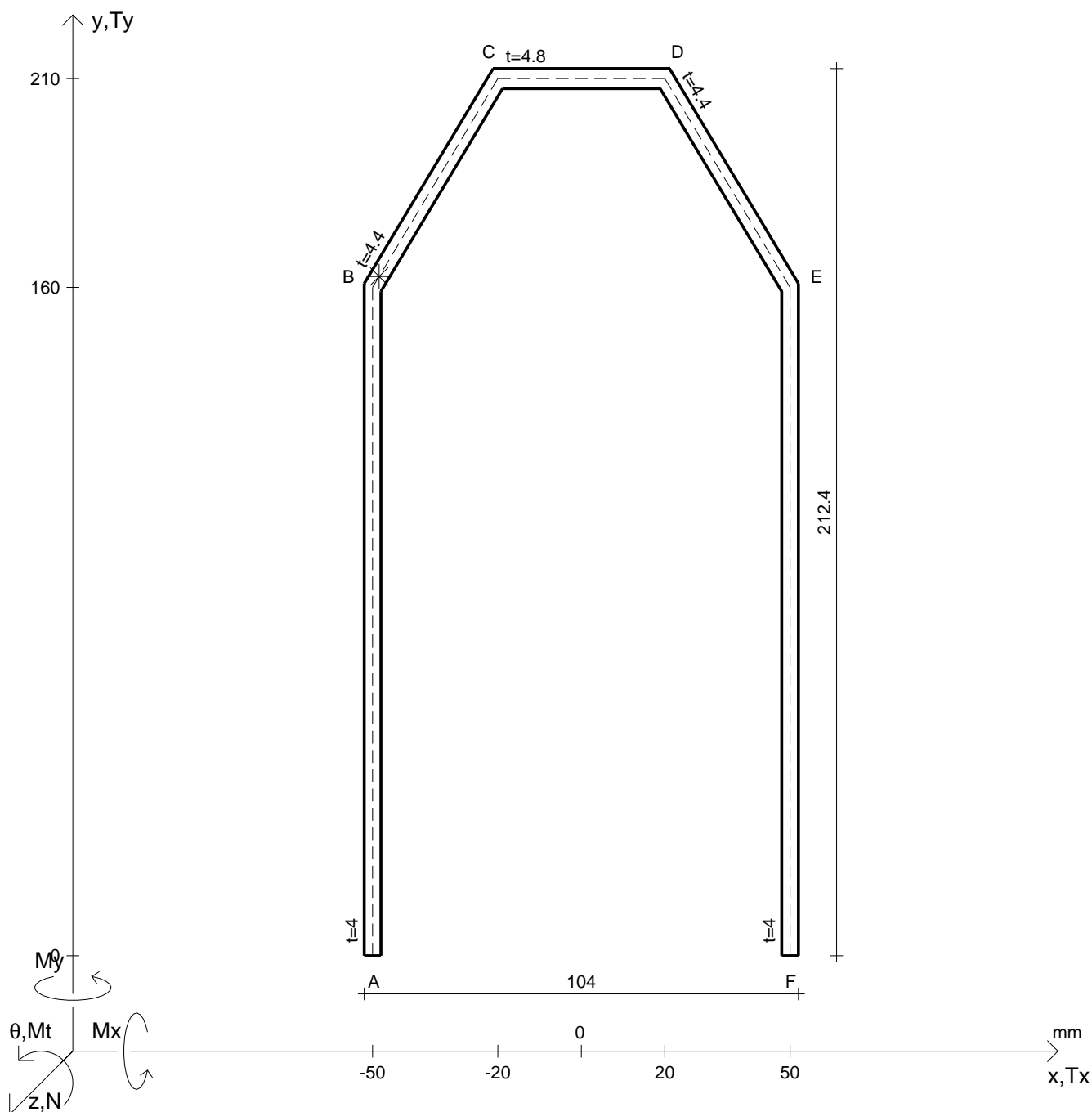
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 98800 \text{ N}$	$M_x$	$= 5350000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 86700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 204000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

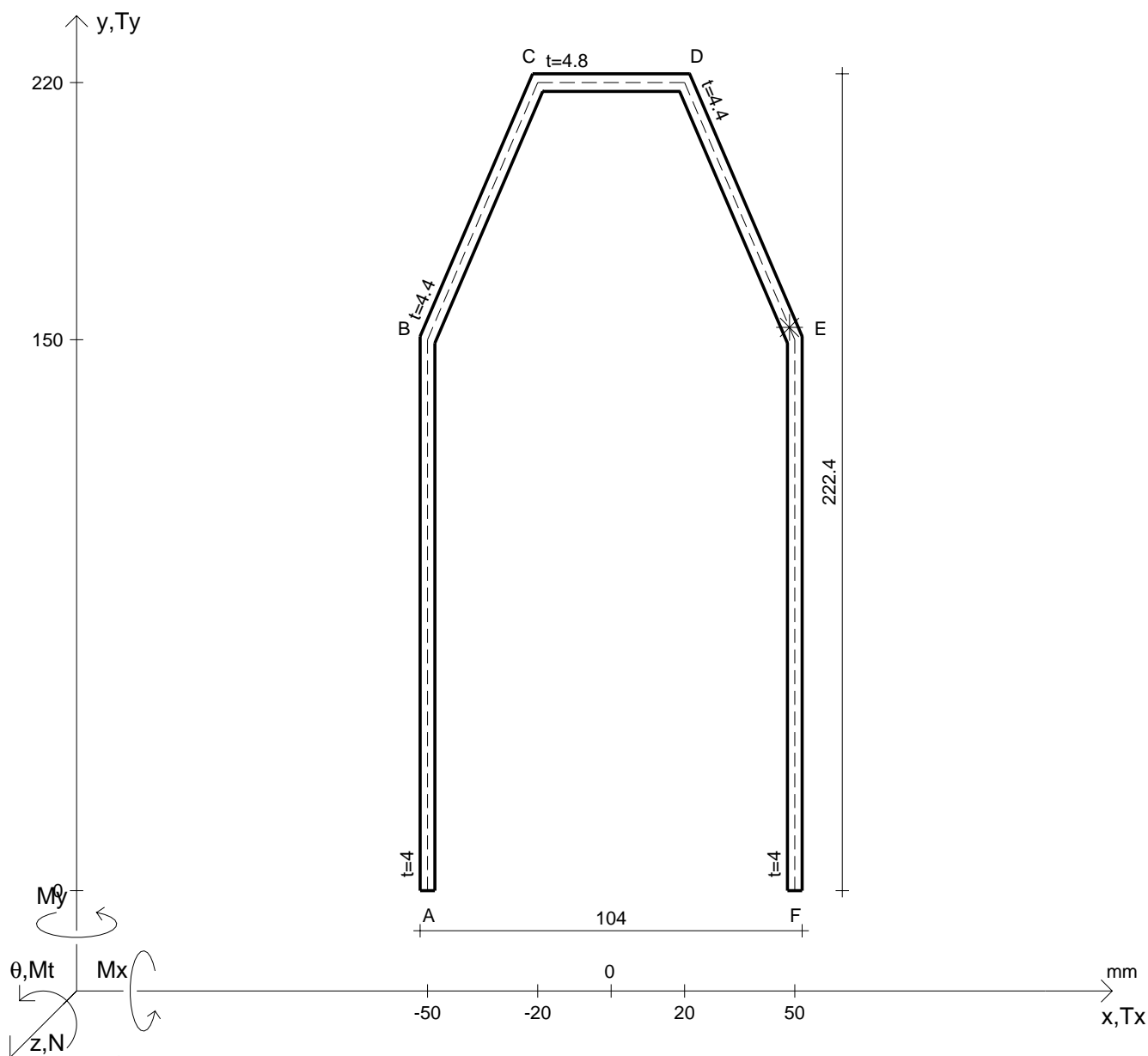
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 104000 N	M <sub>t</sub>	= 144000 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 93400 N	M <sub>x</sub>	= 5480000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A <sup>*</sup>	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

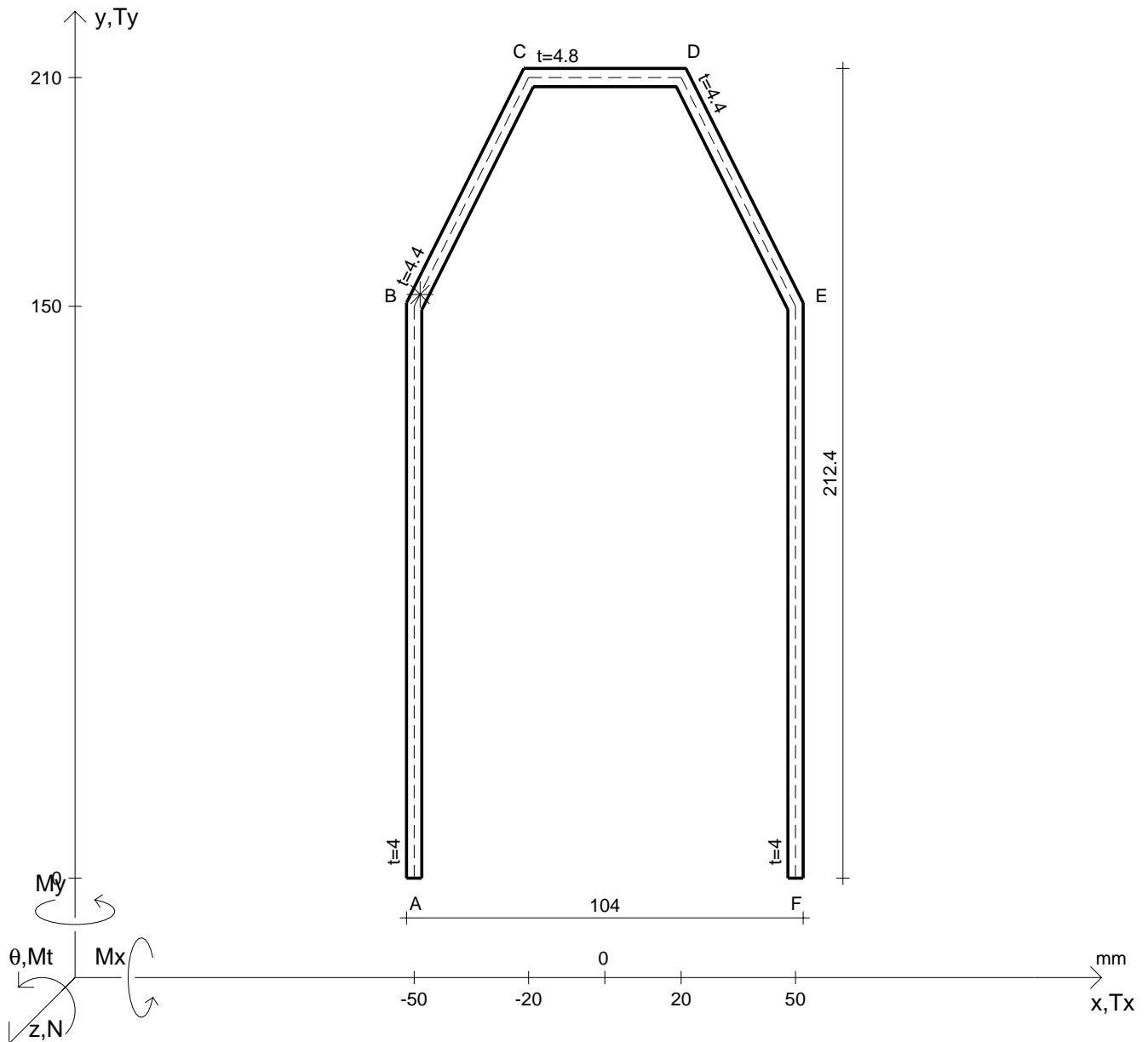
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 120000 N	$M_x$	= 6650000 Nmm	G	= 73000 N/mm <sup>2</sup>
$T_y$	= 67900 N	$\sigma_a$	= 220 N/mm <sup>2</sup>		
$M_t$	= 172000 Nmm	E	= 200000 N/mm <sup>2</sup>		
$y_G$	=	$\tau(M_t)_d$	=	$\sigma_{lld}$	=
$u_o$	=	$\tau(T_{yc})$	=	$\sigma_{tresca}$	=
$v_o$	=	$\tau(T_{yb})_d$	=	$\sigma_{mises}$	=
$A^*$	=	$\tau(T_y)_s$	=	$\sigma_{st.ven}$	=
$S_u$	=	$\tau(T_y)_d$	=	$\theta_t$	=
$C_w$	=	$\sigma$	=	$r_u$	=
$J_u$	=	$\tau_s$	=	$r_v$	=
$J_v$	=	$\tau_d$	=	$r_o$	=
$J_t$	=	$\sigma_{ls}$	=	$J_p$	=
$\sigma(N)$	=	$\sigma_{lls}$	=		
$\sigma(M_x)$	=	$\sigma_{ld}$	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

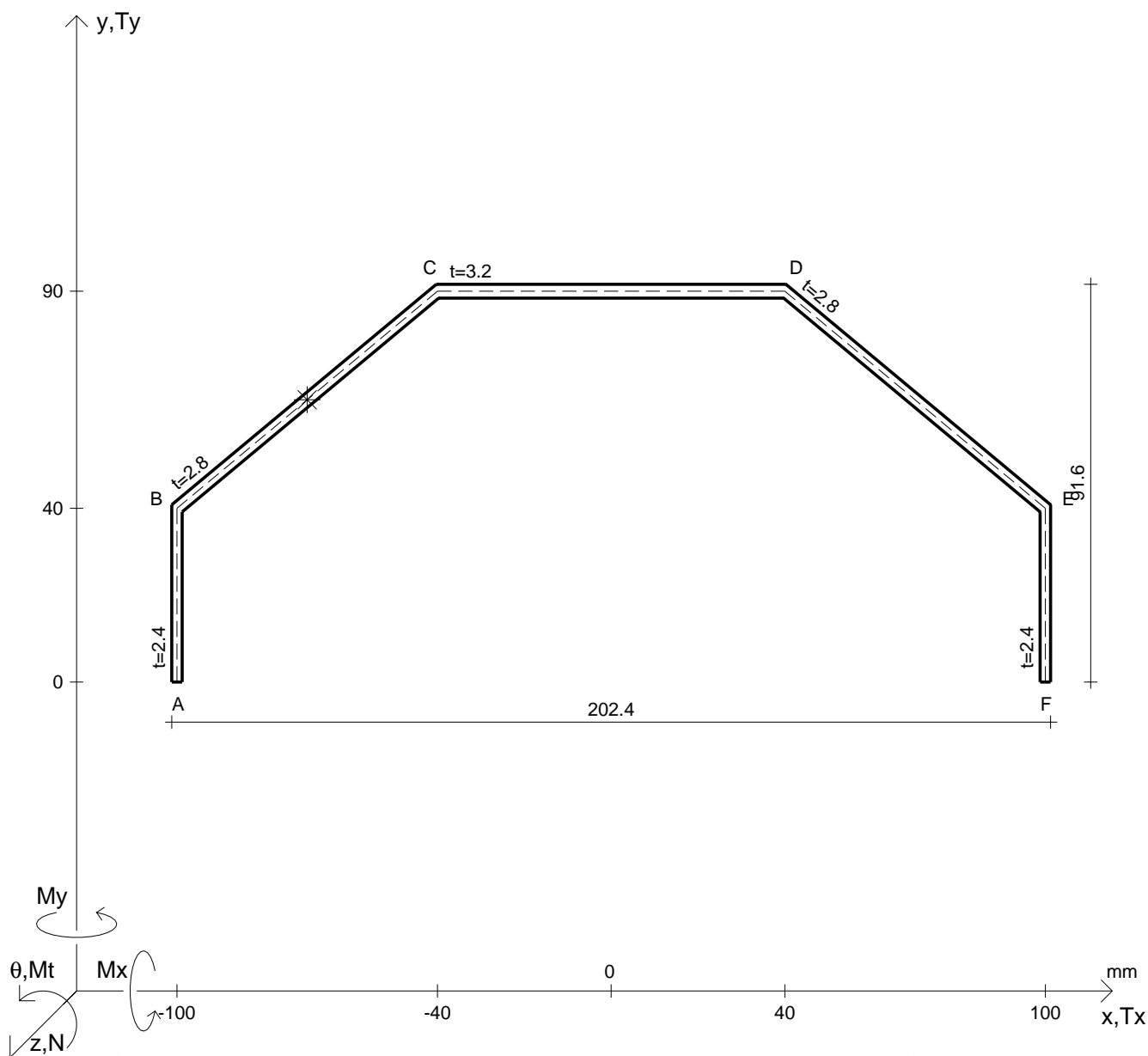
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 85200 \text{ N}$	$M_x$	$= 6650000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 74000 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 181000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

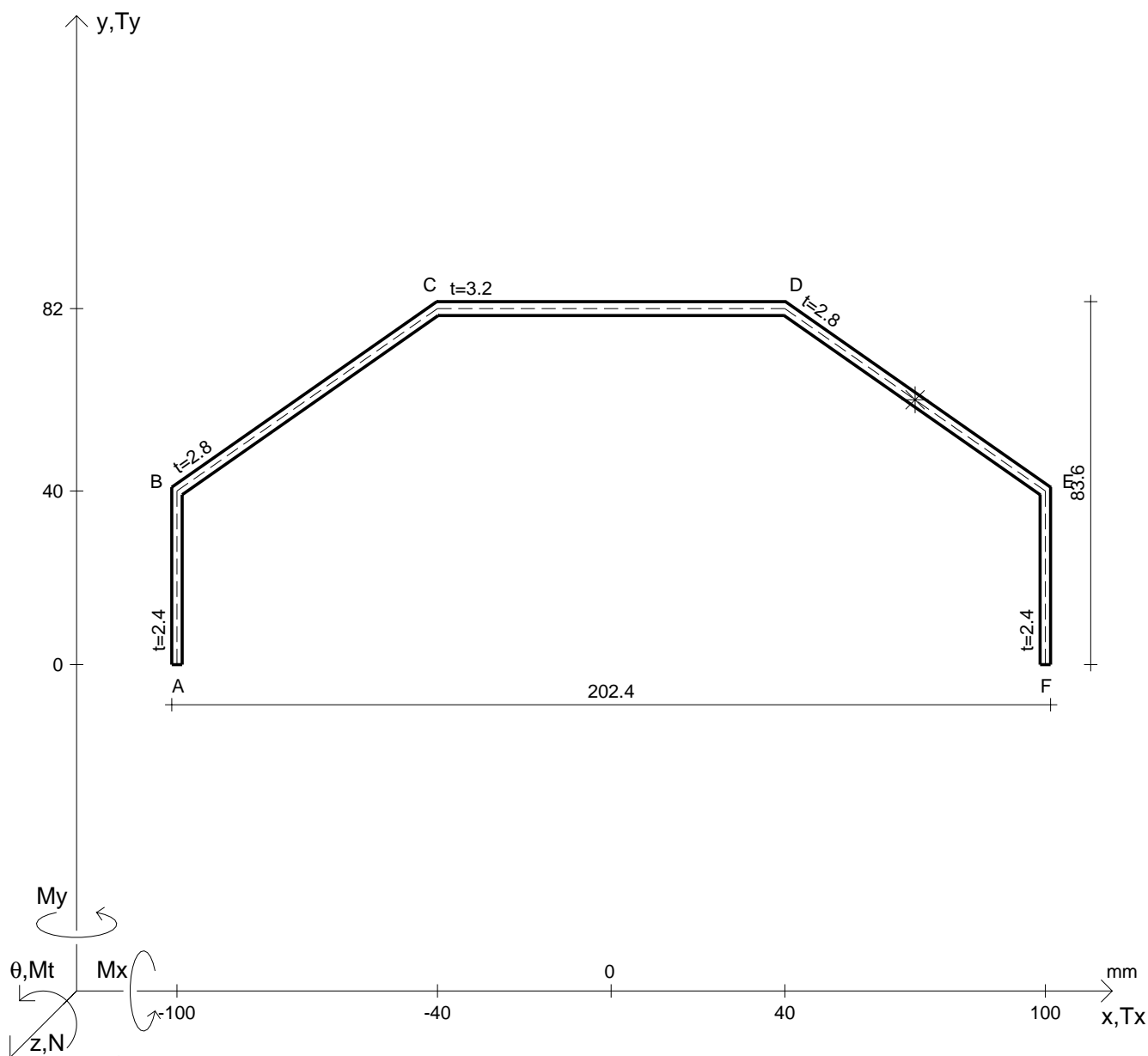
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 42700 \text{ N}$	$M_x$	$= 729000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 22800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 60900 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

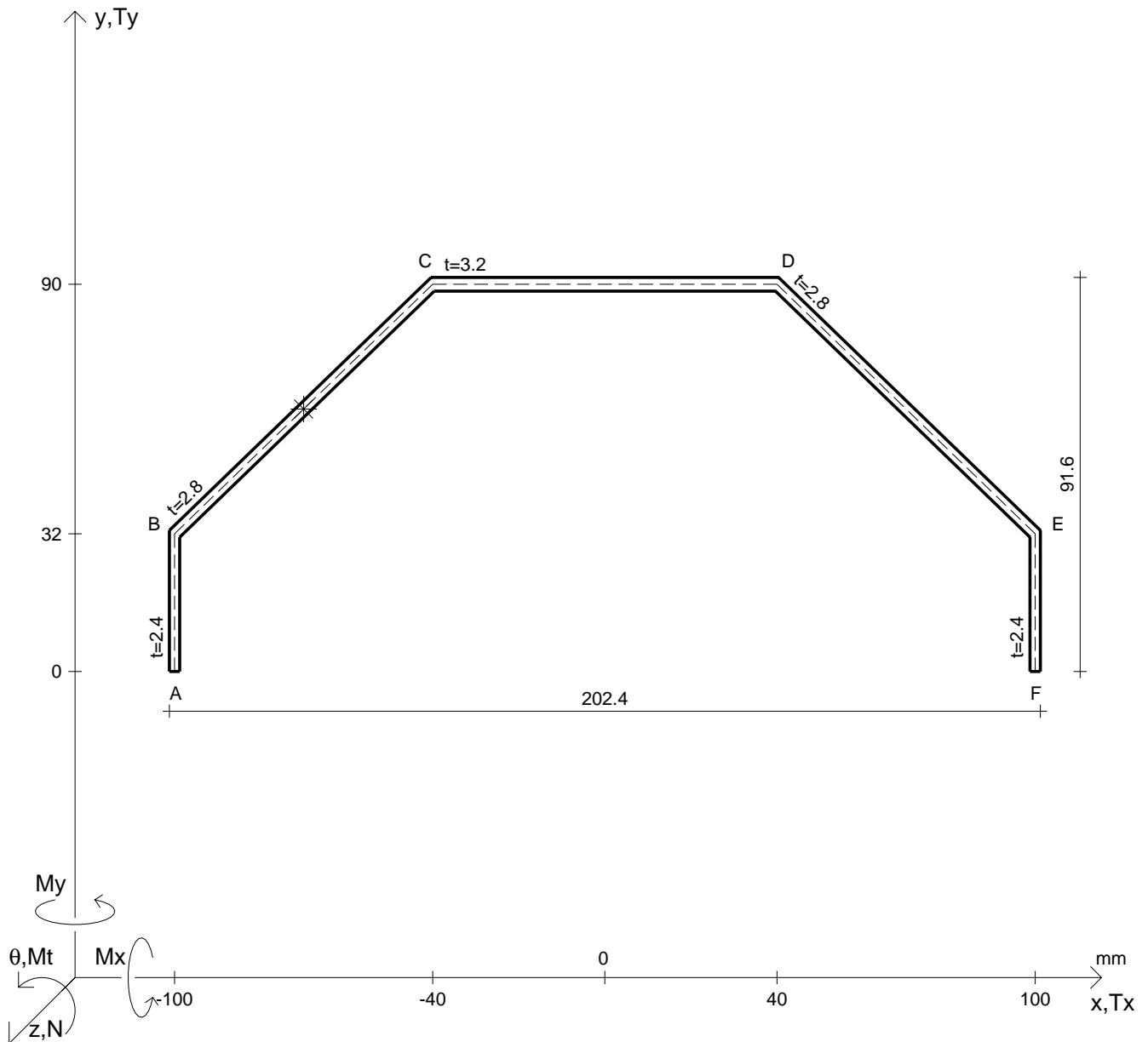
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 45700 \text{ N}$	$M_x$	$= 682000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 22700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 43600 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

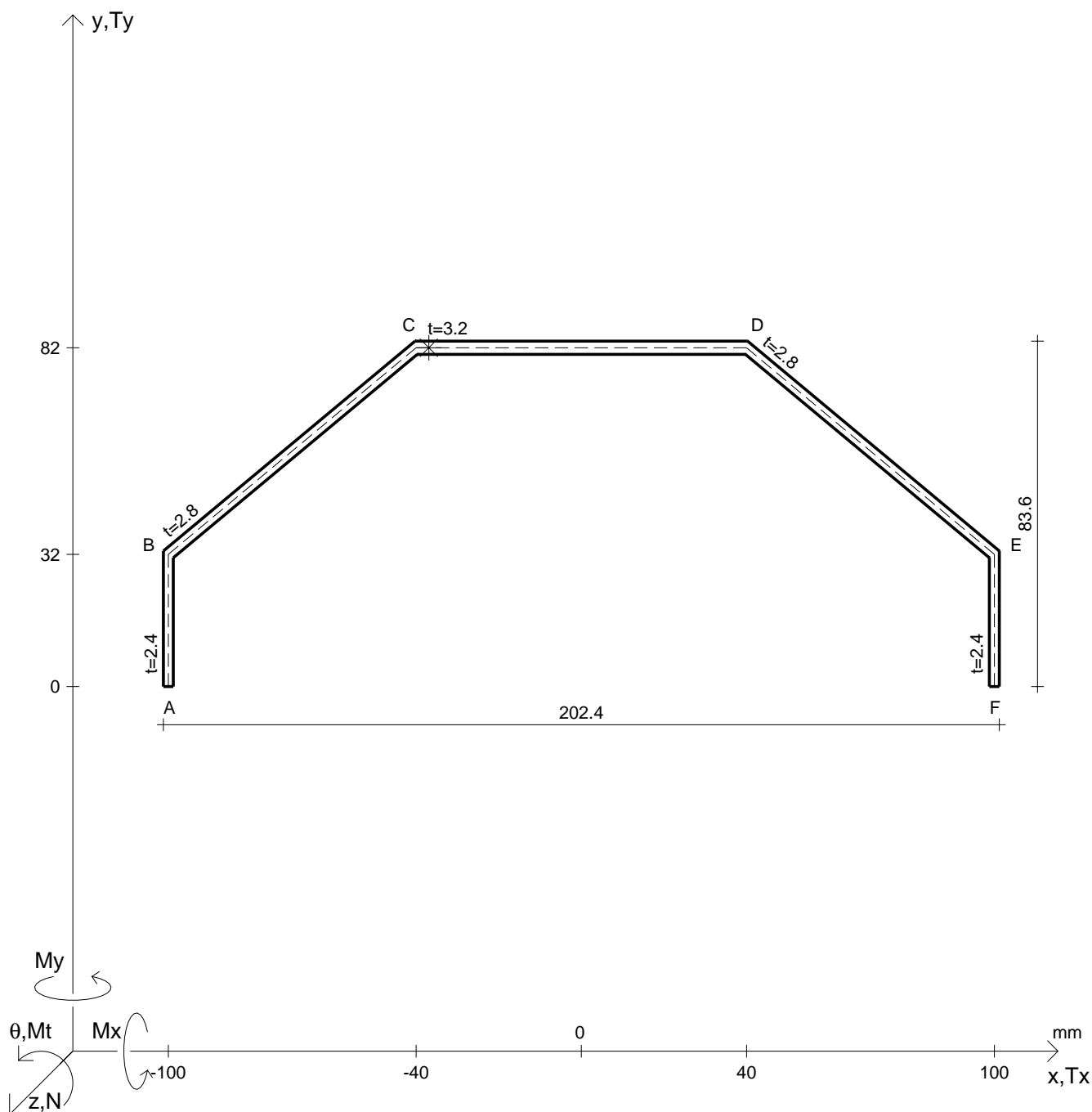
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 51300 \text{ N}$	$M_x$	$= -930000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 18500 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 50500 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto C di CD

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

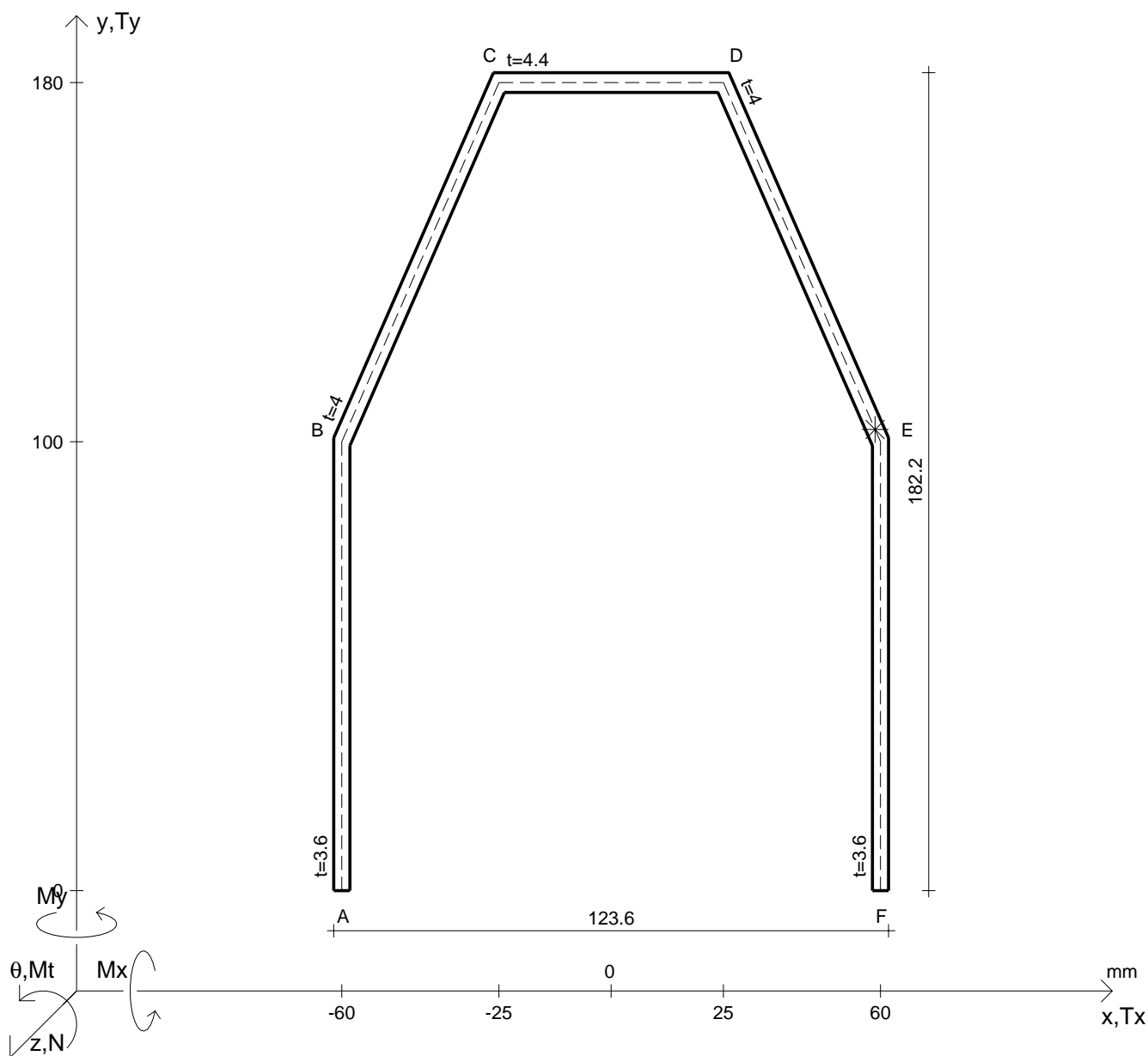
N	= 38900 N	M <sub>t</sub>	= 57300 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 19800 N	M <sub>x</sub>	= 909000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A <sub>*</sub>	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		











Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

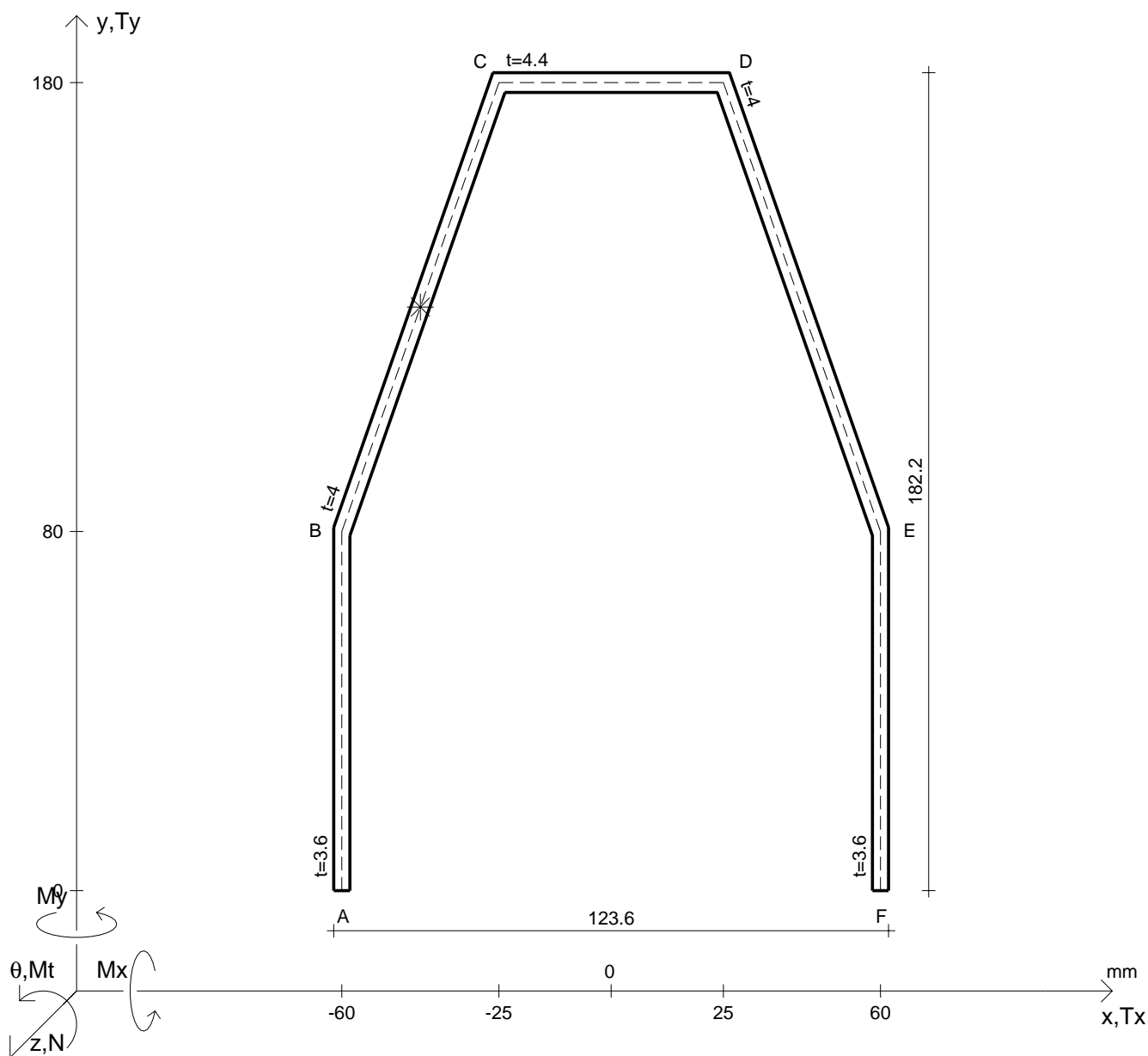
Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 89700 \text{ N}$	$M_x$	$= -3920000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 67600 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 116000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u^*$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		









Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

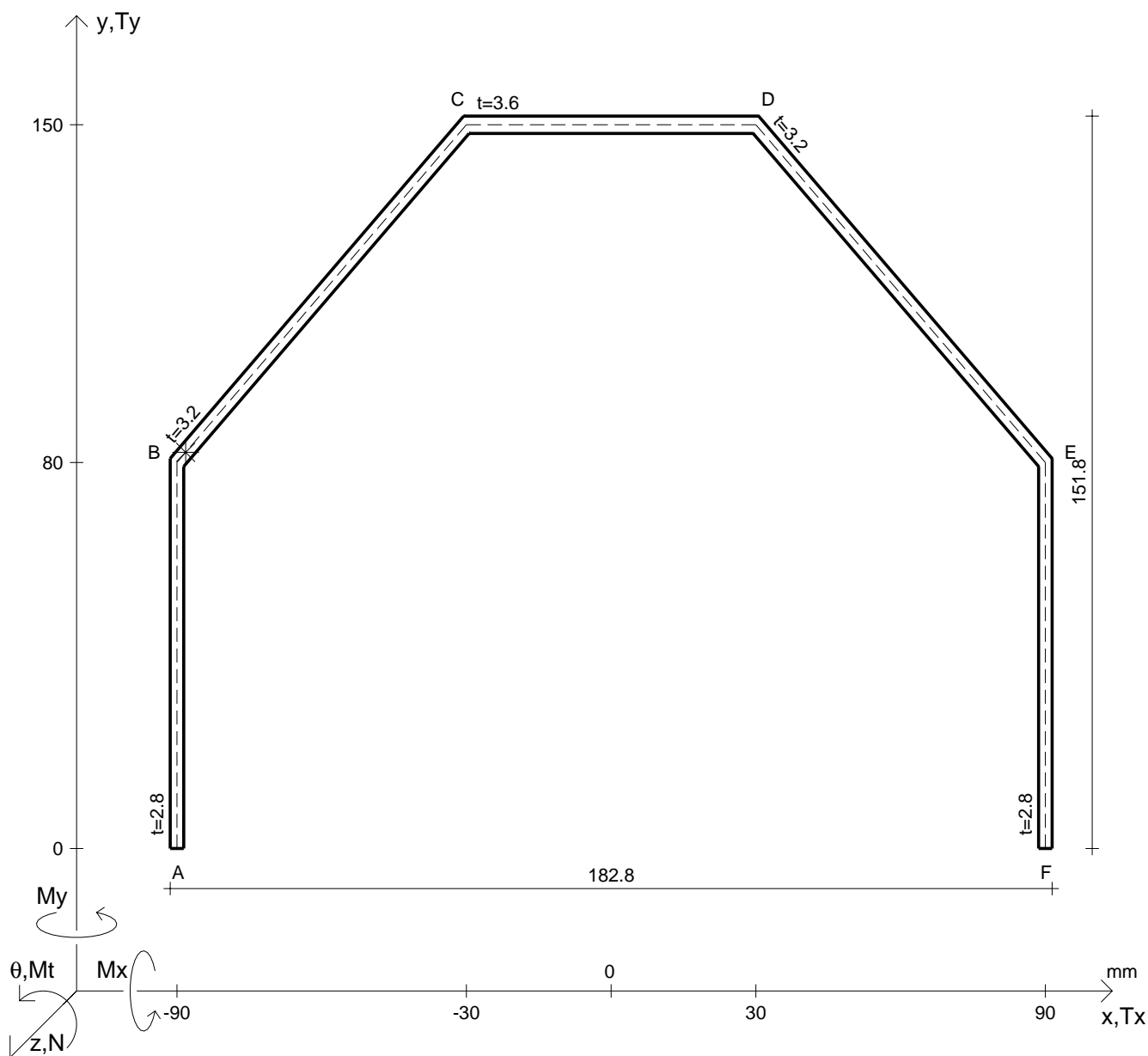
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 71300 N	$M_x$	= 4660000 Nmm	G	= 73000 N/mm <sup>2</sup>
$T_y$	= 58200 N	$\sigma_a$	= 220 N/mm <sup>2</sup>		
$M_t$	= 143000 Nmm	E	= 200000 N/mm <sup>2</sup>		
$y_G$	=	$\tau(M_t)_d$	=	$\sigma_{lld}$	=
$u_o$	=	$\tau(T_{yc})$	=	$\sigma_{tresca}$	=
$v_o$	=	$\tau(T_{yb})_d$	=	$\sigma_{mises}$	=
$A^*$	=	$\tau(T_y)_s$	=	$\sigma_{st.ven}$	=
$S_u$	=	$\tau(T_y)_d$	=	$\theta_t$	=
$C_w$	=	$\sigma$	=	$r_u$	=
$J_u$	=	$\tau_s$	=	$r_v$	=
$J_v$	=	$\tau_d$	=	$r_o$	=
$J_t$	=	$\sigma_{ls}$	=	$J_p$	=
$\sigma(N)$	=	$\sigma_{lls}$	=		
$\sigma(M_x)$	=	$\sigma_{ld}$	=		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

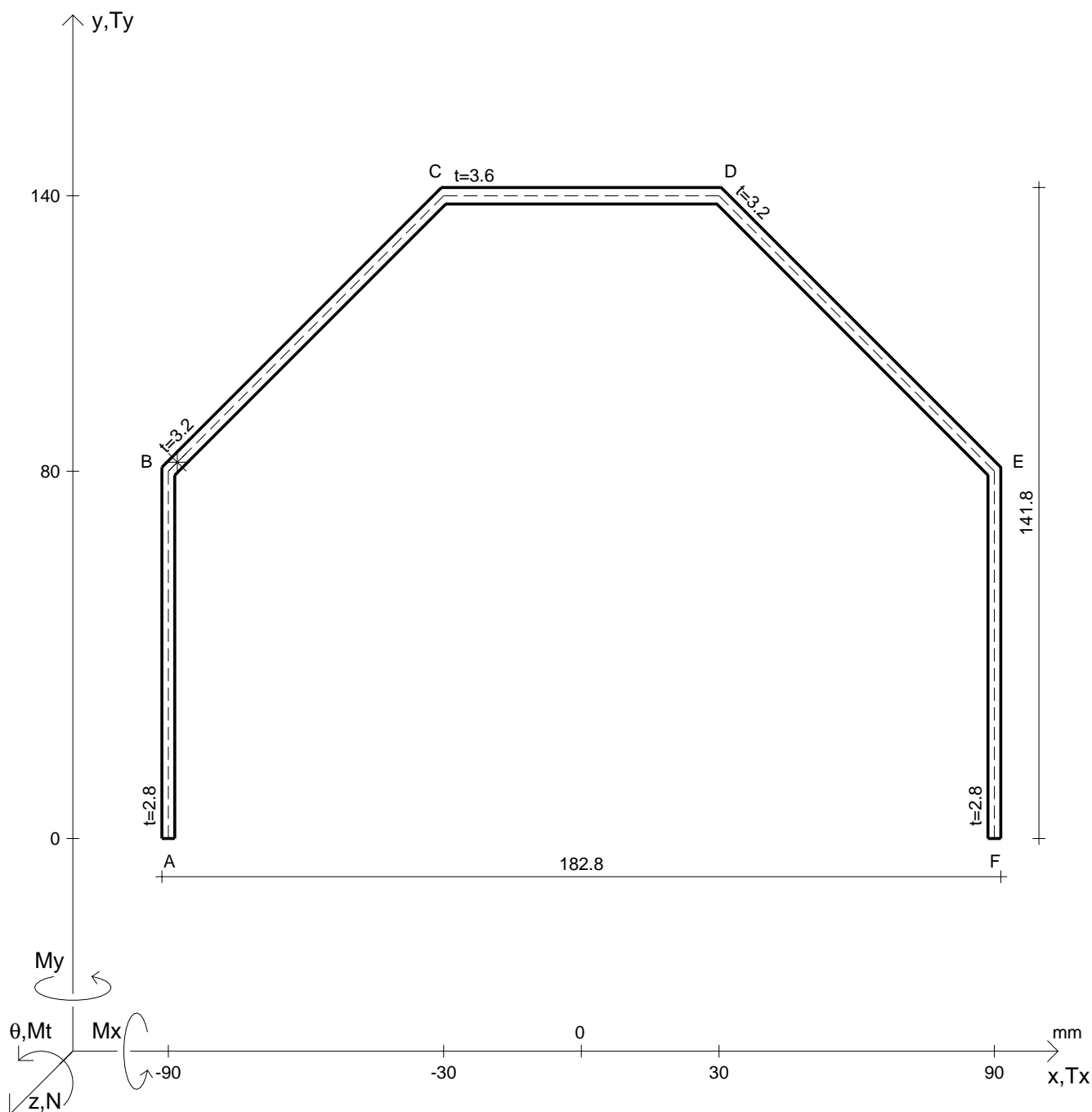
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 62900 N	$M_x$	= -2070000 Nmm	G	= 73000 N/mm <sup>2</sup>
$T_y$	= 41700 N	$\sigma_a$	= 220 N/mm <sup>2</sup>	$\sigma_{lld}$	=
$M_t$	= 97300 Nmm	E	= 200000 N/mm <sup>2</sup>	$\sigma_{tresca}$	=
$y_G$	=	$\tau(M_t)_d$	=	$\sigma_{mises}$	=
$u_o$	=	$\tau(T_{yc})$	=	$\sigma_{st.ven}$	=
$v_o$	=	$\tau(T_{yb})_d$	=	$\theta_t$	=
$A^*$	=	$\tau(T_y)_s$	=	$r_u$	=
$S_u$	=	$\tau(T_y)_d$	=	$r_v$	=
$C_w$	=	$\sigma$	=	$r_o$	=
$J_u$	=	$\tau_s$	=	$J_p$	=
$J_v$	=	$\tau_d$	=		
$J_t$	=	$\sigma_{ls}$	=		
$\sigma(N)$	=	$\sigma_{lls}$	=		
$\sigma(M_x)$	=	$\sigma_{ld}$	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

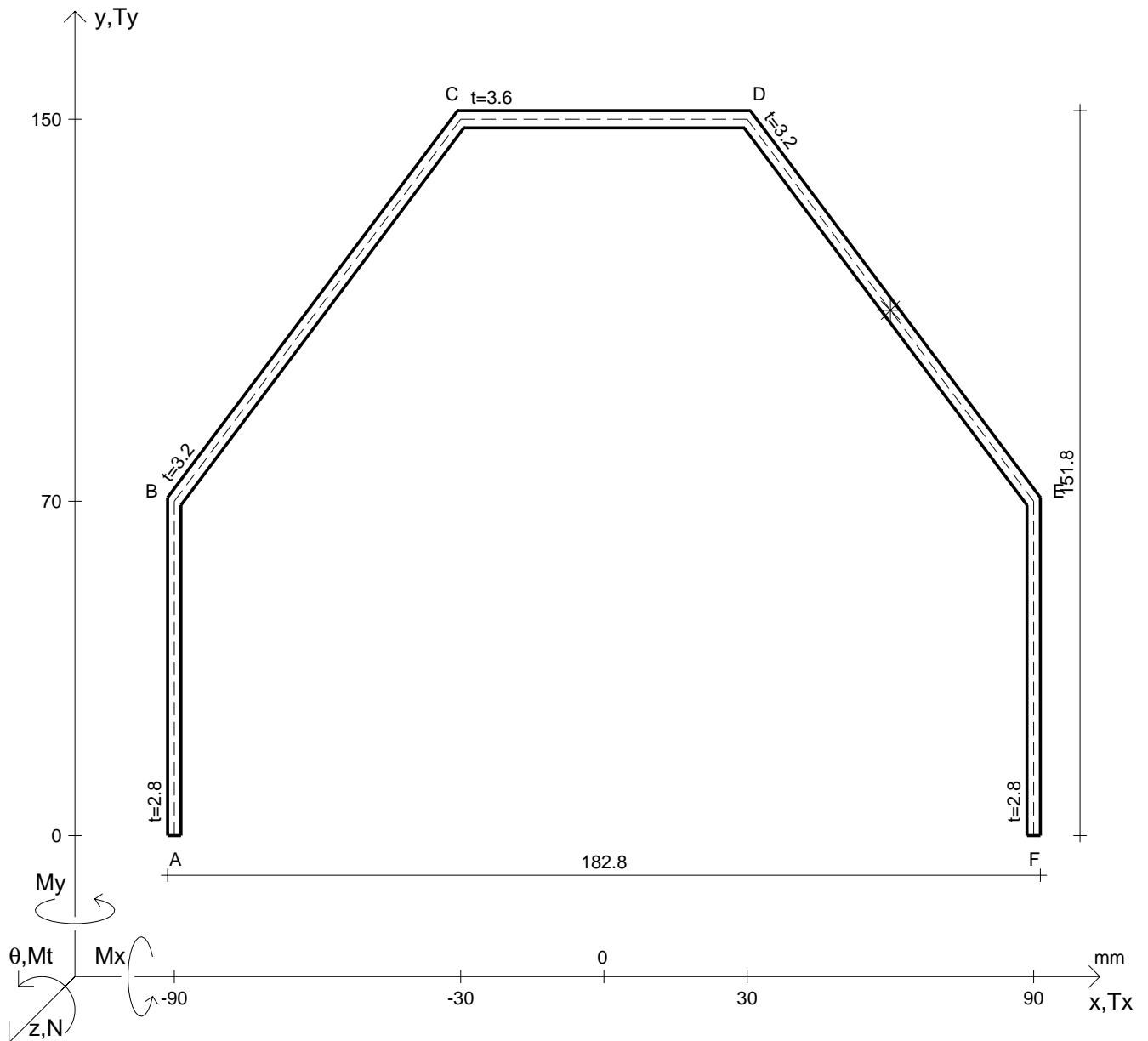
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 67300 N	M <sub>t</sub>	= 69400 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 42200 N	M <sub>x</sub>	= -2050000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A <sub>*</sub>	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

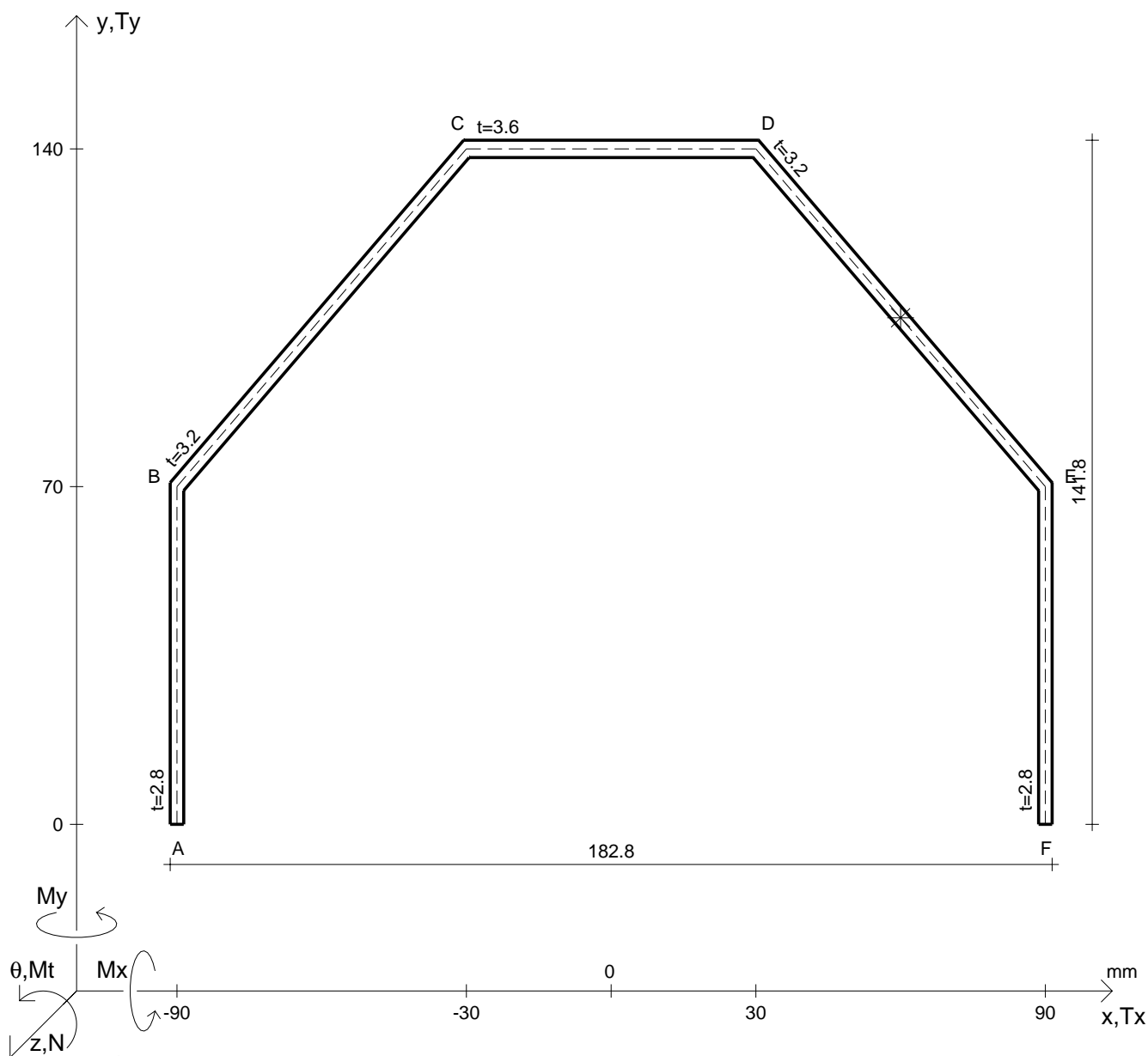
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 74100 \text{ N}$	$M_x$	$= 2510000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 34900 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 79000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

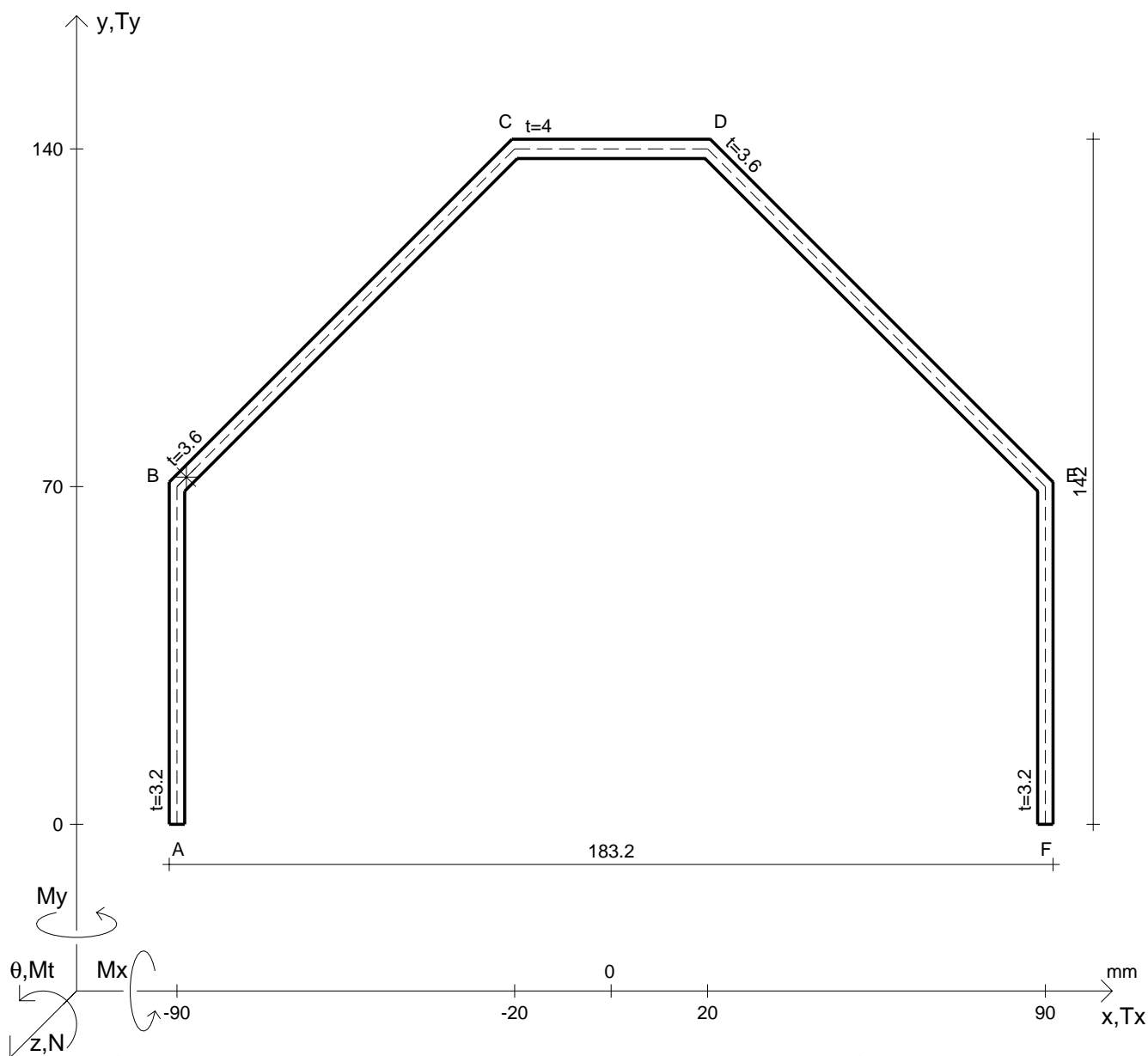
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 53200 \text{ N}$	$M_x$	$= 2450000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 36000 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 84800 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

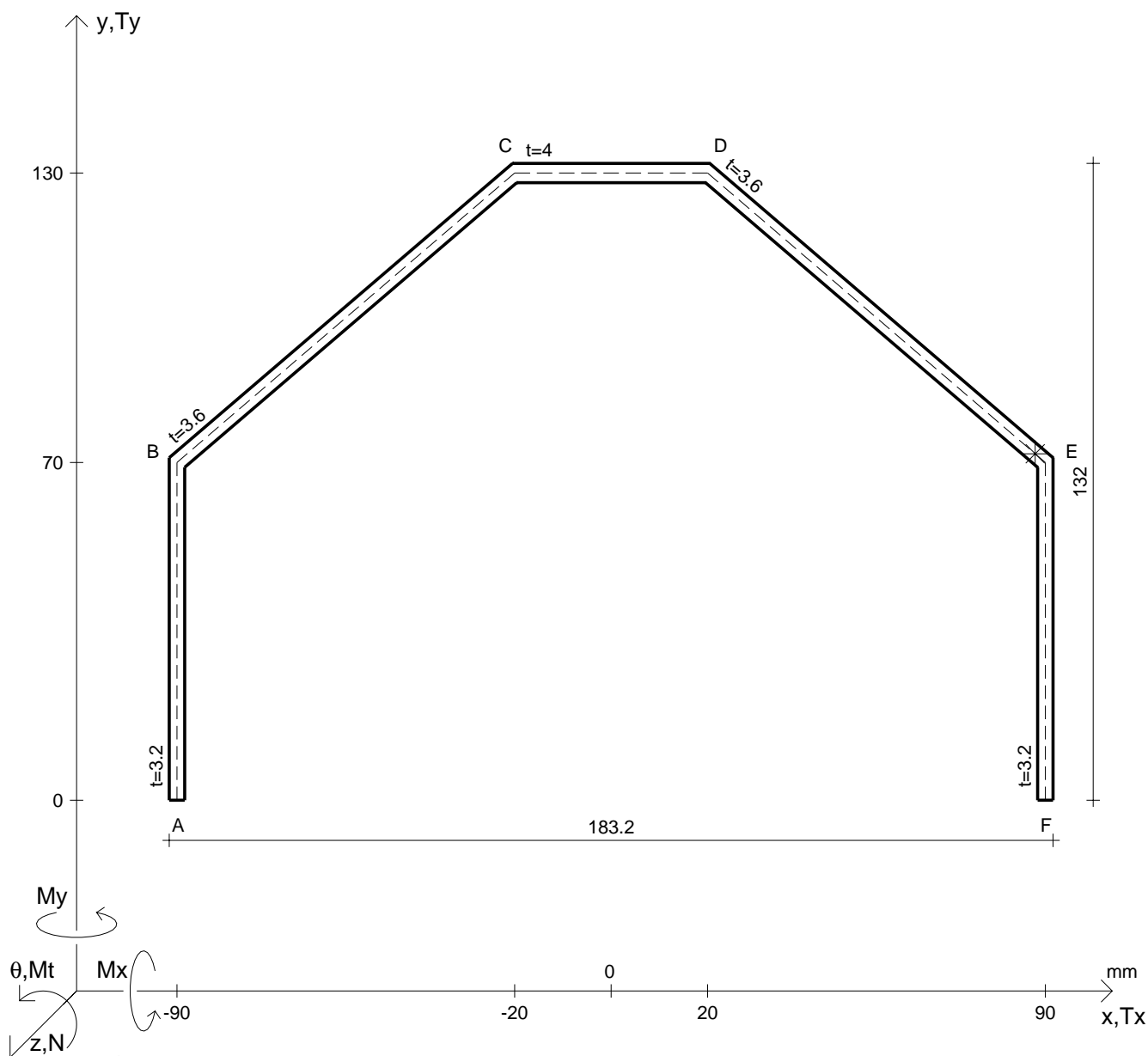
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 65200 \text{ N}$	$M_x$	$= -1950000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 43700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 114000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

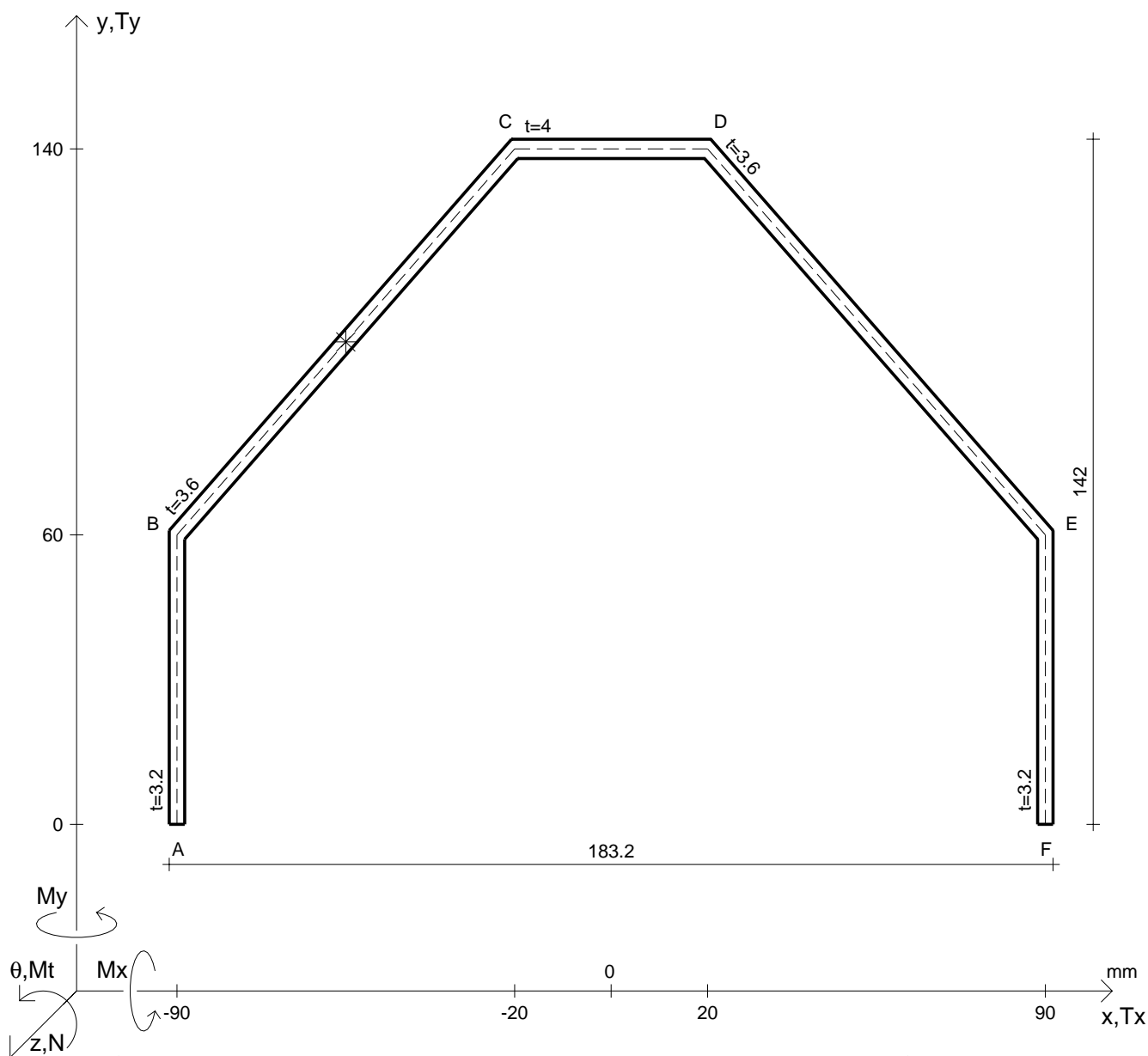
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 69700 \text{ N}$	$M_x$	$= -1910000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 43800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 81600 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

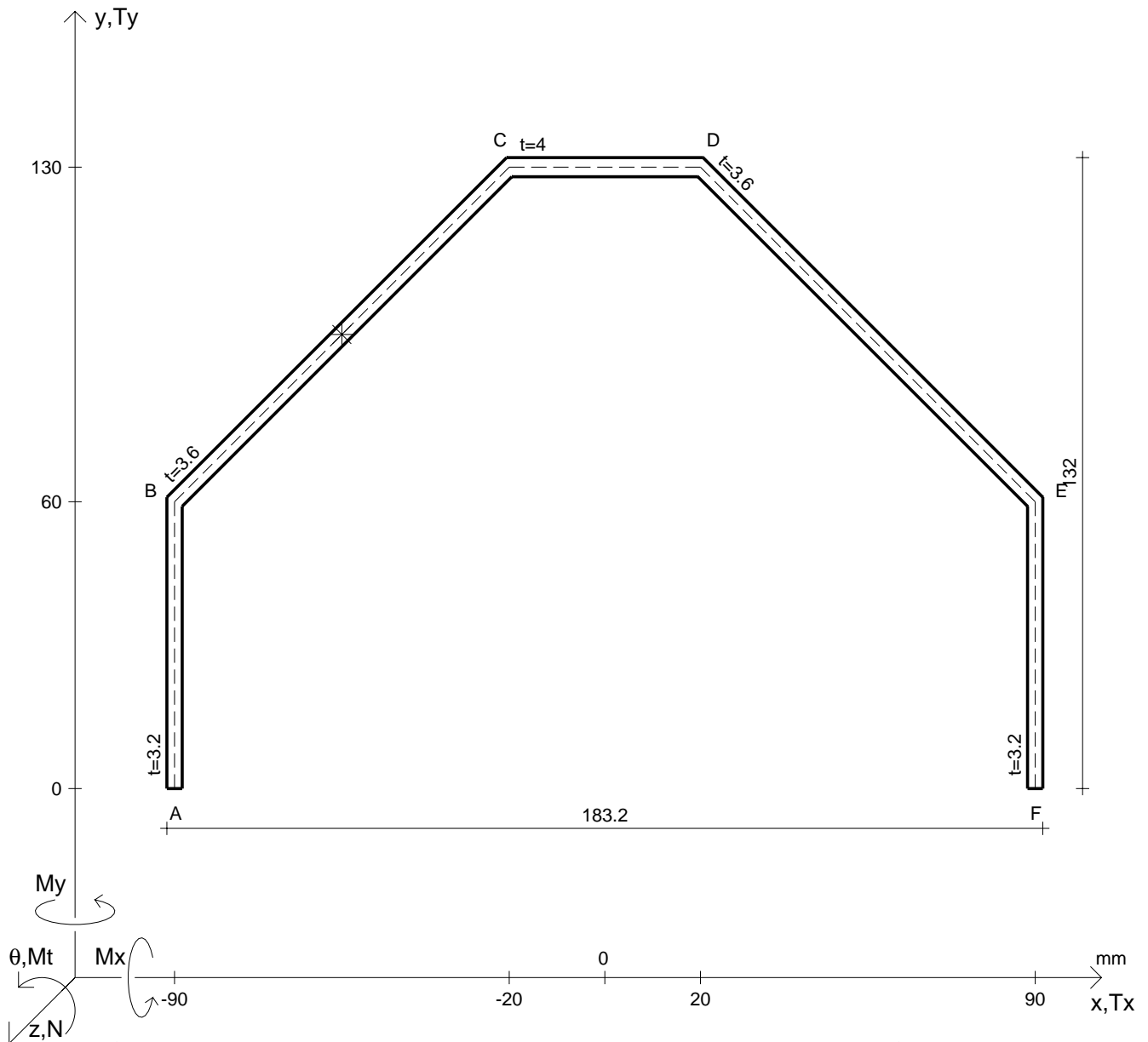
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 75700 \text{ N}$	$M_x$	$= 2340000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 36800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 91400 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

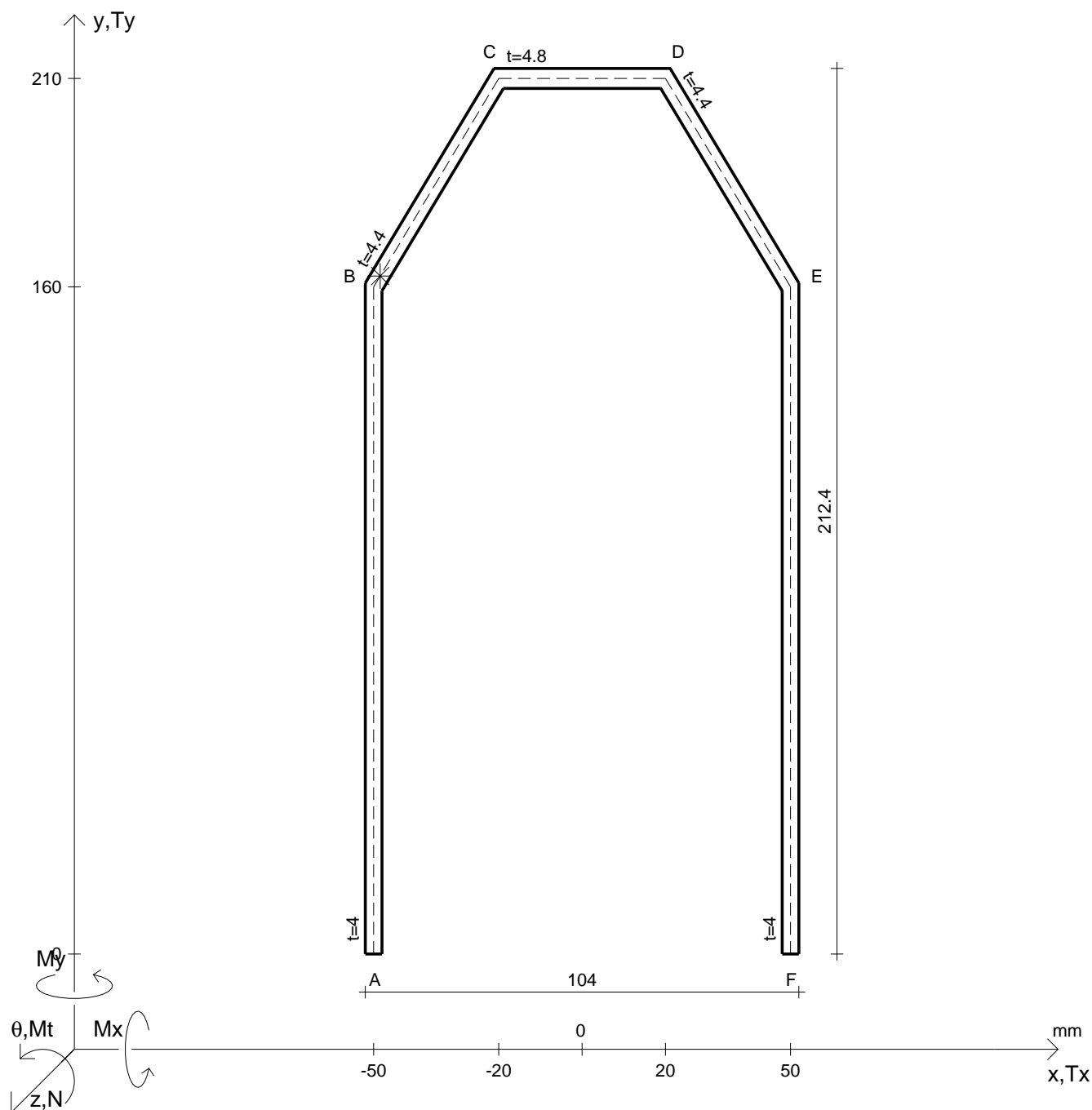
$N$	$= 54500 \text{ N}$	$M_x$	$= 2270000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 37700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 98400 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		











Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

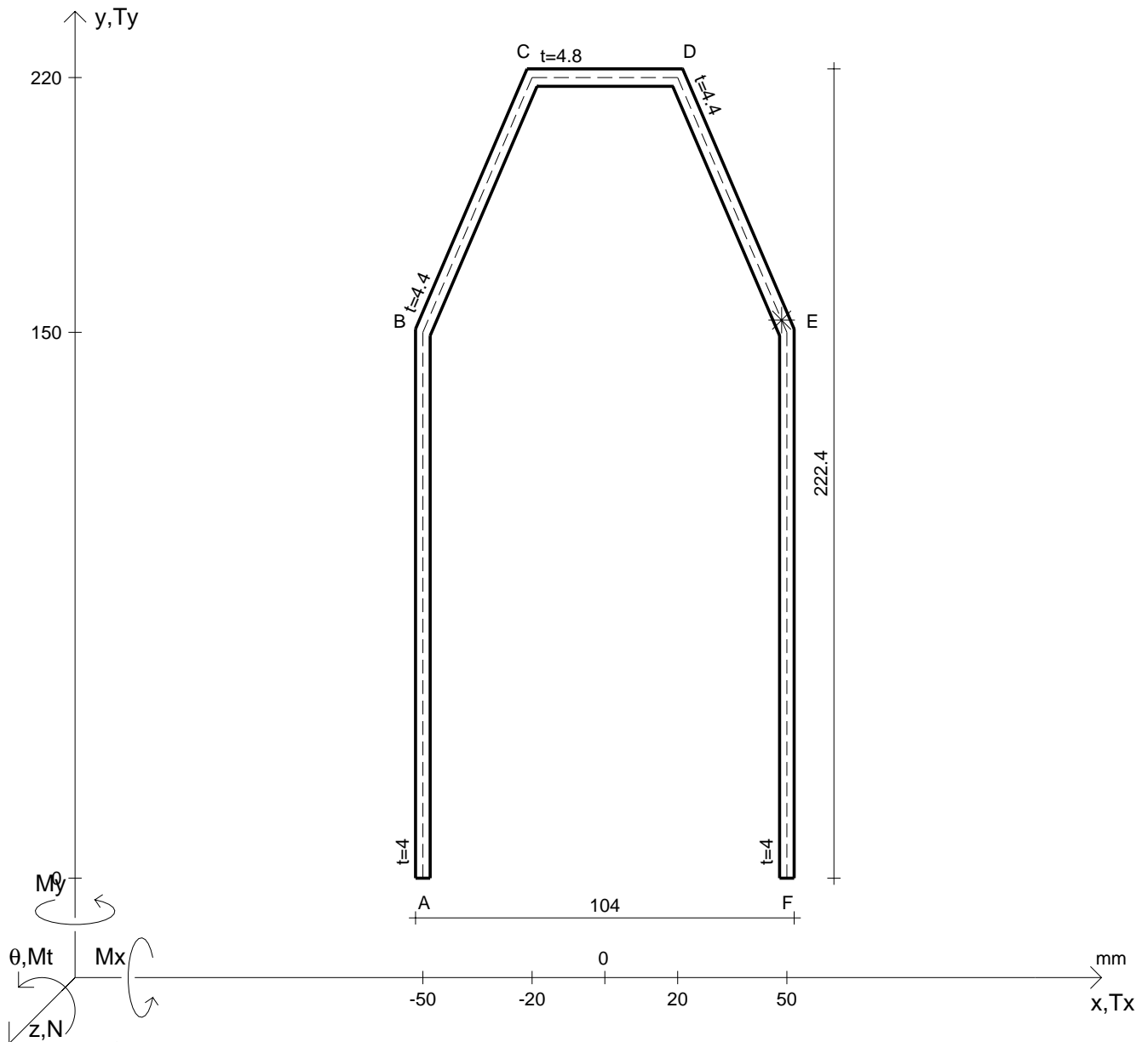
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 104000 N	M <sub>t</sub>	= 144000 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 93400 N	M <sub>x</sub>	= 5480000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A*	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

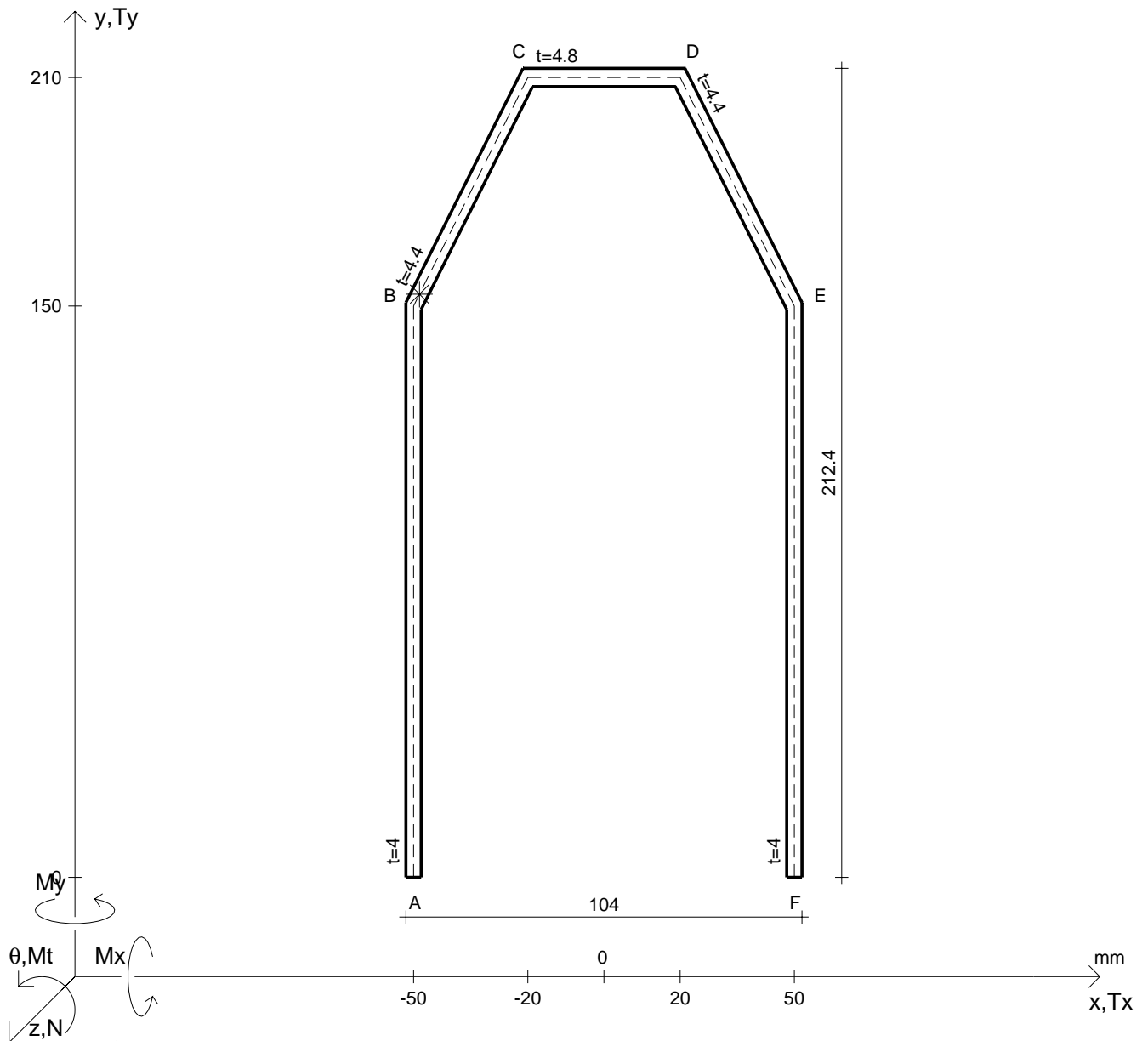
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 120000 \text{ N}$	$M_x$	$= 6650000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 67900 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 172000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

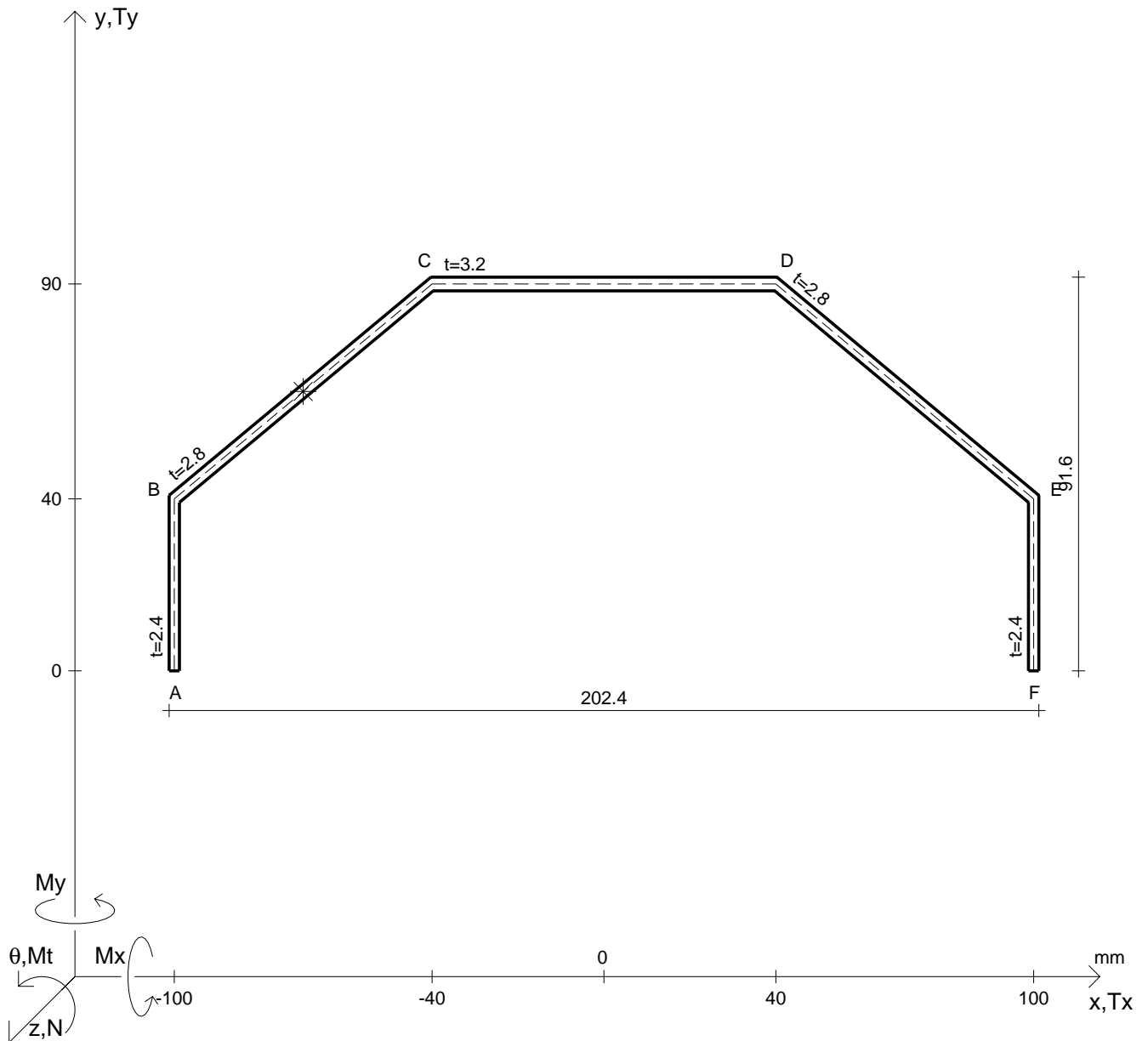
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 85200 \text{ N}$	$M_x$	$= 6650000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 74000 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 181000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

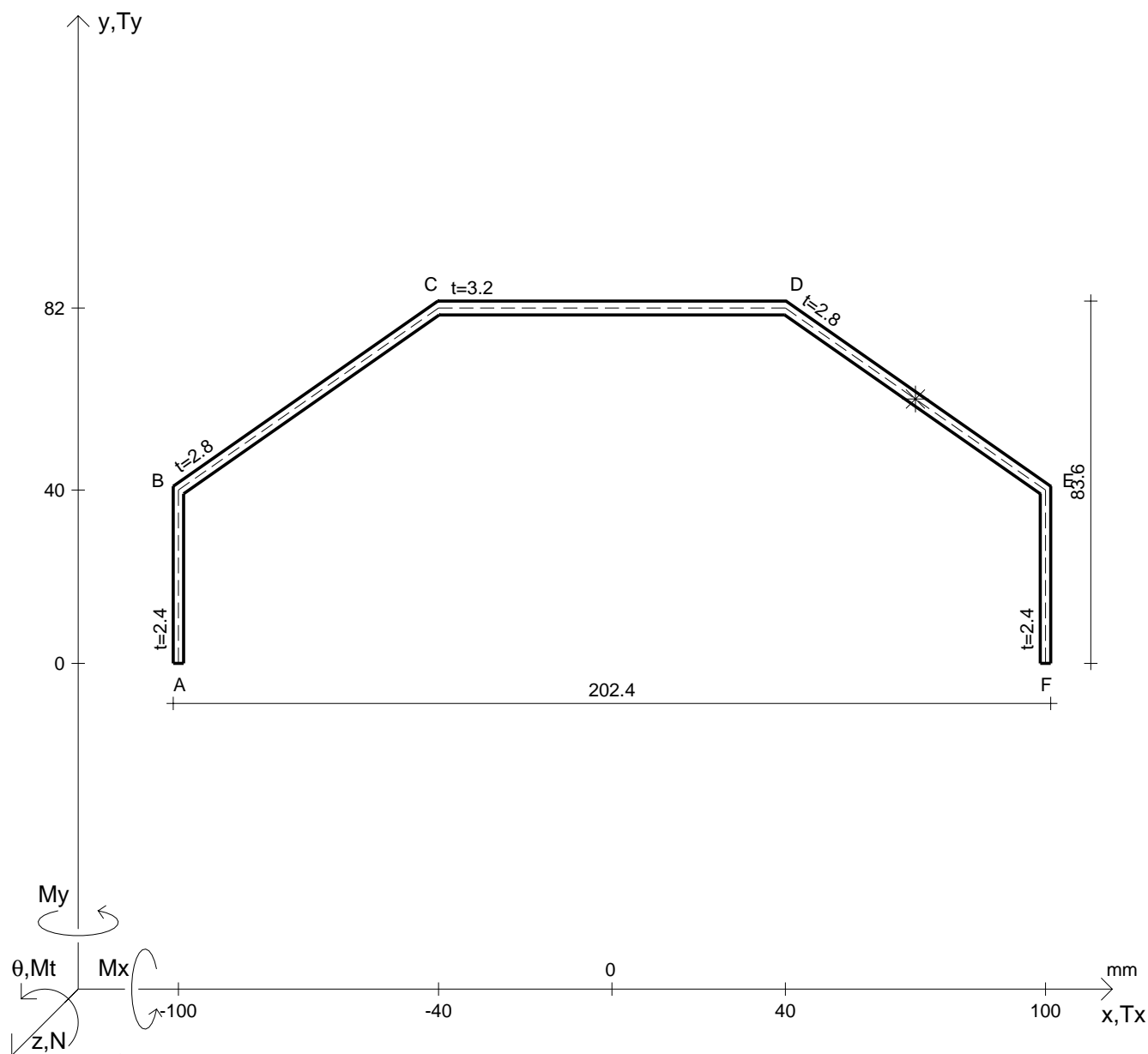
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 42700 \text{ N}$	$M_x$	$= 729000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 22800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 60900 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u^*$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

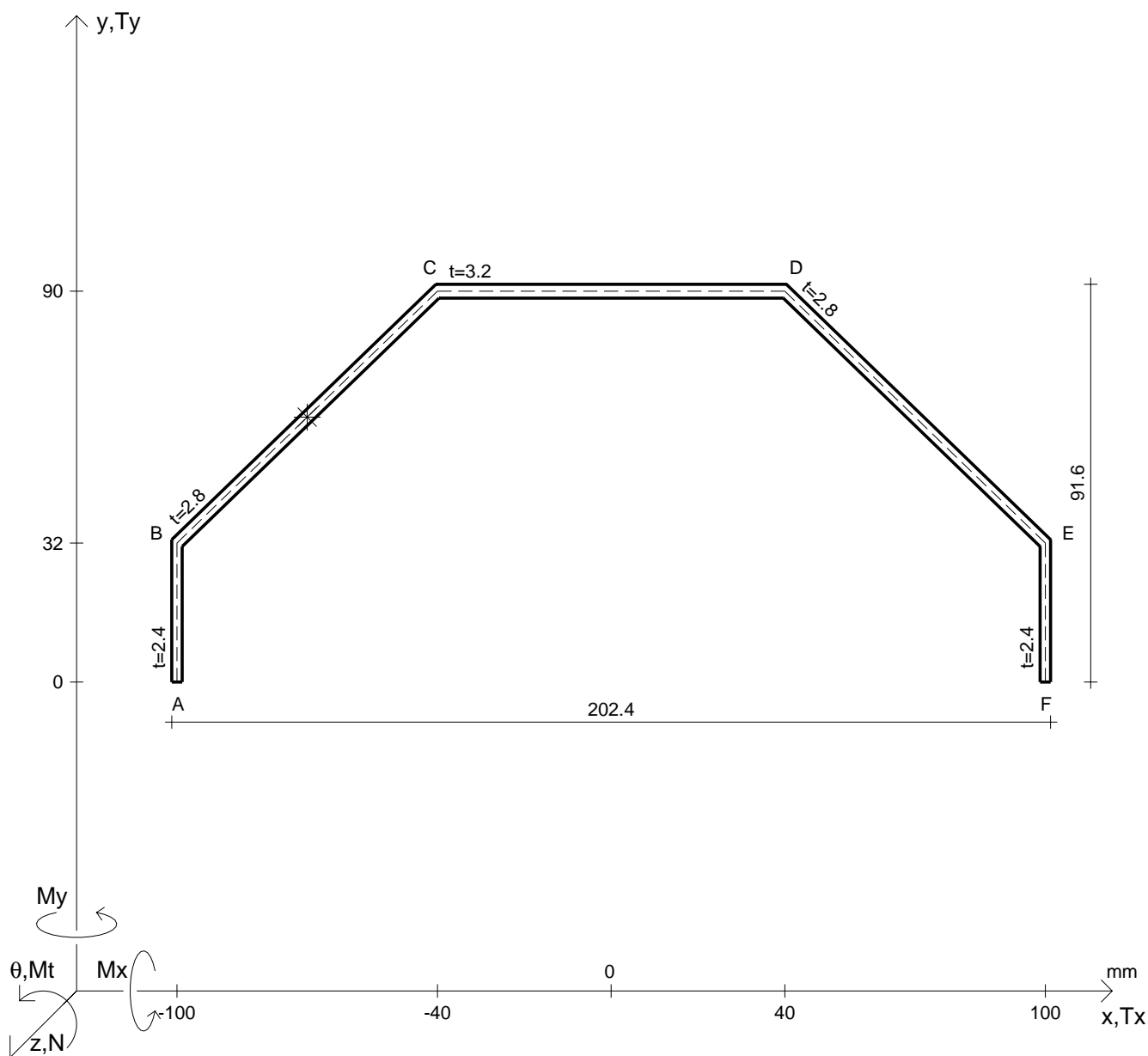
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 45700 \text{ N}$	$M_x$	$= 682000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 22700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 43600 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

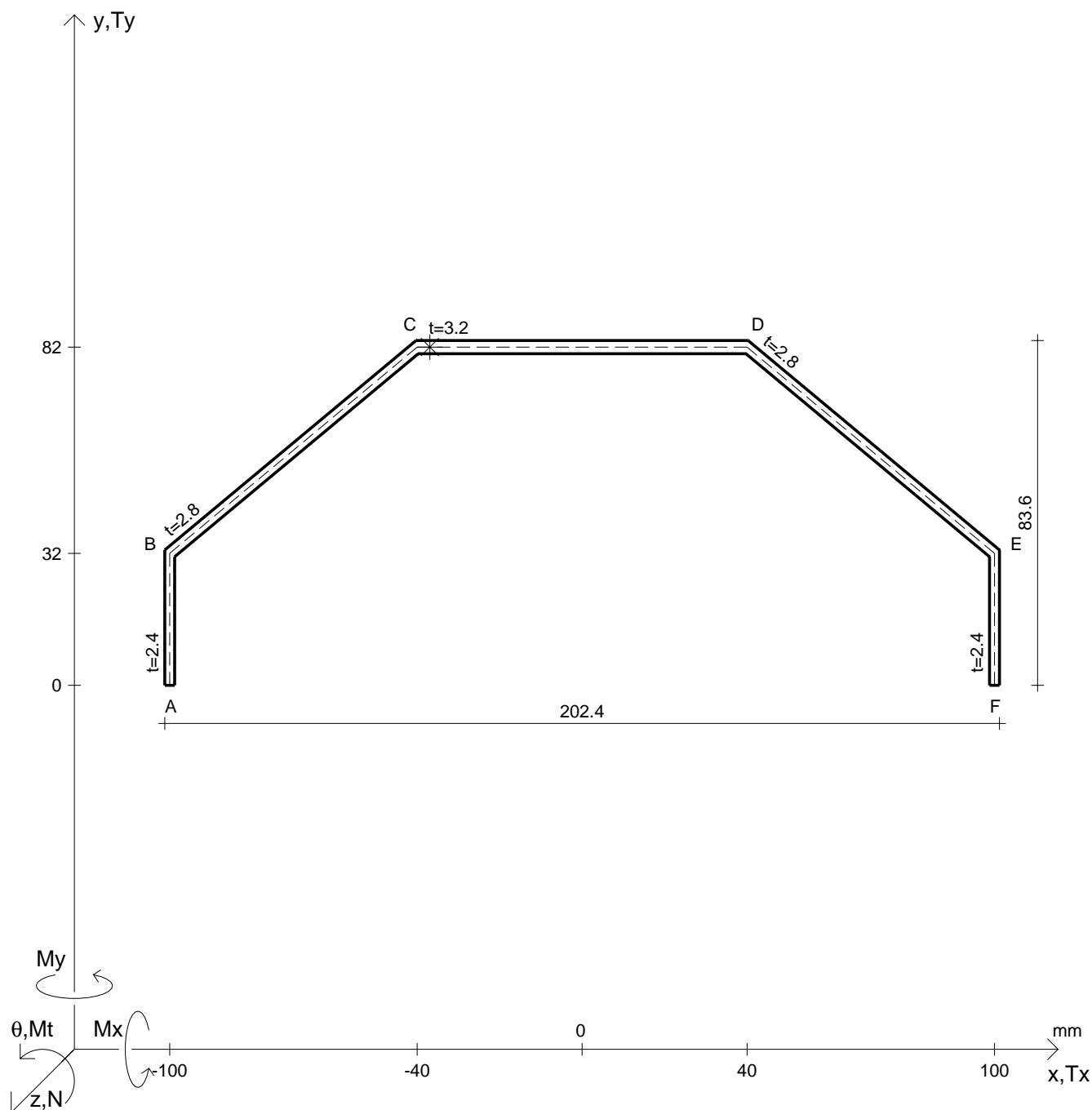
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 51300 \text{ N}$	$M_x$	$= -930000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 18500 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 50500 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto C di CD

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

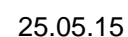
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

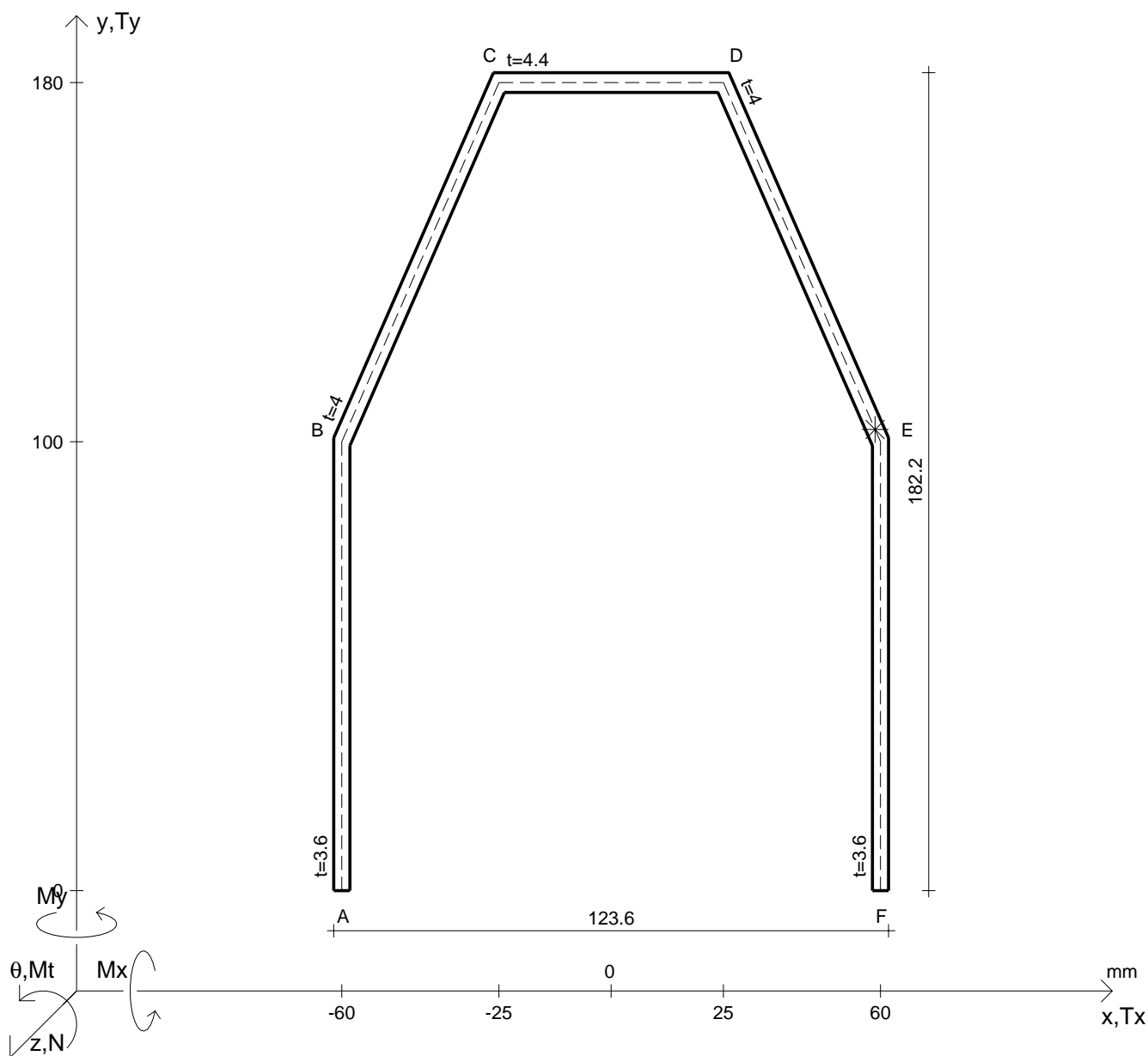
N	= 38900 N	M <sub>t</sub>	= 57300 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 19800 N	M <sub>x</sub>	= 909000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A*	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		











Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

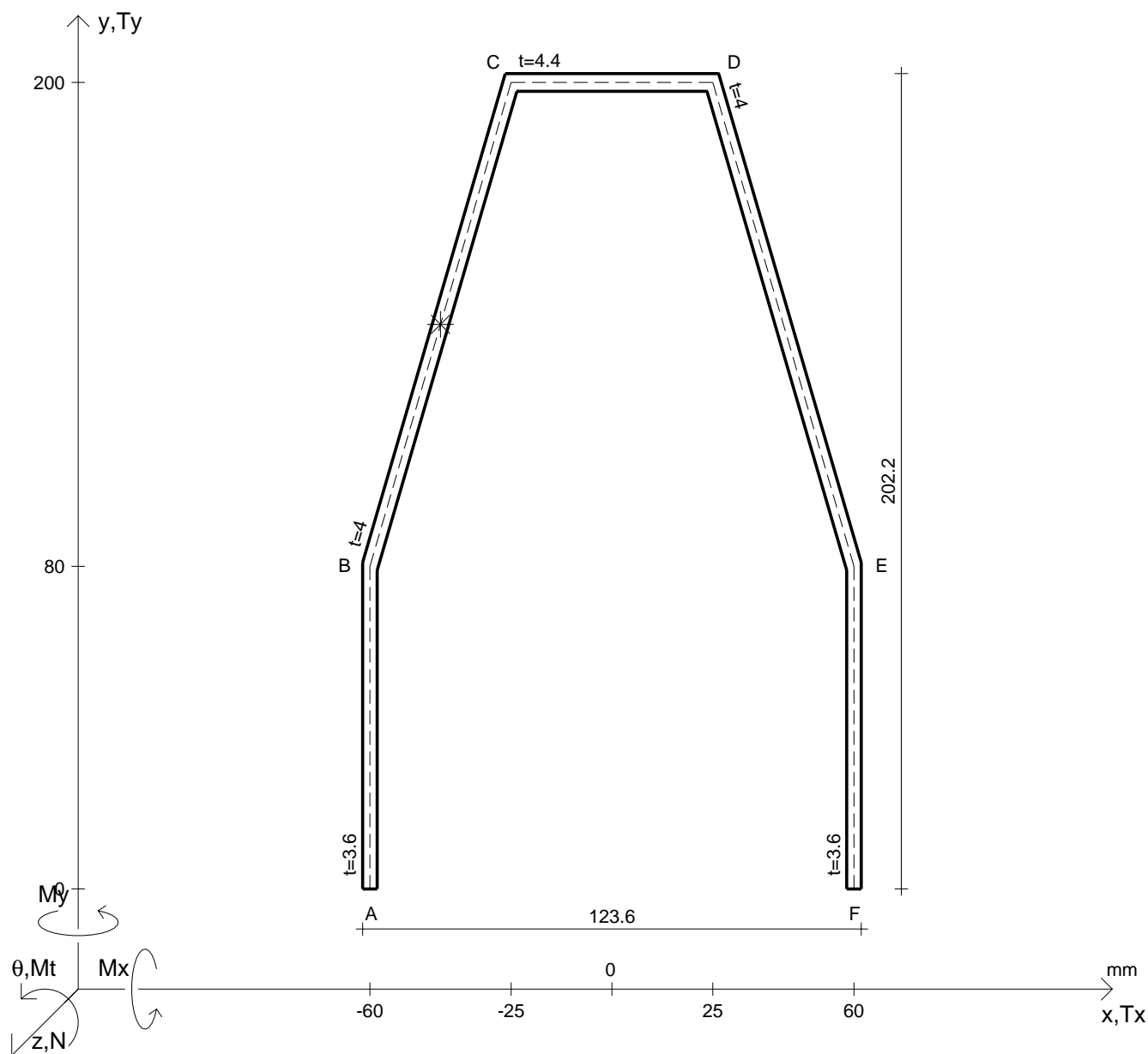
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 89700 N	$M_x$	= -3920000 Nmm	G	= 73000 N/mm <sup>2</sup>
$T_y$	= 67600 N	$\sigma_a$	= 220 N/mm <sup>2</sup>		
$M_t$	= 116000 Nmm	E	= 200000 N/mm <sup>2</sup>		
$y_G$	=	$\tau(M_t)_d$	=	$\sigma_{lld}$	=
$u_o$	=	$\tau(T_{yc})$	=	$\sigma_{tresca}$	=
$v_o$	=	$\tau(T_{yb})_d$	=	$\sigma_{mises}$	=
$A^*$	=	$\tau(T_y)_s$	=	$\sigma_{st.ven}$	=
$S_u$	=	$\tau(T_y)_d$	=	$\theta_t$	=
$C_w$	=	$\sigma$	=	$r_u$	=
$J_u$	=	$\tau_s$	=	$r_v$	=
$J_v$	=	$\tau_d$	=	$r_o$	=
$J_t$	=	$\sigma_{ls}$	=	$J_p$	=
$\sigma(N)$	=	$\sigma_{lls}$	=		
$\sigma(M_x)$	=	$\sigma_{ld}$	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

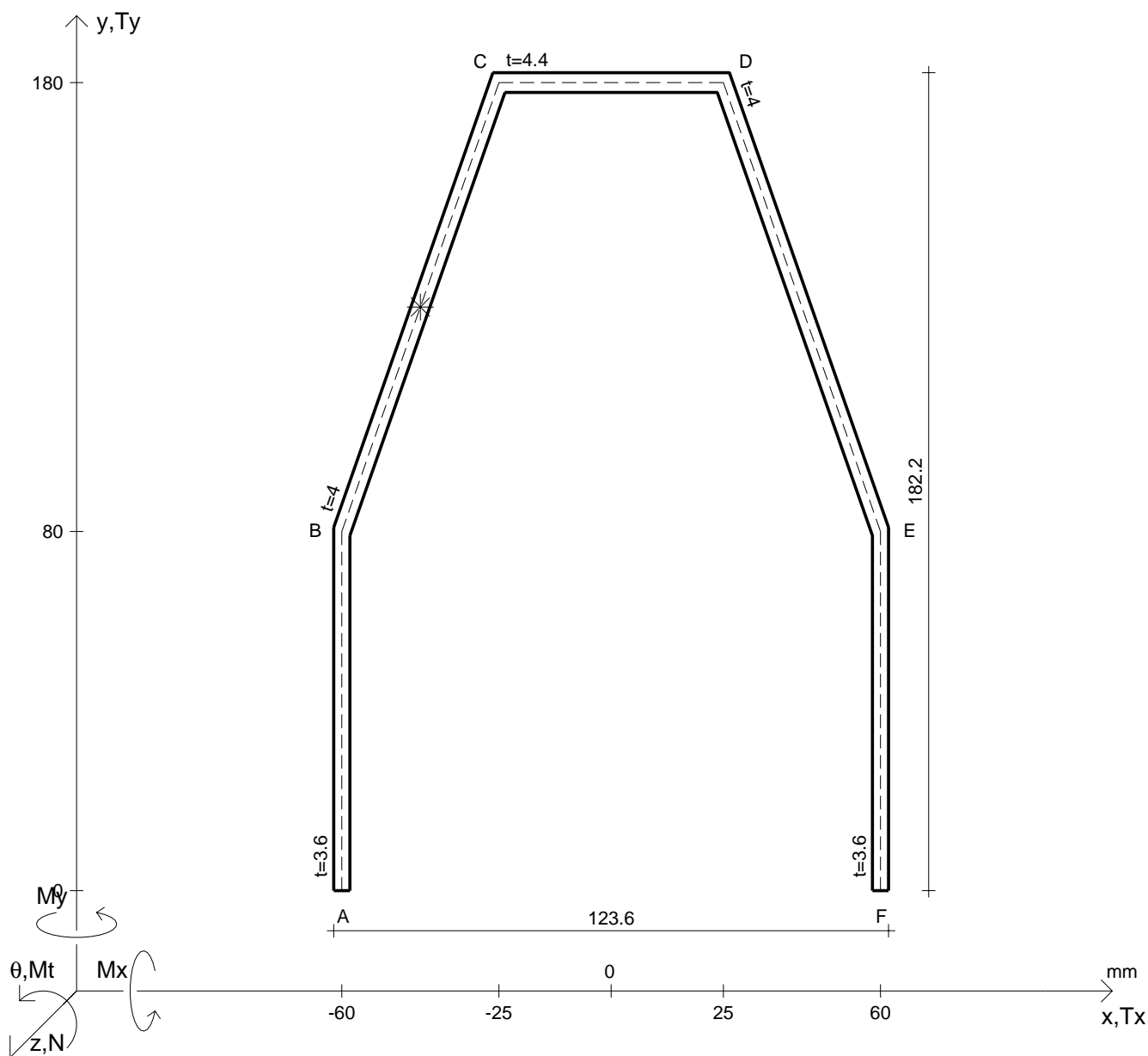
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 103000 \text{ N}$	$M_x$	$= 5070000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 58900 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 139000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$$\begin{aligned} N &= 71300 \text{ N} \\ T_y &= 58200 \text{ N} \\ M_t &= 143000 \text{ Nmm} \end{aligned}$$

$$\begin{aligned} y_G &= \\ u_o &= \\ v_o &= \\ A^* &= \\ S_u &= \\ C_w &= \\ J_u &= \\ J_v &= \\ J_t &= \\ \sigma(N) &= \\ \sigma(M_x) &= \end{aligned}$$

$$\begin{aligned} M_x &= 4660000 \text{ Nmm} \\ \sigma_a &= 220 \text{ N/mm}^2 \\ E &= 200000 \text{ N/mm}^2 \end{aligned}$$

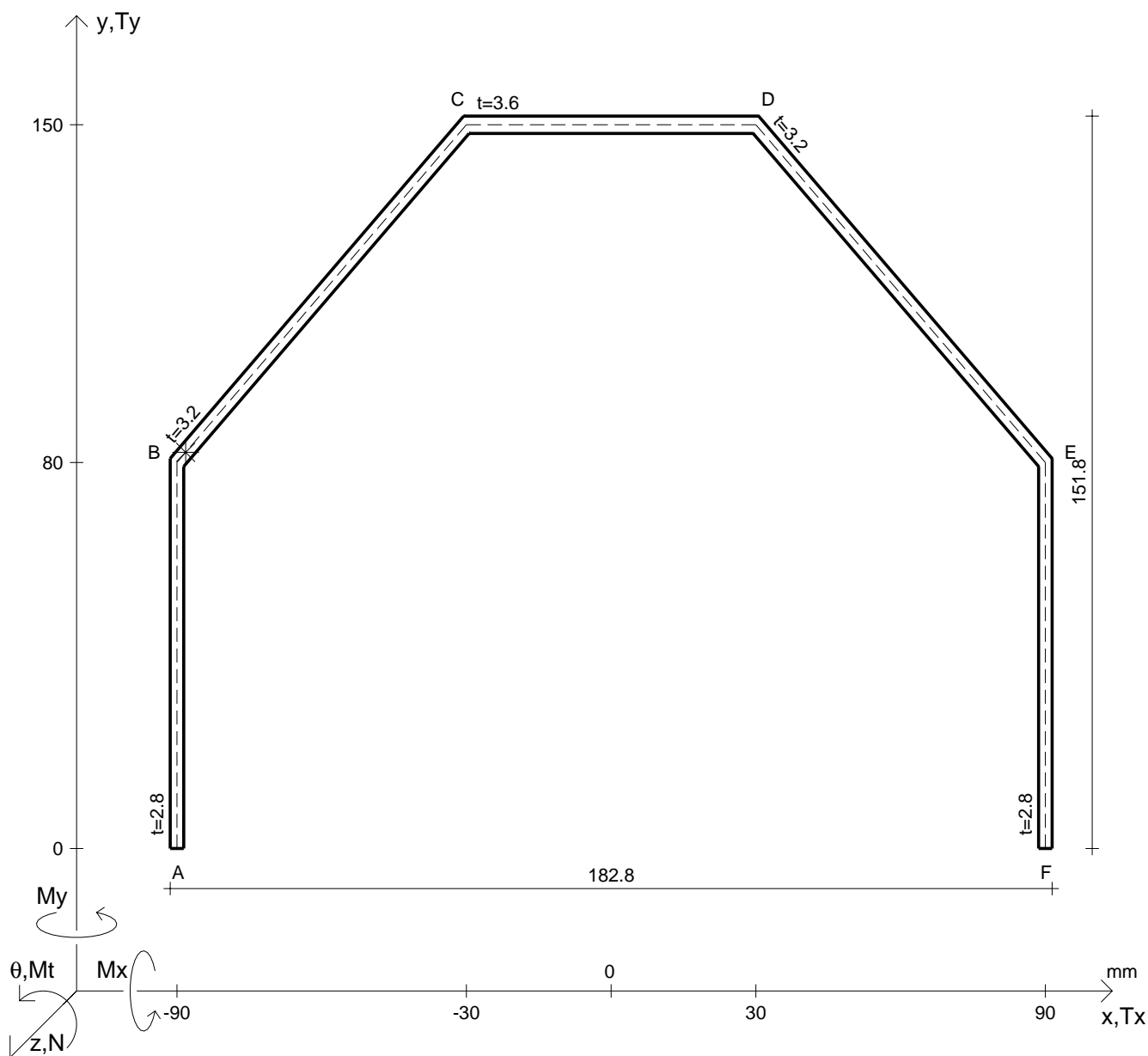
$$\begin{aligned} \tau(M_t)_d &= \\ \tau(T_{yc}) &= \\ \tau(T_{yb})_d &= \\ \tau(T_y)_s &= \\ \tau(T_y)_d &= \\ \sigma &= \\ \tau_s &= \\ \tau_d &= \\ \sigma_{ls} &= \\ \sigma_{lls} &= \\ \sigma_{ld} &= \end{aligned}$$

$$G = 73000 \text{ N/mm}^2$$

$$\begin{aligned} \sigma_{lld} &= \\ \sigma_{tresca} &= \\ \sigma_{mises} &= \\ \sigma_{st.ven} &= \\ \theta_t &= \\ r_u &= \\ r_v &= \\ r_o &= \\ J_p &= \end{aligned}$$







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

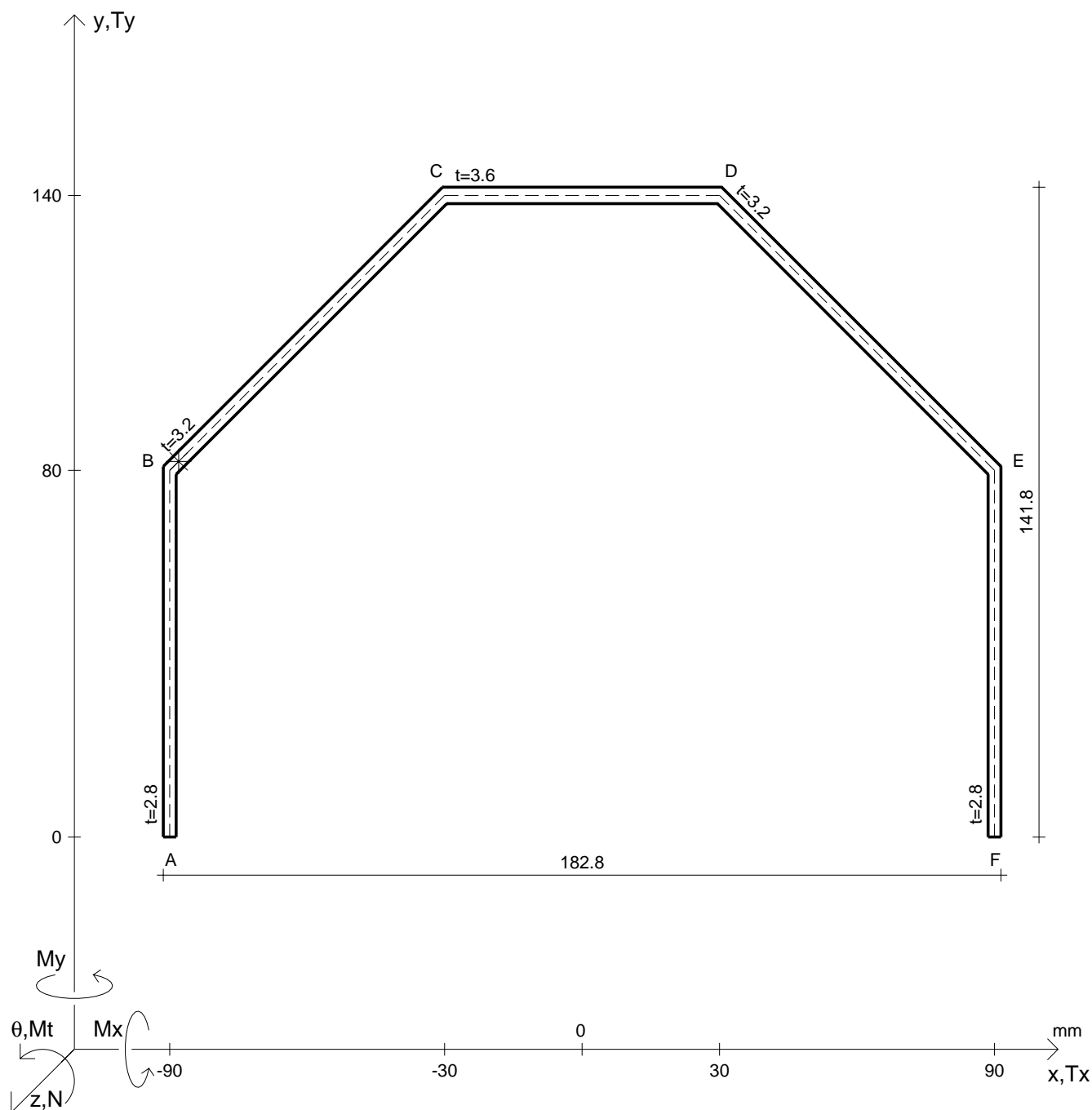
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 62900 \text{ N}$	$M_x$	$= -2070000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 41700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 97300 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

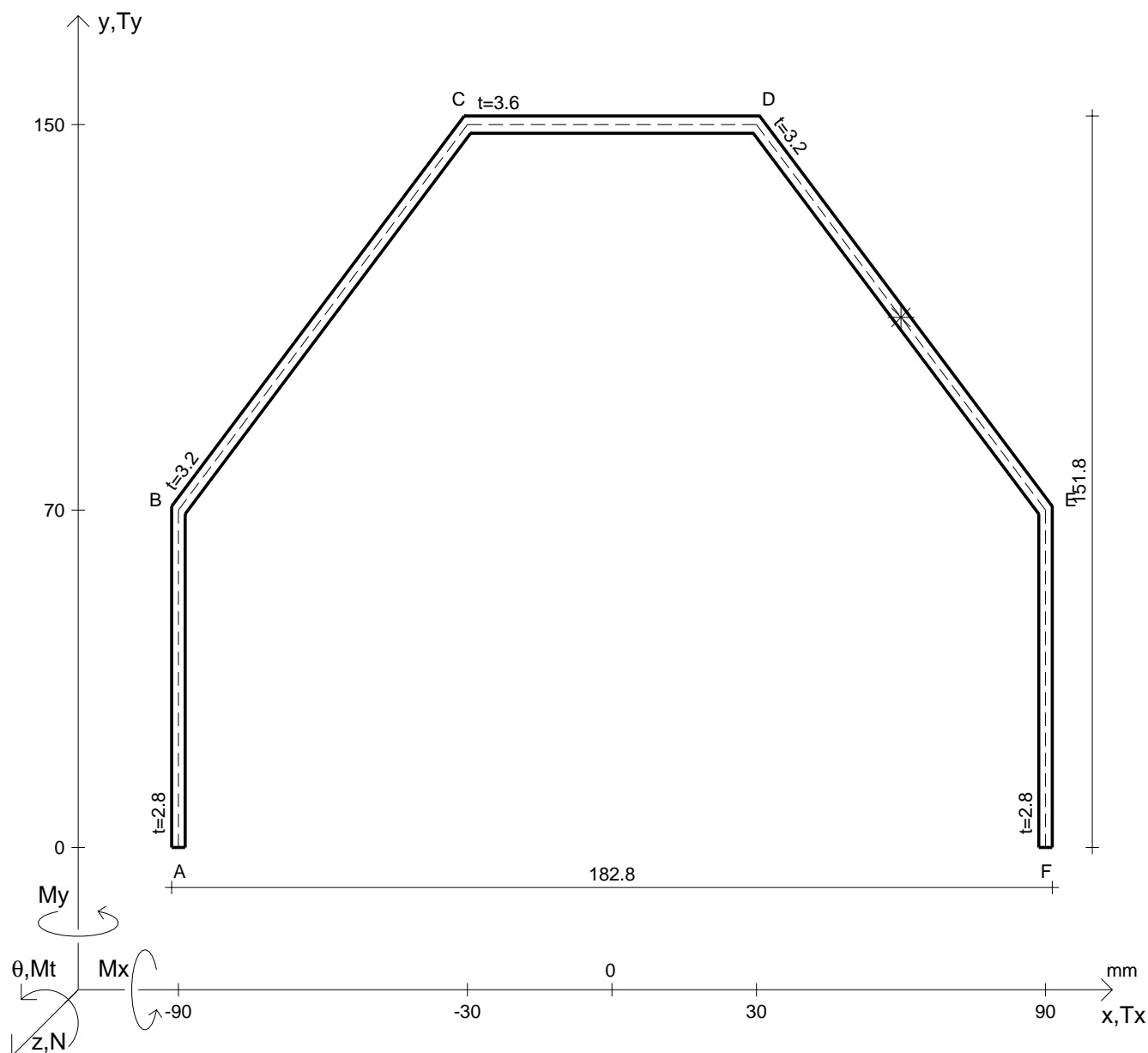
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 67300 N	M <sub>t</sub>	= 69400 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 42200 N	M <sub>x</sub>	= -2050000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A*	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> ) <sub>d</sub>	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

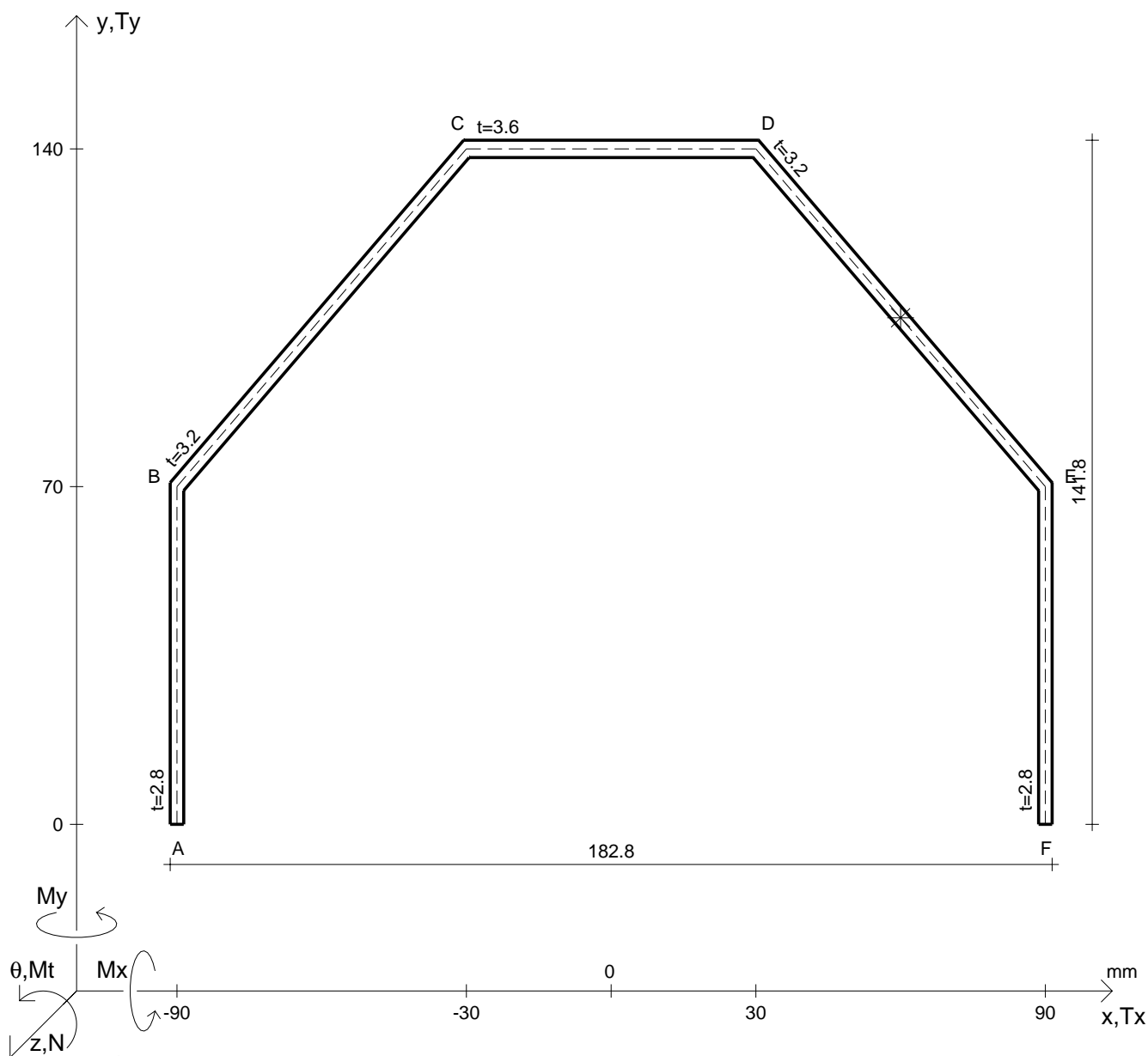
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 74100 \text{ N}$	$M_x$	$= 2510000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 34900 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 79000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

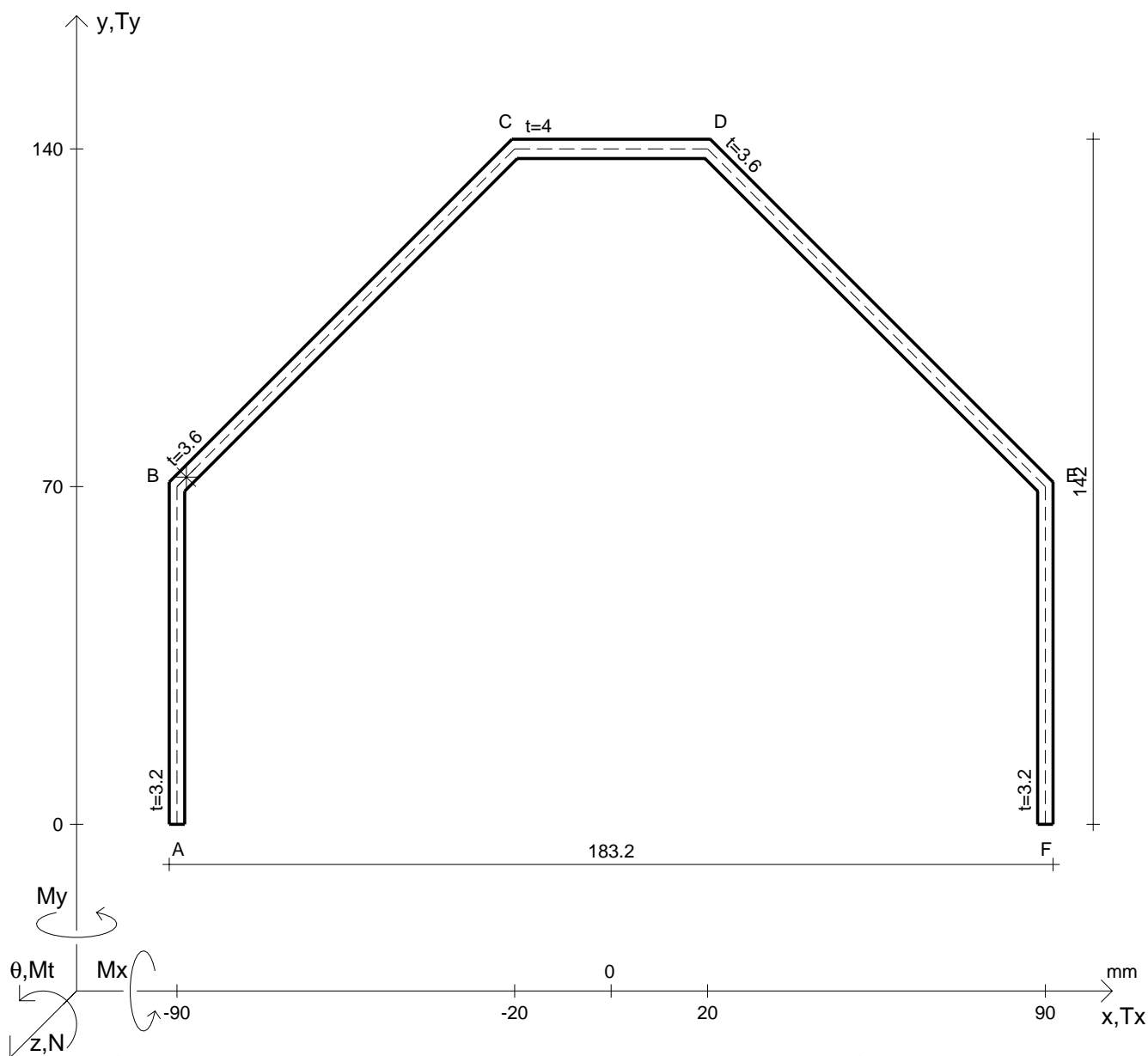
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 53200 \text{ N}$	$M_x$	$= 2450000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 36000 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 84800 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

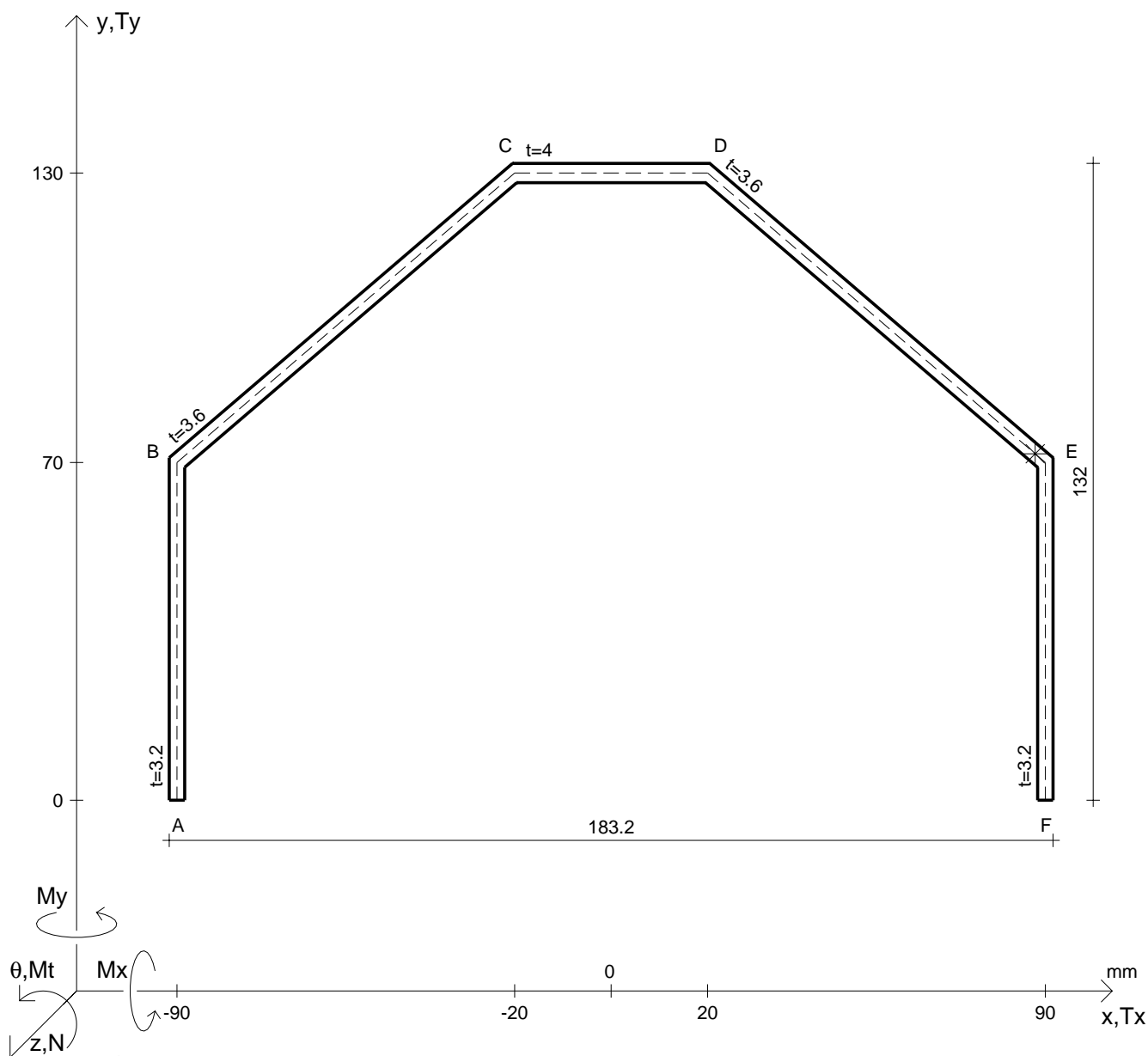
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 65200 \text{ N}$	$M_x$	$= -1950000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 43700 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 114000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto E di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

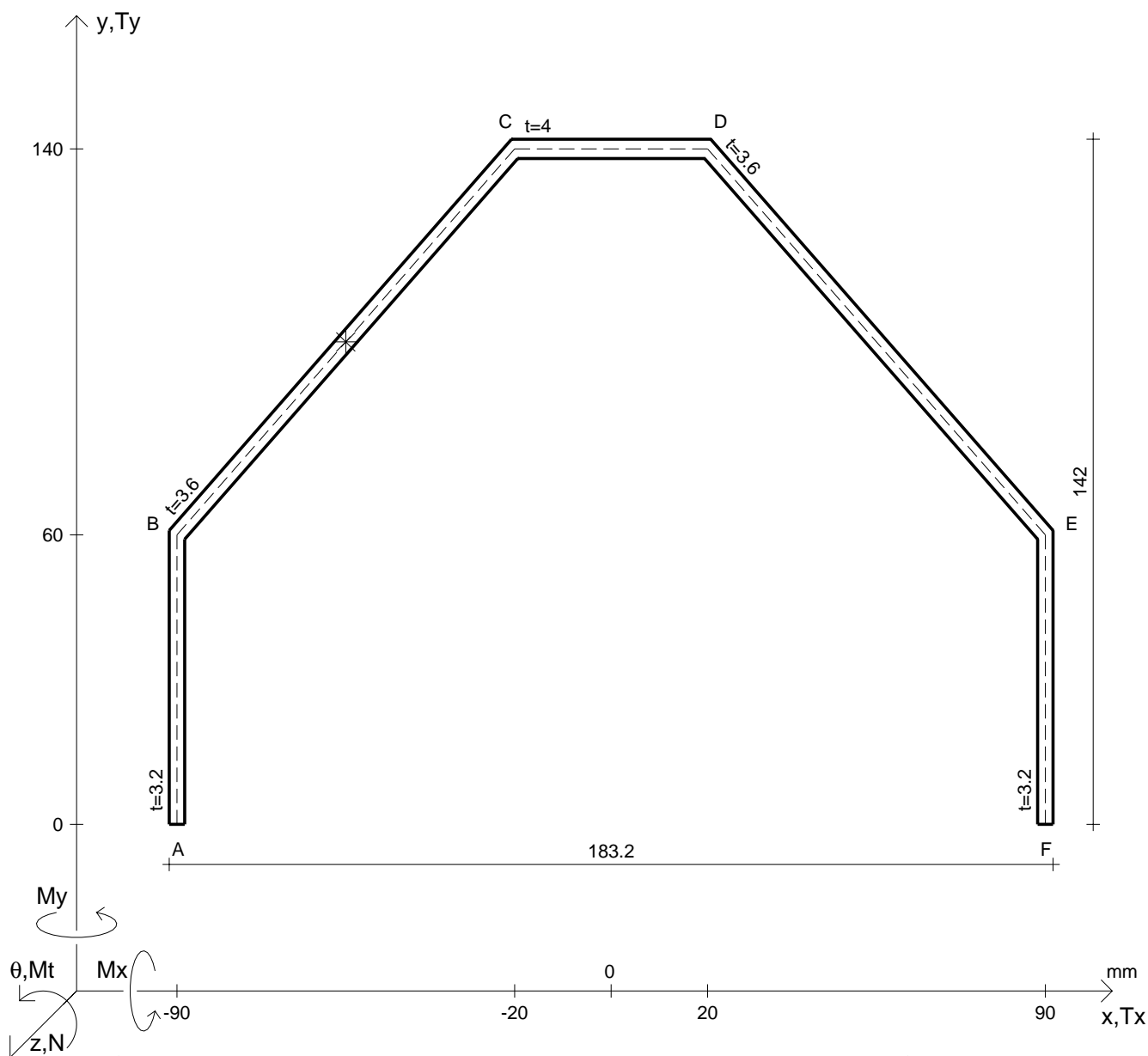
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 69700 \text{ N}$	$M_x$	$= -1910000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 43800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 81600 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

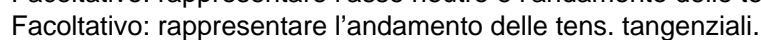
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 75700 \text{ N}$	$M_x$	$= 2340000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 36800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$	$\sigma_{lld}$	$=$
$M_t$	$= 91400 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$	$\sigma_{tresca}$	$=$
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{mises}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{st.ven}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\theta_t$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$r_u$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$r_v$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_o$	$=$
$J_u$	$=$	$\tau_s$	$=$	$J_p$	$=$
$J_v$	$=$	$\tau_d$	$=$		
$J_t$	$=$	$\sigma_{ls}$	$=$		
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		

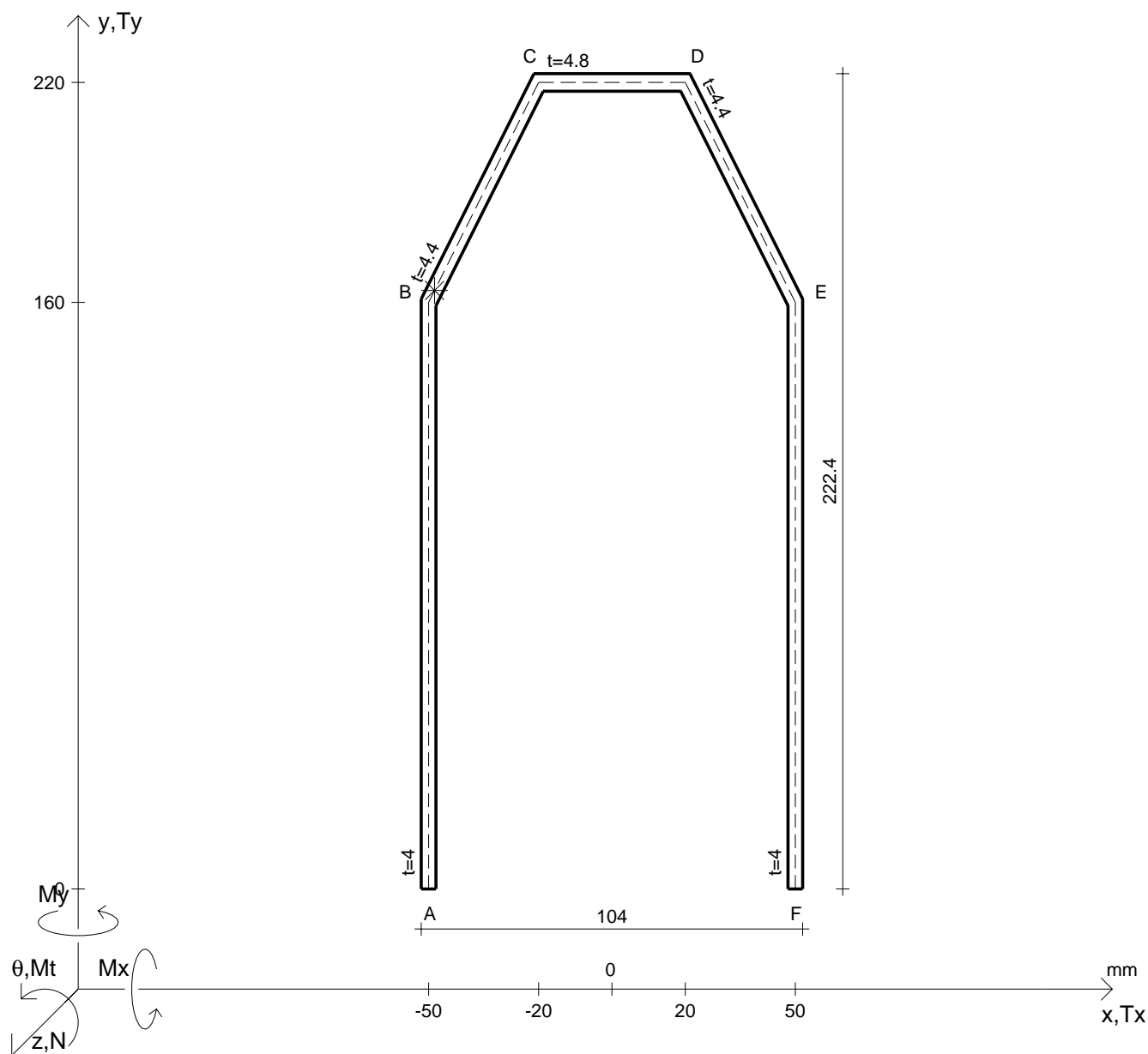




25.05.15







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

### Rappresentare i cerchi di Mohr

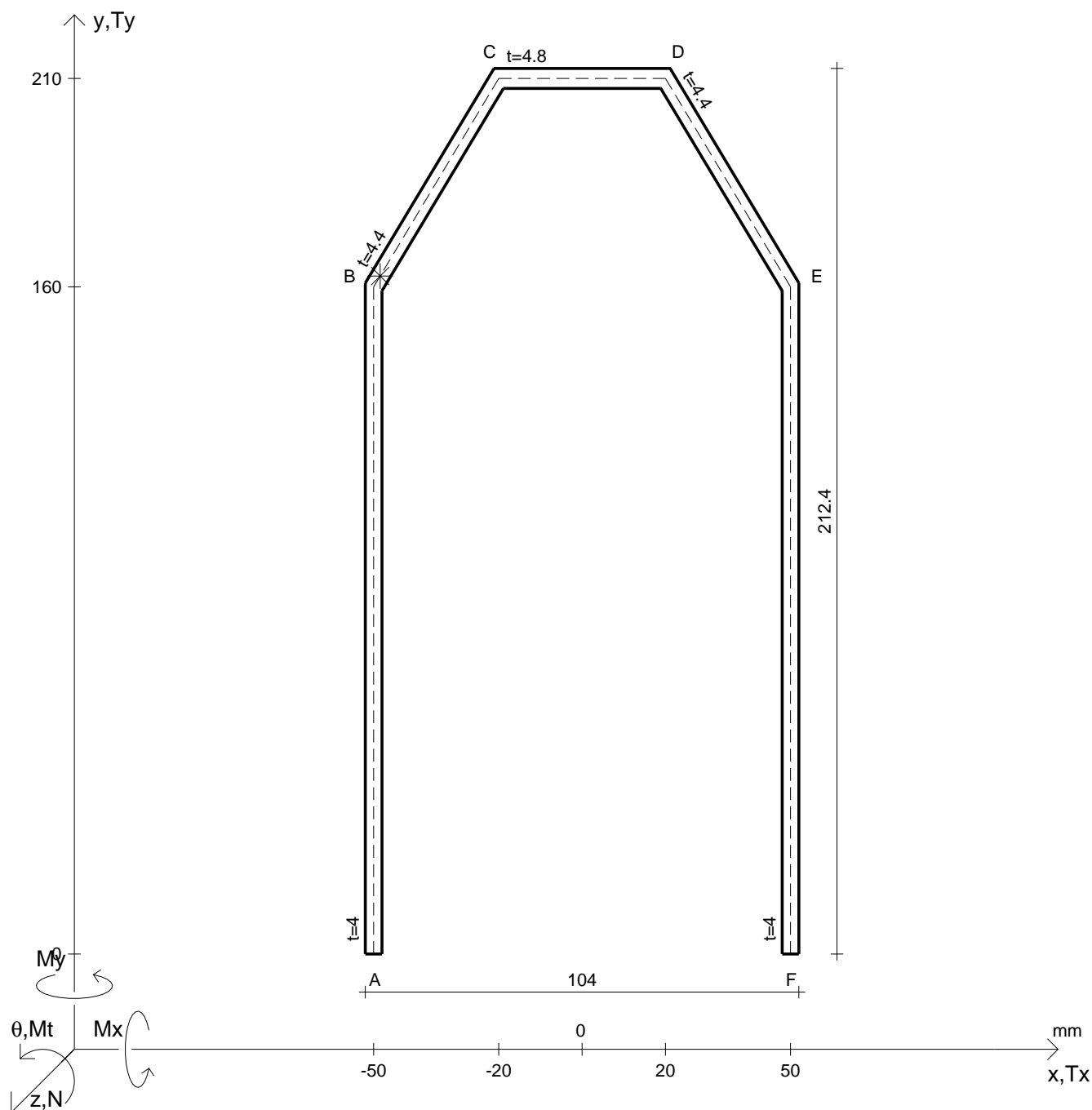
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 98800 N	M <sub>x</sub>	= 5350000 Nmm	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 86700 N	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>		
M <sub>t</sub>	= 204000 Nmm	E	= 200000 N/mm <sup>2</sup>		
Y <sub>G</sub>	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>lld</sub>	=
u <sub>o</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>tresca</sub>	=
v <sub>o</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>mises</sub>	=
A <sub>*</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>st.ven</sub>	=
S <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	θ <sub>t</sub>	=
C <sub>w</sub>	=	σ	=	r <sub>u</sub>	=
J <sub>u</sub>	=	τ <sub>s</sub>	=	r <sub>v</sub>	=
J <sub>v</sub>	=	τ <sub>d</sub>	=	r <sub>o</sub>	=
J <sub>t</sub>	=	σ <sub>ls</sub>	=	J <sub>p</sub>	=
σ(N)	=	σ <sub>lls</sub>	=		
σ(M <sub>x</sub> )	=	σ <sub>ld</sub>	=		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

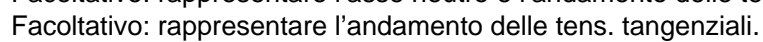
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

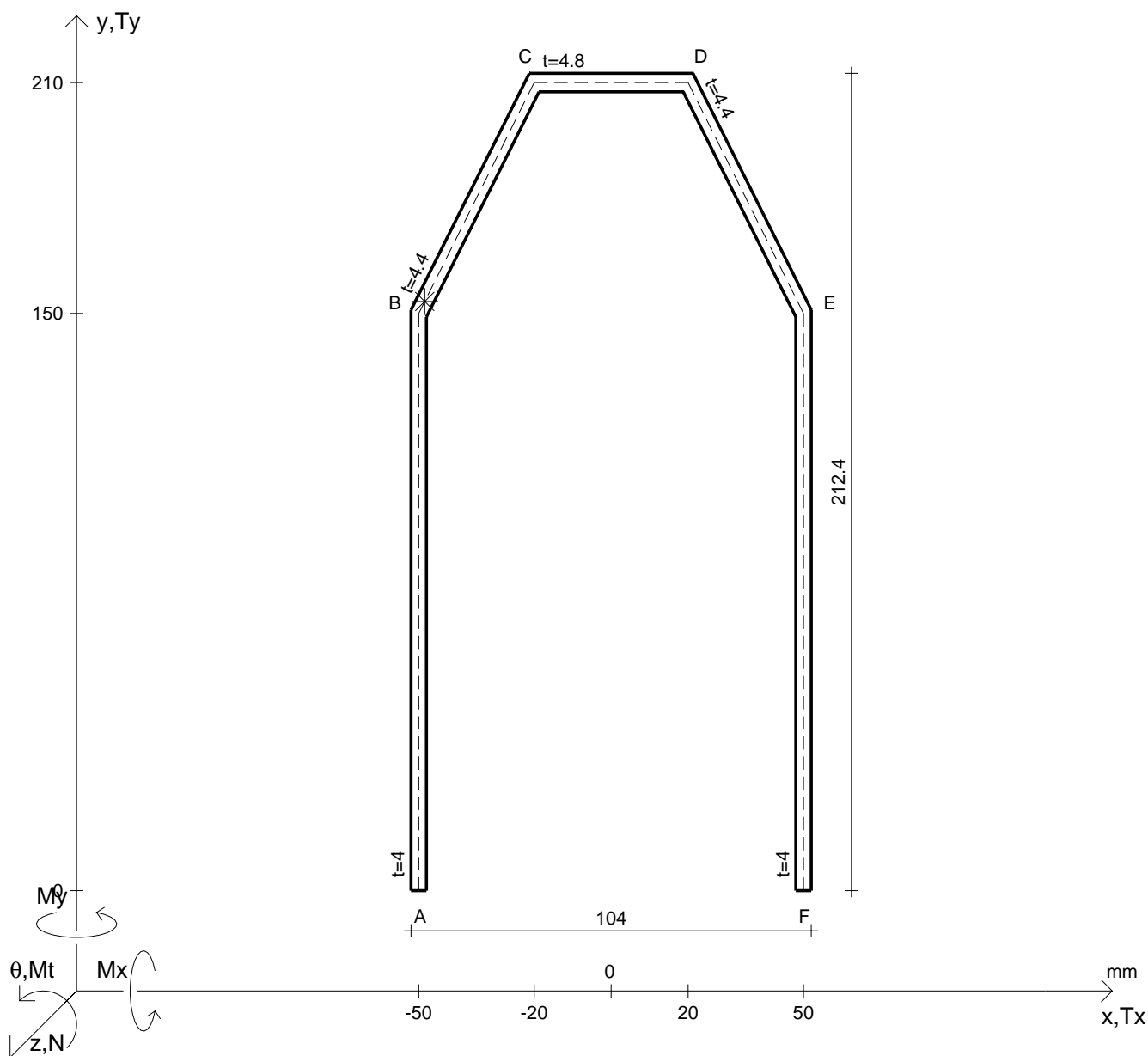
N	= 104000 N	M <sub>t</sub>	= 144000 Nmm	σ <sub>a</sub>	= 220 N/mm <sup>2</sup>	G	= 73000 N/mm <sup>2</sup>
T <sub>y</sub>	= 93400 N	M <sub>x</sub>	= 5480000 Nmm	E	= 200000 N/mm <sup>2</sup>		
y <sub>G</sub>	=	J <sub>t</sub>	=	σ	=	σ <sub>mises</sub>	=
u <sub>o</sub>	=	σ(N)	=	τ <sub>s</sub>	=	σ <sub>st.ven</sub>	=
v <sub>o</sub>	=	σ(M <sub>x</sub> )	=	τ <sub>d</sub>	=	θ <sub>t</sub>	=
A <sup>*</sup>	=	τ(M <sub>t</sub> ) <sub>d</sub>	=	σ <sub>ls</sub>	=	r <sub>u</sub>	=
S <sub>u</sub>	=	τ(T <sub>yc</sub> )	=	σ <sub>lls</sub>	=	r <sub>v</sub>	=
C <sub>w</sub>	=	τ(T <sub>yb</sub> ) <sub>d</sub>	=	σ <sub>ld</sub>	=	r <sub>o</sub>	=
J <sub>u</sub>	=	τ(T <sub>y</sub> ) <sub>s</sub>	=	σ <sub>lld</sub>	=	J <sub>p</sub>	=
J <sub>v</sub>	=	τ(T <sub>y</sub> ) <sub>d</sub>	=	σ <sub>tresca</sub>	=		





@ Adolfo Zavelani Rossi, Politecnico di Milano, vers.27.03.13





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto B di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inerzia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

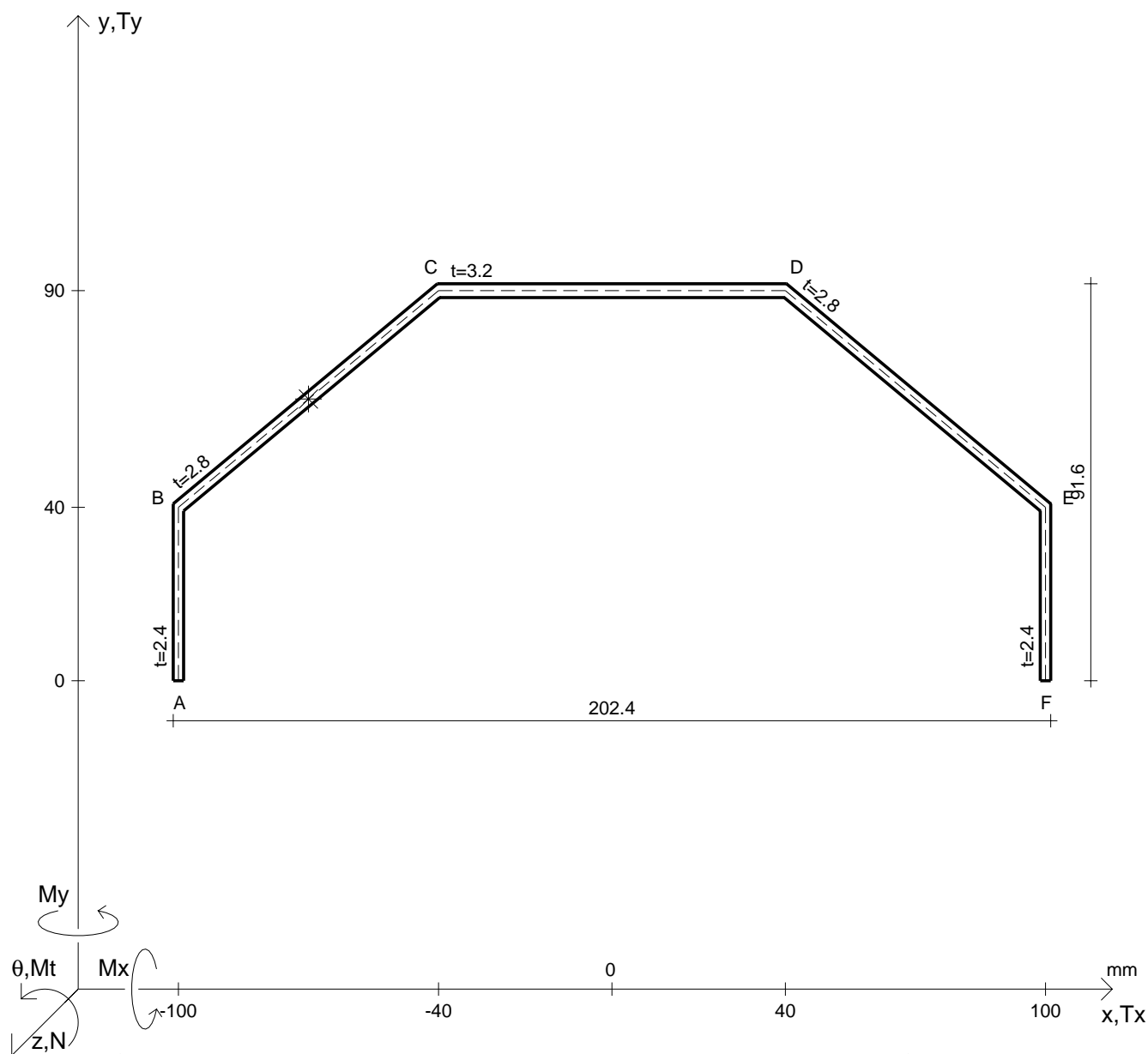
Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 85200 \text{ N}$	$M_x$	$= 6650000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 74000 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 181000 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		







Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di BC

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

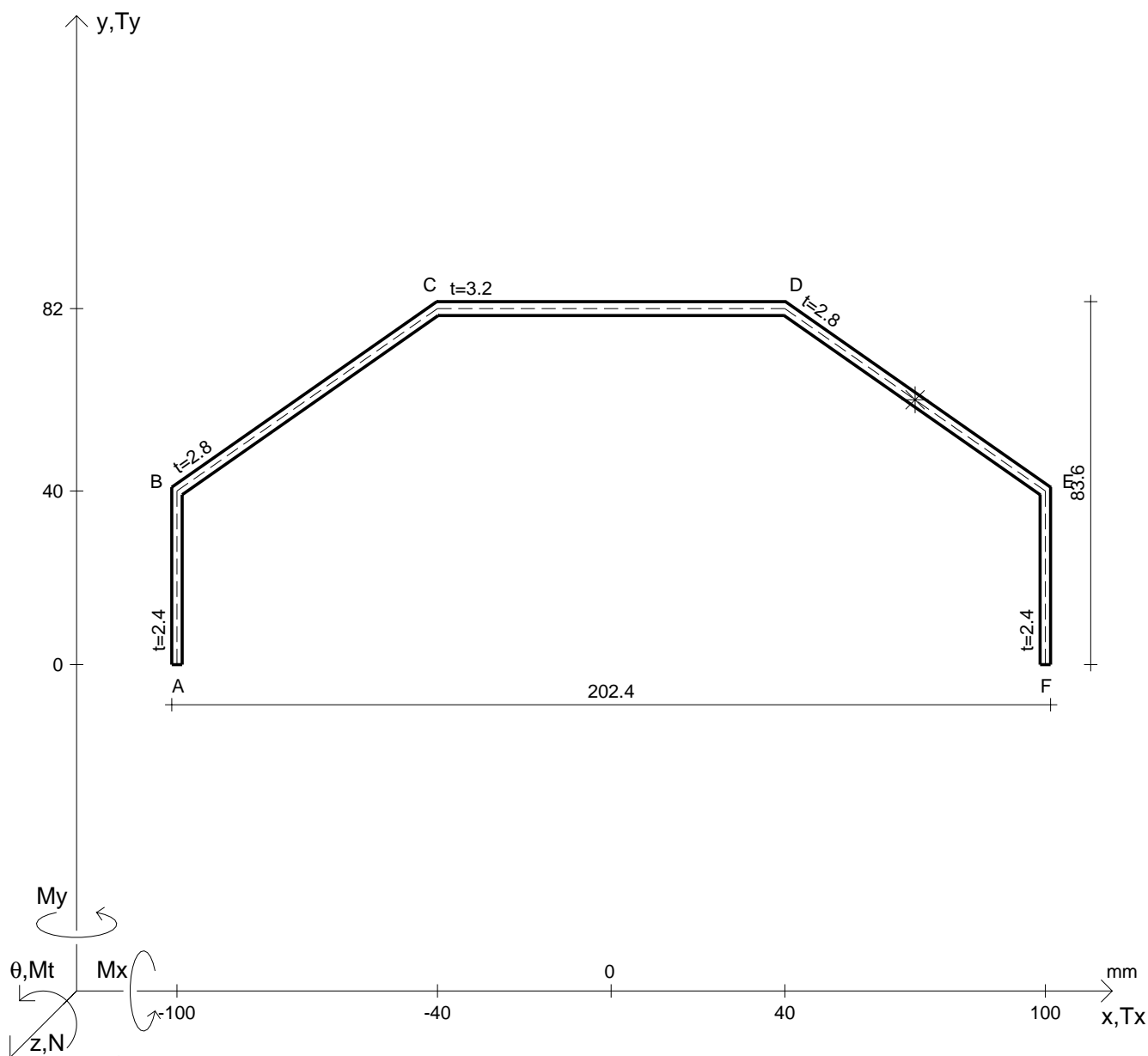
Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

$N$	$= 42700 \text{ N}$	$M_x$	$= 729000 \text{ Nmm}$	$G$	$= 73000 \text{ N/mm}^2$
$T_y$	$= 22800 \text{ N}$	$\sigma_a$	$= 220 \text{ N/mm}^2$		
$M_t$	$= 60900 \text{ Nmm}$	$E$	$= 200000 \text{ N/mm}^2$		
$y_G$	$=$	$\tau(M_t)_d$	$=$	$\sigma_{lld}$	$=$
$u_o$	$=$	$\tau(T_{yc})$	$=$	$\sigma_{tresca}$	$=$
$v_o$	$=$	$\tau(T_{yb})_d$	$=$	$\sigma_{mises}$	$=$
$A^*$	$=$	$\tau(T_y)_s$	$=$	$\sigma_{st.ven}$	$=$
$S_u$	$=$	$\tau(T_y)_d$	$=$	$\theta_t$	$=$
$C_w$	$=$	$\sigma$	$=$	$r_u$	$=$
$J_u$	$=$	$\tau_s$	$=$	$r_v$	$=$
$J_v$	$=$	$\tau_d$	$=$	$r_o$	$=$
$J_t$	$=$	$\sigma_{ls}$	$=$	$J_p$	$=$
$\sigma(N)$	$=$	$\sigma_{lls}$	$=$		
$\sigma(M_x)$	$=$	$\sigma_{ld}$	$=$		





Calcolo degli sforzi in \* con forze baricentriche essendo \* il punto medio di DE

Rappresentare sul foglio, in scala: G, assi u,v, ellisse d'inertia, C.T.

Rappresentare i cerchi di Mohr

Operare le conclusioni sulla verifica di resistenza in \*

Facoltativo: rappresentare l'asse neutro e l'andamento delle tens. normali.

Facoltativo: rappresentare l'andamento delle tens. tangenziali.

N	= 45700 N	$M_x$	= 682000 Nmm	G	= 73000 N/mm <sup>2</sup>
$T_y$	= 22700 N	$\sigma_a$	= 220 N/mm <sup>2</sup>		
$M_t$	= 43600 Nmm	E	= 200000 N/mm <sup>2</sup>		
$y_G$	=	$\tau(M_t)_d$	=	$\sigma_{lld}$	=
$u_o$	=	$\tau(T_{yc})$	=	$\sigma_{tresca}$	=
$v_o$	=	$\tau(T_{yb})_d$	=	$\sigma_{mises}$	=
$A^*$	=	$\tau(T_y)_s$	=	$\sigma_{st.ven}$	=
$S_u$	=	$\tau(T_y)_d$	=	$\theta_t$	=
$C_w$	=	$\sigma$	=	$r_u$	=
$J_u$	=	$\tau_s$	=	$r_v$	=
$J_v$	=	$\tau_d$	=	$r_o$	=
$J_t$	=	$\sigma_{ls}$	=	$J_p$	=
$\sigma(N)$	=	$\sigma_{lls}$	=		
$\sigma(M_x)$	=	$\sigma_{ld}$	=		