Titolo nota 26/11/2019

$$N_{Ed} \leq N_{b,Rd} = \chi A \frac{f_y}{\gamma_{M1}}$$

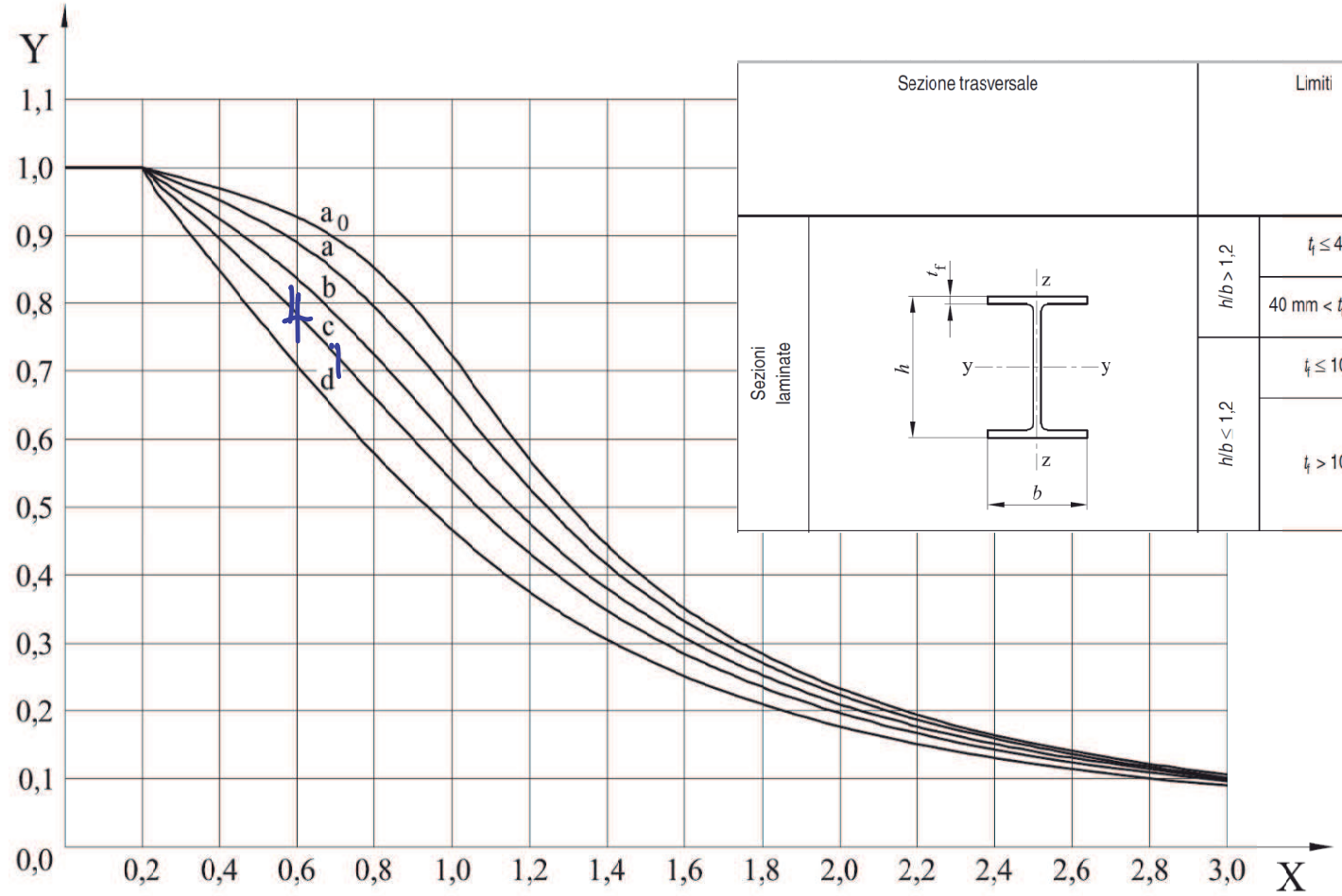
$$A \geq \frac{N_{Ed}\,\gamma_{M1}}{\chi\, f_y}$$

$N_{Ed} = 1622.4$ KN $\qquad \chi = 0.7 \qquad$ S275

$$A \geq \frac{1622.4 \times 10^3 \times 1.05}{0.7 \times 275} = 88.5 \times 10^2 \text{ mm}^2$$

HE 280 A $\quad A = 97.3 \times 10^2$ mm^2 $\quad i_z = 7.0 \times 10$ mm $\quad \lambda = 50 \quad \bar{\lambda} = 0.58$

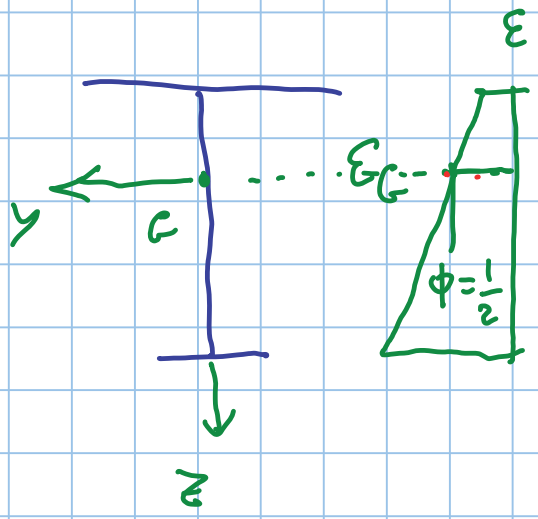
HE 220 B $\quad A = 91.0 \times 10^2$ mm^2 $\quad i_z = 5.59 \times 10$ mm $\quad \lambda = 62.6 \quad \bar{\lambda} = 0.72$



Sezione trasversale		Limiti		Instabilità intorno all'asse	Curva di instabilità	
					S 235 S 275 S 355 S 420	S 460
Sezioni laminate		$h/b > 1,2$	$t_f \leq 40$ mm	y - y z - z	*a* *b*	a_0 a_0
			40 mm < $t_f \leq$ 100 mm	y - y z - z	*b* *c*	*a* *a*
		$h/b \leq 1,2$	$t_f \leq 100$ mm	y - y z - z	*b* *c*	*a* *a*
			$t_f >$ 100 mm	y - y z - z	*d* *d*	*c* *c*

FLESSIONE SEMPLICE $\Rightarrow N = 0$

$$\phi = \frac{d\varepsilon}{dz}$$



$$\varepsilon = \varepsilon_G + \phi z$$

$$\sigma = E\varepsilon = E\varepsilon_G + E\phi z$$

$$N = \int \sigma \, dA$$

$$N = \int (E\varepsilon_G + E\phi z)\, dA = \int E\varepsilon_G \, dA + \int E\phi z \, dA =$$

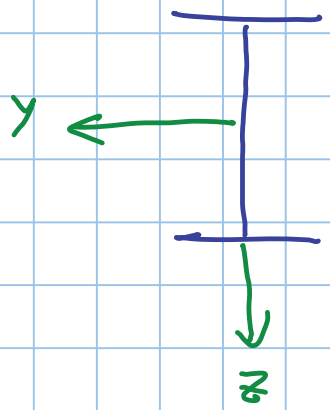
$$= E\varepsilon_G \int dA + E\phi \int z \, dA = E\varepsilon_G A$$

momento statico

$N = 0 \Rightarrow \varepsilon_G = 0$

asse neutro passa per il baricentro

modello lineare



$$\sigma = \frac{M_y}{I_y} z$$

$$\sigma_{max} = \frac{M_y}{I_y} z_{max}$$

$$\sigma_{max} = \frac{M}{W}$$

$$W = \frac{I_y}{z_{max}}$$

modulo di resistenza