E.1.2 Alloy steel

The values given in Table E-4 apply to smooth specimens with diameter d [mm] or thickness t [mm].

Table E-4. Properties of selected alloyed steel.

Grade	$d \leq 16$ $t \leq 8$		$16 < d \leq 40$ $8 < t \leq 20$		$40 < d \leq 100$ $20 < t \leq 60$		$100 < d \leq 160$ $60 < t \leq 100$		$160 < d \leq 250$ $100 < t \leq 160$	
	f_y	f_u	f_y	f_u	f_y	f_u	f_y	f_u	f_y	f_u
34CrMo4	800	1000 - 1200	650	900 - 1100	550	800 - 950	500	750 - 900	450	700 - 850
42CrMo4	900	1100 - 1300	750	1000 - 1200	650	900 - 1100	550	800 - 950	500	750 - 900
50CrMo4	900	1100 - 1300	780	1000- 1200	700	900 - 1100	650	850 - 1000	550	800 - 950
36CrNiMo4	900	1100 - 1300	800	1000 - 1200	700	900 - 1100	600	800 - 950	550	750 - 900
34CrNiMo6	1000	1200 - 1400	900	1100 - 1300	800	1000 - 1200	700	900 - 1100	600	800 - 950
30CrNiMo8	1050	1250 - 1450	1050	1250 - 1450	900	1100 - 1300	800	1000 - 1200	700	900 - 1100

f_y yield strength [MPa]
f_u tensile strength [MPa]

E.2 Cast iron

The values given in Table E-5 are valid for a wall thickness below 50 mm. For other dimensions the values must be reduced in accordance with DIN 1693 and proper reduction factors for surface roughness and notches must be included.

Table E-5. Properties of selected cast iron (minimum values).

Grade	Tensile strength f_y [MPa]	Yield strength f_u [MPa]	Elongation at rupture δ [%]
GGG-35.3	350	220	22
GGG-40	400	250	15
GGG-40.3	400	250	18
GGG-50	500	320	7
GGG-60	600	380	3

E.3 Fibre Reinforced Plastics

E.3.1 Glass fibre reinforced plastics

Table E-6 shows the guiding values given in the Danish design code for the mechanical properties of glass fibre reinforced plastics.

Table E-6. Mechanical properties for GRP.

	Mat lamina, 30 weight % glass	Weaved roving lamina, 50 weight % glass [1]
Values to be used in strength calculation		
Tensile strength	80 MPa	170 MPa
Compressive strength	100 MPa	100 MPa
Bending strength	150 MPa	170 MPa
Shear strength		
interlaminar	10 MPa	10 MPa
in plane	20 MPa	20 MPa
Flexural modulus	4 000 MPa	8 000 MPa
Values to used in deformation calculation		
Modulus of elasticity	6 000 MPa	12 000 MPa
Shear modulus	2 200 MPa	-
Poissons ratio	0.35	-

1. Applies to balanced web, loaded in the main direction.

These values are to be reduced in accordance with DS 456 depending on temperature, load duration, cyclic load and fabrication method.