

## Material specification sheet

### Saarstahl - 17CrNi6-6 - 15CrNi6

Material No.:	Former brand name:	International steel grades:
1.5918	RECNW	BS: AFNOR: 16NC6
1.5919		SAE: 3115

**Material group:** Case hardening steels according to DIN EN 10084

Chemical composition: (Typical analysis in %)	C	Si	Mn	Cr	Ni	other
	0,15	0,25	0,50	1,55	1,55	(Pb)

**Application:** Alloyed case hardening steel for highly strained parts and good toughness at core tensile strength of 900 - 1200 N/mm<sup>2</sup>. Driving bevel gears, crown wheels, gears, shafts, bolts for automotive and gear components.

<b>Hot forming and heat treatment:</b>	Forging or hot rolling:	1100 - 850°C
	Normalising:	850 - 880°C/air
	Soft annealing:	650 - 700°C/furnace
	Carburising:	880 - 980°C
	Core hardening:	830 - 870°C/oil
	Intermediate annealing:	630 - 650°C
	Case hardening:	780 - 820°C/oil
Tempering:	150 - 200°C	

<b>Mechanical Properties:</b>	Treated for cold shearability, +S:	max. 255 HB
	Soft annealed, +A:	max. 229 HB
	Treated for strength, +TH:	175 - 229 HB
	Treated for ferrite and pearlite structure and hardness range, +FP:	156 - 207 HB

after hardening and tempering at 200°C:

Diameter d [mm]	d ≤ 16	16 < d ≤ 40	40 < d ≤ 100
Tensile strength R <sub>m</sub> [N/mm <sup>2</sup> ]	min. 1200	min. 1100	min. 900