

**EQUIVALENTS:**

German: W. Stoff No 1.6587

**COLOUR CODE:**


ANN

**CHEMICAL COMPOSITION (%):**

	C	Si	Mn	S	P	Cr	Ni	Mo
Min	0.15	≤	0.50			1.50	1.40	0.25
Max	0.21	0.40	0.90	≤0.035	≤0.025	1.80	1.70	0.35

**CHARACTERISTICS:**

- Alloy Steel 1.5% Nickel Chrome Moly
- Can be case hardened or through hardened
- Carburised and heat treated it develops a hard wear resistant case to HRC 60/63 and a tough core with tensile range of 900-1300MPa in small to fairly large sections

**TYPICAL APPLICATIONS:**

- Gear parts exposed to high stresses and wear conditions, planetary gears, plate wheels, drive pinions
- Can be used for high tensile applications un-carburised but through hardened and tempered
- It is used by industry sectors for components and shafts requiring high surface wear resistance, high core strength and impact properties
- Alloyed case hardening steel for heavy and high strained gear parts with high demands on toughness at core tensile strengths of 1050-1350 N/mm<sup>2</sup>

**HOT FORMING AND HEAT TREATMENT CYCLE:**

Forging or hot rolling	1150 - 850°C
Normalising	850 - 880°C/air
Soft annealing	650 - 700°C/furnace
Carburising	880 - 980°C
Core hardening	830 - 870°C/water
Intermediate annealing	630 - 650°C
Case hardening	780 - 820°C/water
Tempering	150 - 200°C

**MECHANICAL PROPERTIES:**

Treated for cold shearability, +S	max. 255 HB
Soft annealed, +A	max. 229 HB
Treated for strength, +TH	179 - 229 HB
Treated for ferrite and pearlite structure and hardness range, +FP	159 - 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