



Steel

F65[®]

34CrMo4

Variant:

F65W:: Consumable electrode remelted steel

SPECIFICATIONS

European standards:

- 34CrMo4
- Numerical designation: 1.7220

AIR : 35 CD 4

WL : 1.7220, 1.7224

COMPOSITION

Carbon.....	0.35
Chromium.....	1.00
Molybdenum.....	0.20

TYPICAL MECHANICAL PROPERTIES

- Annealed condition: heat to 825°C followed by slow cooling.
 - Brinell hardness: 217

HEAT TREATMENT REFERENCE

- Oil quench from 850°C. Temper at 600°C.
 - UTS: 1050 N/mm²
 - 0.2 % Yield strength: 950 N/mm²
 - Elongation (5d): 16.5 %
 - Impact strength KCU: 100 J/cm²
- Oil quench from 850°C. Temper at 675°C.
 - UTS: 900 N/mm²
 - 0.2 % Yield strength: 750 N/mm²
 - Elongation (5d): 20 %
 - Impact strength KCU: 140 J/cm²

APPLICATIONS

Various mechanical parts as:

- Shafts
- Gears

CHARACTERISTICS

- Good repeated impact resistance.
- Good fatigue properties in alternating bend stress.

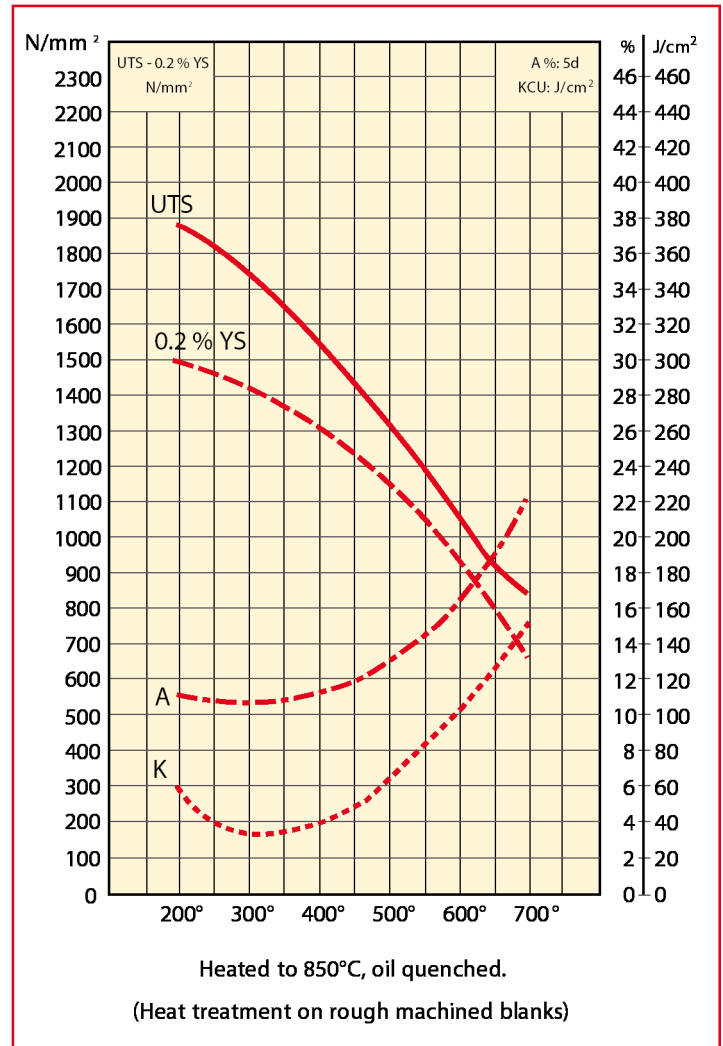
HEAT TREATMENT

- Harden:
 - Heat to 850°C.
 - Oil quench.
- Temper:
 - Depending on properties required.

PHYSICAL PROPERTIES

- Density: 7.8
- Mean coefficient of expansion in m/m.°C:
 - between 20°C and 100°C: 11.4×10^{-6}
 - between 20°C and 700°C: 14.3×10^{-6}
- Critical points:
 - Ac 1: 750°C
 - Ac 3: 810°C

TEMPERING CURVE



FORGING

- 1100/900°C

Contact:

www.aubertduval.com

The data provided in this document represent typical or average values rather than maximum or minimum guaranteed values. The applications indicated for the grades described are given as guidance only in order to help the reader in his personal assessment. Please note that these do not constitute a guarantee whether implicit or explicit as to whether the grade selected is suited to specific requirements. Aubert & Duval's liability shall not under any circumstances extend to product selection or to the consequences of that selection.