

Melting: consumable electrode remelted steel

## SPECIFICATIONS

AIR : E 35 NCD 16 H

## COMPOSITION

Carbon.....	0.38
Nickel.....	4.00
Chromium.....	1.75
Molybdenum.....	0.50

## TYPICAL MECHANICAL PROPERTIES

- Annealed condition: heat to 680°C followed by slow cooling.
  - Brinell Hardness: 285

### HEAT TREATMENT REFERENCE

- Air cool from 875°C. Sub-zero treatment (-75°C).  
Temper at 200°C.

- UTS:	1900 N/mm <sup>2</sup>
- 0.2 % Yield strength:	1500 N/mm <sup>2</sup>
- Elongation (5d):	10 %
- Impact strength KCU:	50 J/cm <sup>2</sup>
- Air cool from 875°C. Temper at 650°C.

- UTS:	1050 N/mm <sup>2</sup>
- 0.2 % Yield strength:	900 N/mm <sup>2</sup>
- Elongation (5d):	18 %
- Impact strength KCU:	110 J/cm <sup>2</sup>

## APPLICATIONS

- Aerospace parts subjected to high fatigue stresses.
- Heavily stressed mechanical parts.
- Tooling.

## CHARACTERISTICS

- Good mechanical properties in the longitudinal and transverse directions.
- Excellent hardenability.
- Good dimensional stability.

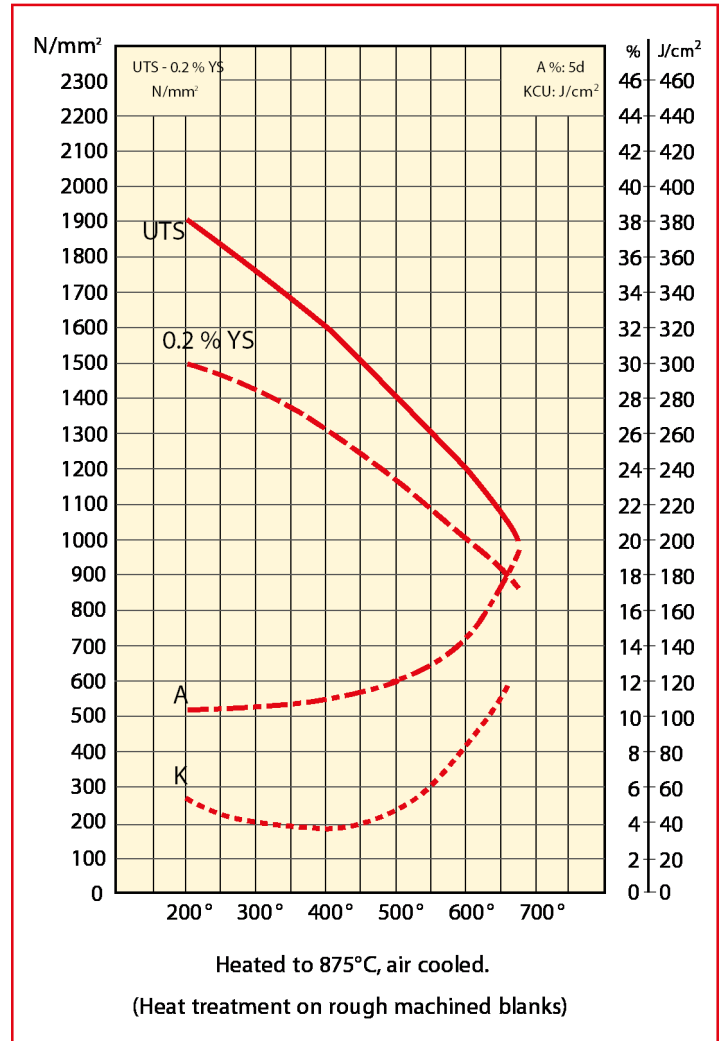
## HEAT TREATMENT

- Harden:
  - Heat to 875°C
  - Air cool or gas pressure
- Temper:
  - Depending on properties required

## PHYSICAL PROPERTIES

- Density: 7,8
- Mean coefficient of expansion in m/m.°C:
  - between 20°C and 200°C:  $11.5 \times 10^{-6}$
  - between 20°C and 400°C:  $12.4 \times 10^{-6}$
  - between 20°C and 600°C:  $12.8 \times 10^{-6}$
- Critical points:
  - Ac 1: 660°C
  - Ac 3: 780°C

## TEMPERING CURVE



## FORGING

- 1100/900°C

Contact:

[www.aubertduval.com](http://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.