

Variant:

SCVW: Consumable electrode remelted steel

## SPECIFICATIONS

- 15CrMoV6

AIR : 15 CDV 6

WL : 1.7734

For the remelted grade

WL : 1.7736

## TYPICAL MECHANICAL PROPERTIES

- Annealed condition: heat to 875°C followed by slow cooling:

- Brinell Hardness: 174

- Air cool from 975°C. Temper at 600°C, air cool:  
(Only apply to thickness < 7mm)

- UTS: 1050 N/mm<sup>2</sup>

- 0.2 % Yield strength: 850 N/mm<sup>2</sup>

- Elongation (5d): 16 %

### HEAT TREATMENT REFERENCE

- Oil quench from 975 °C. Temper at 625 °C, oil quench

- UTS: 1150 N/mm<sup>2</sup>

- 0.2 % Yield strength: 1100 N/mm<sup>2</sup>

- Elongation (5d): 17 %

- Impact strength KCU: 130 J/cm<sup>2</sup>

- Variation of 0.2% Yield strength as a function of temperature on metal heat treated for UTS:

- 1100 N/mm<sup>2</sup>

## COMPOSITION

Carbon.....	0.15
Chromium.....	1.25
Moybdenum .....	0.90
Vanadium.....	0.25

## APPLICATIONS

- Welded assemblies.
- Complies with the requirements of the aerospace industry.

## CHARACTERISTICS

- Good mechanical properties.
- Good creep resistance.
- Good weldability

Temperature in °C	Duration load applied	
	5 minutes	10 minutes
300	780 N/mm <sup>2</sup>	750 N/mm <sup>2</sup>
400	730 N/mm <sup>2</sup>	710 N/mm <sup>2</sup>
500	670 N/mm <sup>2</sup>	640 N/mm <sup>2</sup>
600	500 N/mm <sup>2</sup>	470 N/mm <sup>2</sup>

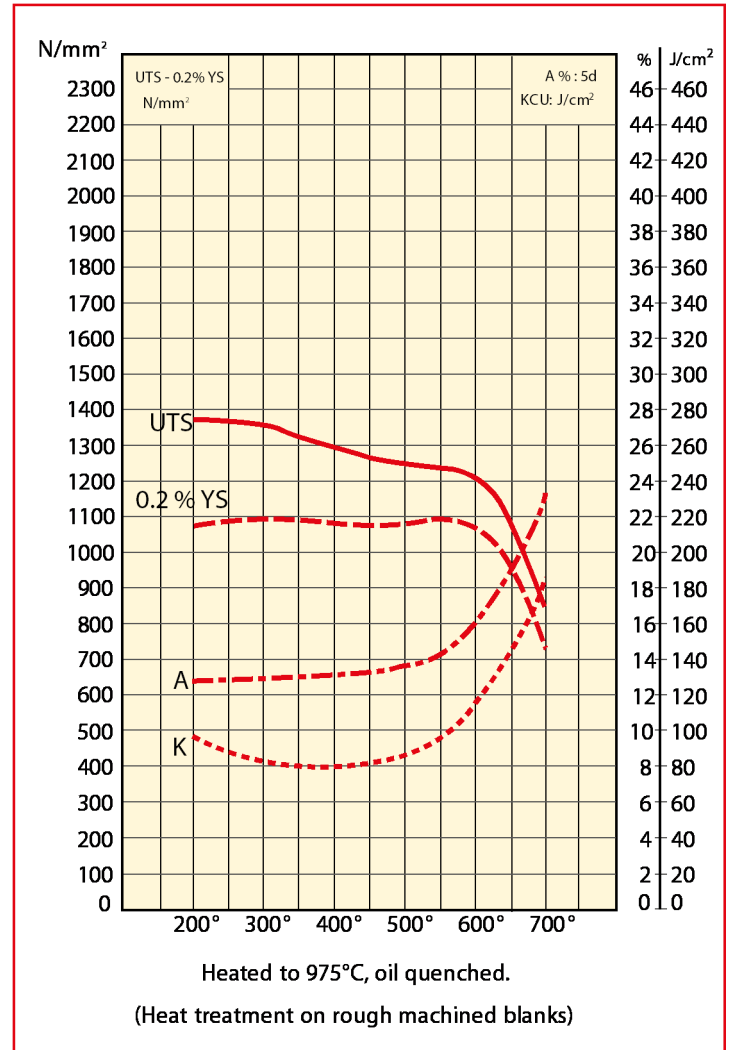
## HEAT TREATMENT

- Hardening:
  - Heat to 975°C.
  - Oil quench or air cool depending on the section of the part.
- Temper:
  - Depending on properties required.

## PHYSICAL PROPERTIES

- Density: 7.8
- Mean coefficient of expansion in m/m.°C:
  - between 20°C and 200°C:  $12.6 \times 10^{-6}$
  - between 20°C and 400°C:  $13.5 \times 10^{-6}$
  - between 20°C and 500°C:  $14.3 \times 10^{-6}$
- Thermal conductivity in W.m/m<sup>2</sup>.°C:
  - at 20°C: 46
- Critical points:
  - Ac 1: 765°C
  - Ac 3: 950°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.