



Variant:

SCW: Consumable electrode remelted grade

SPECIFICATIONS

AECMA:

- Designation: FE-PL52 S, FE-PL1505
- 15CrMoV6

AIR : 15 CDV 6

WL : 1.7734

For the remelted grade:

AECMA:

- Designation: FE-PL53S

WL : 1.7736

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 applies to thicknesses < 7mm).
 - UTS: 1050 N/mm²
 - 0.2 % Yield strength: 850 N/mm²
 - Elongation (5d): 16 %
- Oil quench from 975°C. Temper at 625°C, oil quench.
 - UTS: 1150 N/mm²
 - 0.2 % Yield strength: 1100 N/mm²
 - Elongation (5d): 17 %
 - Impact strength KCU: 130 J/cm²
- Variation of 0.2 % Yield strength as a function of temperature on metal heat treated for UTS: 1100 N/mm².

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

COMPOSITION

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

APPLICATIONS

- Welded assemblies requiring high mechanical properties.
- Complies with the requirements of the aerospace industry.

CHARACTERISTICS

- Good mechanical properties.
- Good creep resistance.
- Good weldability, use our welding wire: BMS in the case of heat treated parts or SCVS in the case of heat treatment at a later date.

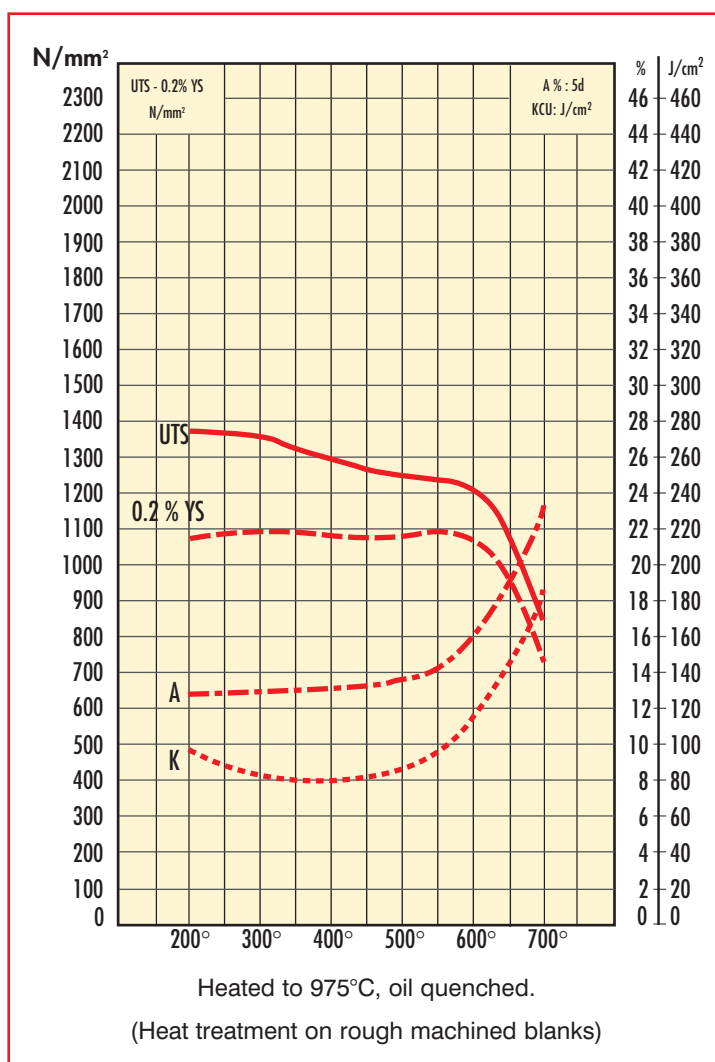
HEAT TREATMENT

- Harden:
 - 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: 12.6×10^{-6}
 - between 20°C and 400°C: 13.5×10^{-6}
 - between 20°C and 600°C: 14.3×10^{-6}
- Critical points:
 - Ac 1: 765°C
 - Ac 3: 950°C
- Thermal conductivity in W.m/m².°C:
 - at 20°C: 46

TEMPERING CURVE



FORGING

- 1100/900°C

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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.