AUBERT&DUVAL

Steel
ARMAD
32CrMoV12-10

Premium Quality

Variant:
ARMADW: Consumable Electrode Remelted

SPECIFICATIONS

European standards:

32CrMoV12-10
32 CDV 12-10

COMPOSITION

Carbon	0.32
Chromium	3.10
Molybdenum	1.00
Vanadium	0.30

MECHANICAL PROPERTIES

- Delivered conditions:
  - Excellent ability for cold hammering
  - Usual value of Ultimate Tensile Strength : 1000 MPa

- Oil quench from 900/930°C. Temper at 570°C.
  - UTS: 1500 N/mm^2
  - 0.2 % Yield strength: 1300 N/mm^2
  - Elongation (5d): 15 %
  - Impact strength KV: 80 J

- Oil quench from 900/930°C. Temper at 610°C.
  - UTS: 1250 N/mm^2
  - 0.2 % Yield strength: 1050 N/mm^2
  - Elongation (5d): 20 %
  - Impact strength KV: 200 J

APPLICATIONS

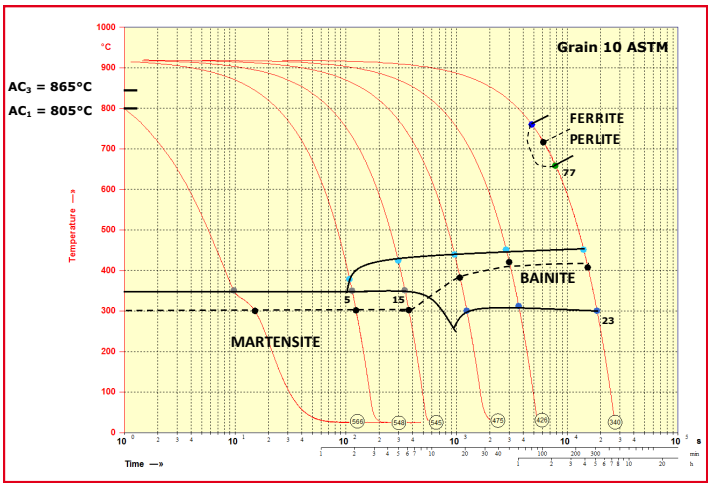
- Gun barrels for firearms when a balance between ultimate tensile strength (UTS) and Impact Toughness (KV) at -40°C is above standard used steels grades.
- For any safety mechanical application for which a balance between strength and impact toughness is needed especially at low temperatures.

CHARACTERISTICS

- Very good ability to cold hammering and button rifling.
- Opportunity to heat treat above 40HRC, while maintaining a high level of Charpy Impact Toughness at 20°C and -40°C, enhancing firearm performances in operation.

HEAT TREATMENT

- Harden:
  - Heat to 900/930°C.
  - Oil quench.
- Temper:
  - Above 525°C depending on properties required.
- Nitriding:
  - Surface hardness: approx. 850 Vickers

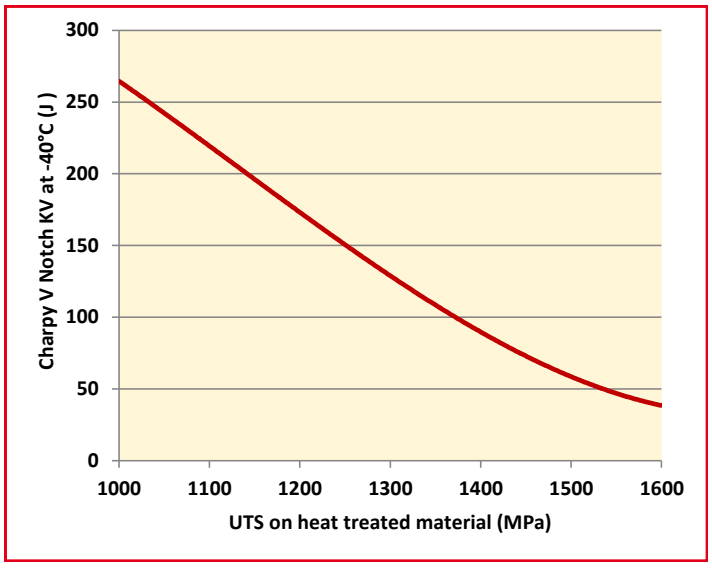


CCT DIAGRAM
Austenitization temperature: 920°C

PHYSICAL PROPERTIES

- Density: 7.8
- Mean coefficient of expansion in m/m.°C:
  - between 20°C and 100°C: 11.8×10^{-6}
  - between 20°C and 700°C: 13.6×10^{-6}
- Critical points:
  - Ac 1: 805°C
  - Ac 3: 865°C

MECHANICAL PROPERTIES



Contact:

www.aubertduval.com