403Cb, 410Cb, B50A790, XM-30, UNS S41040 - Turbine Blade Steels Datasheet

403Cb, 410Cb is a martensitic stainless steel, this alloy has higher strength and toughness, the addition of columbium can improve grain size control and make it easier to heat treat, mainly used in electrical energy.

Chemical Composition

Grade	Chemical composition WT %															
	C	Si	Mn	P	S	Cr	Ni	Mo	W	V	Ti	N	Sn	Al	Cu	Co
403Cb, B50A947	0.06-0.15	0.5	0.25-0.65	0.025	0.010	11.25-13	0.6	0.3	0.1	Tried	0.05	Tried	0.05	0.025	0.2	0.2

Mechanical Properties

- Tensile strength R_m MPa: Min 760
- Yield Strength R_p MPa: Min 555
- Elong In2 inches %: min 15
- RA %: min 15
- Brinell Hardness, 3000Kg Load %: 223-269
- V-Notch Charpy Min. Energy at R.T. ft-lbs(J): min 25(33.9)

Physical Properties

Heat Treatment

Welding Properties

Good welding property

Machining Properties

Good machining property

Similar or Equivalents Steel Grade