

Martensitic Stainless Steels Grade, Chemical Composition, Applications and Heat Treatment

Outline

Martensitic Stainless Steels

Steel Grade			Chemical Composition (%)				Properties	Heat Treatment			Hardness		Main Application
NACHI	AISI SAE	JIS	C	Si	Mn	Cr		Annealing (°C)	Hardening (°C)	Tempering (°C)	Annealed hardness (HB)	Practical hardness (HRC)	
440C	440C	SUS440C	1.05	0.5		18.0	High corrosion resistance High wear resistance	800–920 SC	1010–1070 OQ	100–180 AC	Max269	58–62	High grade blades Bearings
14RM			Patent pending				Grindability, Cold workability 14RM>440C	800–850 SC			Max229	58–62	Bearings
13RA			0.65	0.2	0.2	13.0	High corrosion resistance	830–870 SC	1000–1050 OQ	150–200 AC	Max223	53–57	Knives Blades

SC: Slow cooling OQ: Oil quenching AC: Air cooling