



SIQUAL 6582 Steel

Designation by Standards

Brand Name	Ravne	Mat. No.	DIN	EN	AISI/SAE
SIQUAL 6582	VCNMO150	1.6582	-	34CrNiMo6	4337/4340

Chemical Composition (in weight %)

C	Si	Mn	Cr	Mo	Ni	V	W	Others
0.34	max.0.40	0.65	1.50	0.23	1.50	-	-	-

Description

SIQUAL 6582 is a heat treatable, low alloy steel containing nickel, chromium and molybdenum. It is known for its toughness and capability of developing high strength in the heat treated condition while retaining good fatigue strength. A very popular, versatile steel. It can be heat-treated to produce a wide range of tensile strength in moderate sections.

Applications

Typical applications are for structural use, such as aircraft landing gear, power transmission gears and shafts and other structural parts, general engineering parts, through-hardened gears, connecting rods and bolts, gun barrels.

Physical properties (average values) at ambient temperature

Modulus of elasticity [$10^3 \times \text{N/mm}^2$]: 210

Density [g/cm^3]: 7.84

Thermal conductivity [W/m.K]: 37.7

Specific heat capacity [J/g.K]: 0.46

Environmental resistance

Flammability: very good

Fresh water: good

Organic solvent: very good

Oxidation at 500°C: good

Sea water: average

Strong acid: poor

Strong alkalis: poor

Wear: very good

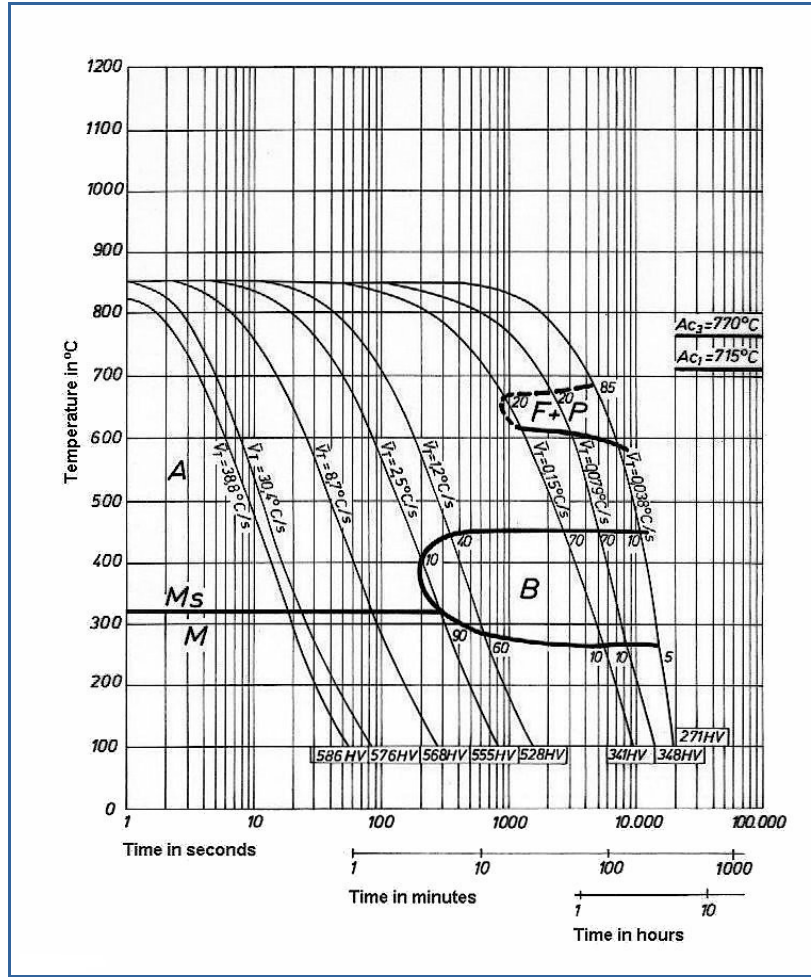
Weak acid: average

Weak alkalis: good

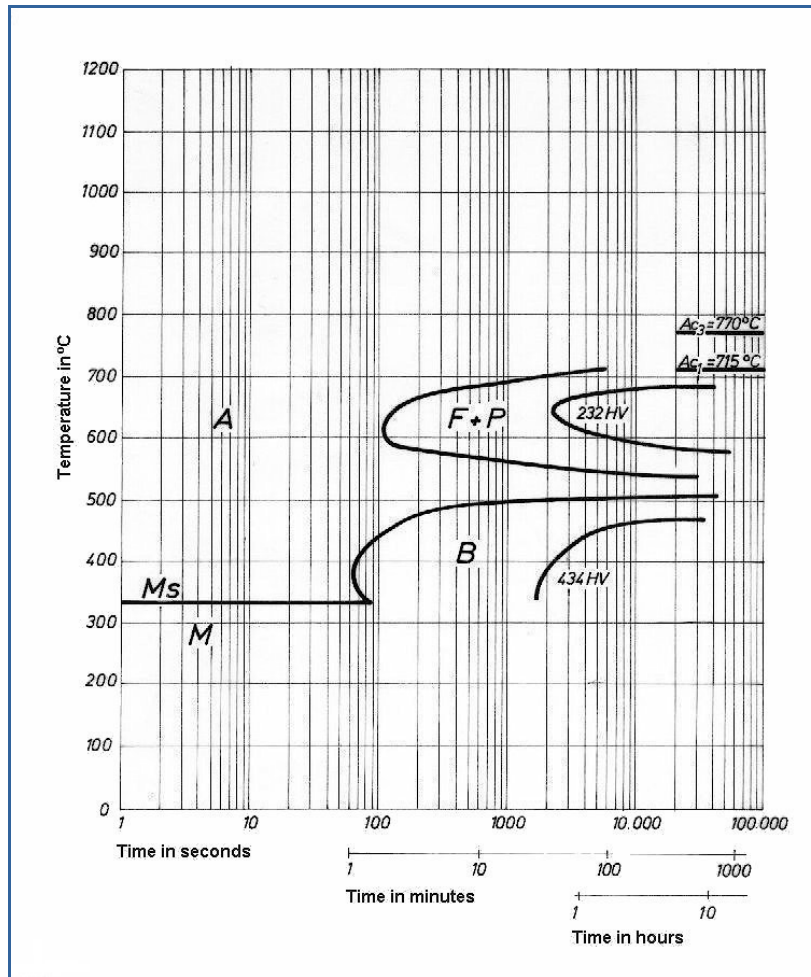
Minimum service temperature: -73.2 to -42.2°C

Maximum service temperature: 613-653°C

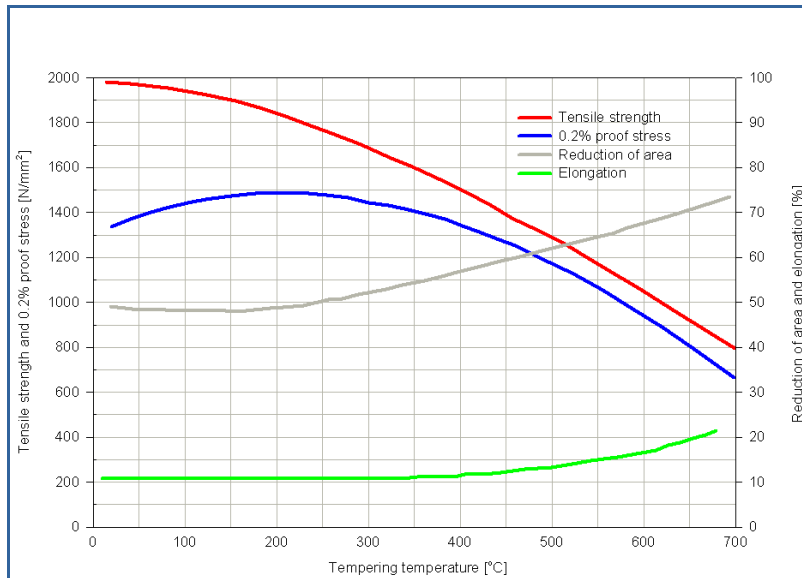
Continuous Cooling Transformation (CCT) Diagram



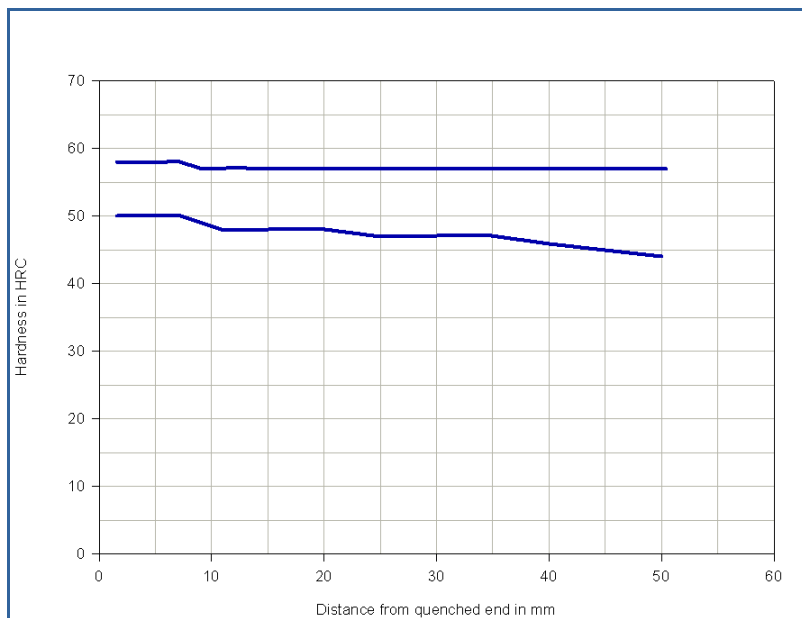
Time-Temperature Transformation (TTT) Diagram



Tempering Diagram



Hardenability Diagram



Forging

Hot forming temperature: 1100-900°C.

Machinability

Machining is best done with this alloy in the annealed or normalized and tempered condition. It can be machined by all conventional methods.

Corrosion Resistance

This is a low alloy steel and not a corrosion resistant alloy. Protective coating should be used.

Welding

The alloy can be fusion or resistance welded. Preheat and post heat weld procedures should be followed when welding this alloy by established methods.

Cold working

The VCNMO150 alloy may be cold worked, in the annealed condition, by conventional methods and tooling. It has good ductility.

Forms manufactured: Please see the [Dimensional Sales Program](#).

Disclaimer

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