



SIQUAL 7220 Steel

Designation by Standards

Brand Name	Ravne	Mat. No.	DIN	EN	AISI/SAE
SIQUAL 7220	VCMO135	1.7220	-	34CrMo4	4135/4137

Chemical Composition (in weight %)

C	Si	Mn	Cr	Mo	Ni	V	W	Others
0.34	max. 0.40	0.75	1.05	0.23	-	-	-	-

Description

Structural alloyed carbon steel.

Applications

Statically and dynamically stressed components for vehicles, engines and machines - axles, turbine components, chains, forgings, etc.

Physical properties (average values) at ambient temperature

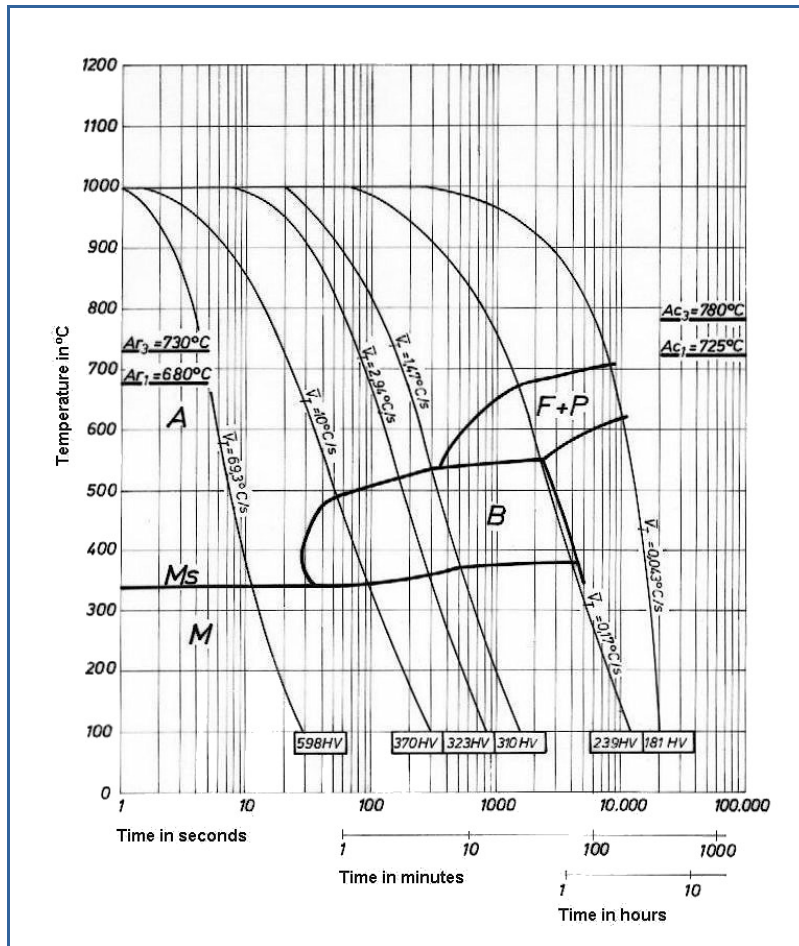
Modulus of elasticity [$10^3 \times \text{N/mm}^2$]: 210

Density [g/cm^3]: 7.86

Thermal conductivity [W/m.K]: 41.9

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

Continuous Cooling Transformation (CCT) Diagram



Soft Annealing

Heat to 680-720°C, cool slowly. This will produce a maximum Brinell hardness of 223.

Normalizing

Temperature: 850-890°C.

Hardening

Harden from a temperature of 830-890°C followed by oil or water quenching.

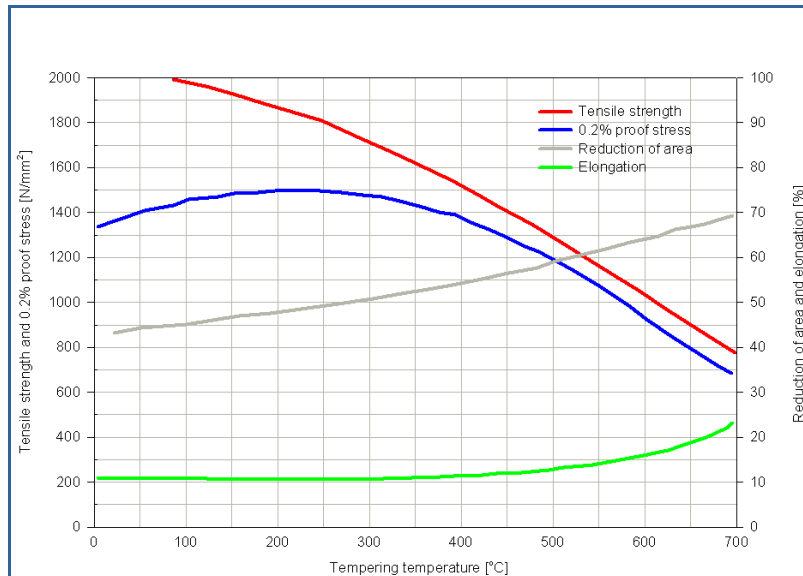
Tempering

Tempering temperature: 540-680°C.

Mechanical Properties in Hardening and Tempering Condition

Diameter (mm)	0.2 % proof stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Reduction of area (%)	Notch impact energy (ISO-V) (J)
up to 16	785	980-1180	11	45	41
17-40	665	880-1080	12	50	48
41-100	560	780-930	14	55	48
101-160	510	740-890	15	60	48
161-250	460	690-840	15	60	48

Diagram Tempering Temperature - Mechanical Properties



Forging

Hot forming temperature: 1050-850°C.

Machinability

No data.

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

Disclaimer

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