

JC METAL

Jcmetal is a wholly-owned subsidiary of a Chinese state-owned enterprise, which can provide high-quality copper, aluminum, steel products and metals from China.

Our products: all kinds of die steel, spring steel, alloy steel and aluminum alloy series, etc. It can also provide professional industry solutions according to the needs and attributes of steel, aluminum and copper in different industries.

We export to the United States, Russia, Germany, France, Spain, Italy, the United Kingdom, Japan, and most of the Southeastern countries.

Our products are used in ships, automobiles, agricultural machinery, heavy vehicle parts, electronic machinery parts, medical, food and other industries

If you have any questions about them: Email info@jcmetalchina.com

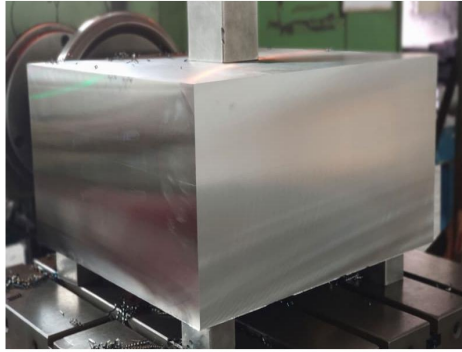


4CrMnSiMoV

Description

4CrMnSiMoV steel is one of the steel grades developed in China in the field of low alloy large section hot work die steel in the past 20 years.

4CrMnSiMoV steel has high tempering resistance and good high temperature strength, thermal fatigue resistance and toughness. It also has good hardenability and good cold and hot working properties. The steel is suitable for the manufacture of various types of hammer dies and press forging dies.



4CrMnSiMoV Chemical Composition

C	Si	Mn	P (s)	S (s)	Cr	V
0.35-0.45	0.80-1.10	0.80-1.10	0.030	0.030	1.30-1.50	0.2-0.4

4CrMnSiMoV Mechanical Properties

Proof strength	Tensile strength	Impact energy	Elongation at fracture	Reduction in cross section on fracture	As-Heat-Treated Condition	Brinell hardness(HBW)
313(≥)	425(≥)	44	44	22	Solution and Aging, Annealing, Ausaging, Q+T	112

Physical Properties

Property	Density kg/dm ³	Temperature T °C/F	Specific heat J/kgK	Thermal conductivity W/mK
124(≥)	299(≥)	33	31	32
Temp. °C/°F	Creep strain limit (10000h) (Rp1.0)N/mm ²	Creep rupture strength (10000h) (Rp1.0)N/mm ²	Electric resistance μΩ·cm	Modulus of elasticity kN/mm ²
965	627	847	Solution and Aging, Annealing, Ausaging, Q+T	222

Heat Treatment

Hot Working Specifications

Steel ingot: heating temperature 1160~1180°C, starting temperature 1100~1150°C, end temperature ≥850°C, slow cooling (sand cooling or pit cooling).

Steel billet: heating temperature 1100~1150°C, starting temperature 1050~1100°C, end temperature ≥850°C, slow cooling (sand cooling or pit cooling).

Isothermal Annealing Specifications

Annealing temperature is 840~860°C, heat preservation is 2~4h, isothermal temperature is 700~720°C, heat preservation is 4~8h, and the furnace is cooled to below 500°C for air cooling.

General Quenching Specification

Quenching temperature 860~880°C, oil cooling, hardness 56~58HRC. 4CrMnSiMoV Steel

Application

- 1) 4CrMnSiMoV steel is suitable for large and medium forging dies.
- 2) Compared with the service life of hot die steel such as 5CrNiMo, the service life of this steel is the highest. Such as connecting rod die, front beam die, gear die, flange segment die (deep die), etc., the service life of the 5CrNiMo die is increased by 1 to 0.8 times.
- 3) The service life of straightening dies, bending dies and flat forging dies is generally 0.5 times higher than that of 5CrNiMo. Individuals exceed 1 to 2 times.
- 4) Used to make hammer forging dies, press forging dies and bending dies.

4CrMnSiMoV Steel Products:

Product type	Products	Dimension	Processes	Delivery Status
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