



Hot Working Tool Steel

PREMIUM GRADE TG-1.2367 SUP



Smelting method : EAF+LF+VD+ESR

Main characteristics : High heat resistance, favorable high-temperature tenacity, high thermal fatigue resistance and abrasion performance, little change in heat treatment size, nitridation treatment, favorable polishability and favorable isotropic.

Major applications : • Long-life pressure casting molds; • Forged molds and inserts; • Hot extrusion molds.

Chemical constituent (%):

C	Si	Mn	Cr	Mo	V	P	S
0.37	0.4	0.45	5.0	2.8	0.55	≤0.015	≤0.001

Physical Property :

Room temperature density (Kg/m ³)	Specific heat of room temperature (J/Kg.K)	200°C thermal conductivity (W/m.K)	Elastic modulus (N/mm ²)	Linear expansivity (x10 ⁻⁶ /K)	
				20 ~ 200°C	20 ~ 400°C
7.83	--	25.0	215,000	12	12.5

Ultrasonic flaw detection: Flaw detection standard: as per Class A of GB/T4162, i.e., flat bottom hole ≤Φ2mm, or as per customer requirements.

Purity :

Class A		Class B		Class C		Class D	
Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse
1.0	0.5	1.5	1.0	1.0	1.0	1.5	1.0

Delivery state : (1) Delivery hardness: delivery under annealing state, delivery hardness ≤229HB; (2) Organization state and impact power requirement: the organization and segregation shall comply with North American Die Casting Association No. 207 criterion; (3) Impact power sample: please sample according to the central part of steel. The samples shall be treated according to criterions in North American Die Casting Association, making sure that hardness of samples at 45±2HRC. Dimension of sample: 7*10*55. Gapless.

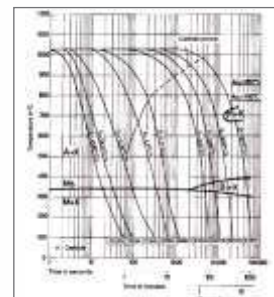
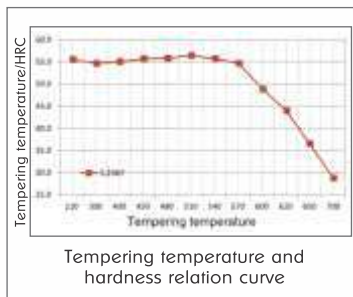
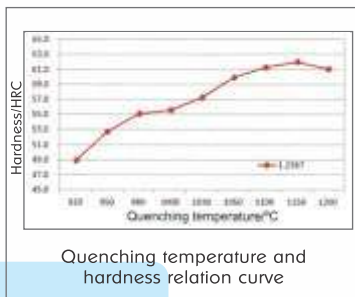
Specification (diameter, thickness mm)	Average impact power at the center part not less than (J)	Minimum impact power per sample not less than (J)
≥60~200	300	250
≥201~300	280	220

Supply specification

Product Name	Specification/mm	Material
Forged round bar	Φ 71-810	1.2367 SUP
Forged module	(120-400) x (300-800)	1.2367 SUP
Rolled round bar	Φ 14.5-70	1.2367 SUP
Rolled flat bar	(12-120) x (200-810)	1.2367 SUP

Thermal treatment

Softening annealing	Quenching	Tempering
Heating to 820-840°C for heat insulation; cooling to 600°C at 10°C/h air cooling	1,030-1,060°C high-speed gas quenching or hot oil cooling	Selecting tempering temperature according to hardness requirements; please conduct tempering for 3 times; prevent tempering under 450-550°C



CCT curve