

1.2738HH (MOD)

Plastic Mould Steel

TECHNICAL SHEET

1 Comparison Standards

W.Nr	DIN	JIS equivalent	AISI/SAE	AFNOR	BS	UNI
1.2738 HH	-	-	-	-	-	-

2 Chemical Composition

C	Si	Mn	P (max)	S (max)	Cr	Mo	Ni	Supply Condition	Supply Hardness (HB)
0.29	≤ 0.30	1.50	0.01	0.001	1.30	0.57	1.05	Q & T	360-400

3 Main Characteristics and Applications

1.2738HH is a pre-hardened plastic tool steel specifically designed for producing large blocks with thicknesses up to 1300mm, offering exceptional through-hardening homogeneity. It is known for its excellent machinability, high toughness and good polishability.

Applications:

- Bumper Mould
- Injection Moulds
- Compression and Large Moulds
- Automotive Industry

4 Physical Properties (Reference Values)

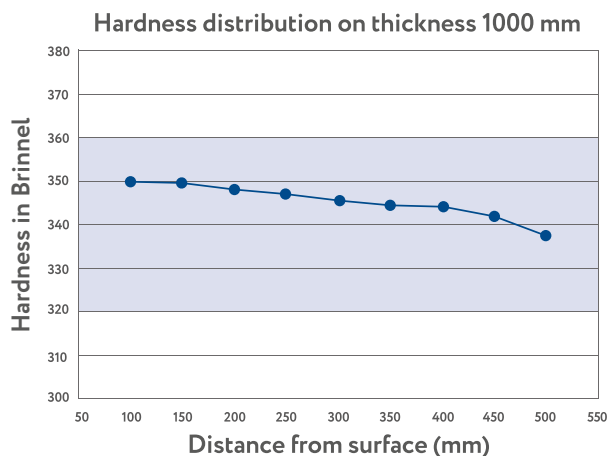
	20°C	100°C	250°C	500°C
Thermal expansion coefficient (10 ⁻⁶ /K)	11.4	11.6	12,7	14.2
Thermal Conductivity (W/mk)	36	36.7	38	34.3
Young modulus (Kn/mm2)	211	207	199	166

7 Heat Treatment

TREATMENT	TEMPERATURE	HOLDING TIME (HT)	COOLING	COMMENTS
Annealing	Heat to 650 - 700 °C	Min. H.T. for 2 minute /mm	Air or Furnace	To achieve a hardness below 250 HB (24 HRC) and enhance machinability
Stress relieving	Heat to 500 - 550 °C	Min. H.T. for 2 minute /mm	Air or Furnace	It is recommended to eliminate the residual stresses induced by mechanical working after machining
Hardening	Heat to 860 - 900 °C	Min. H.T. for 1 minute /mm	Polymer	-
Tempering	Heat to 550 - 610 °C	Min. H.T. for 3 minute /mm	Air or Furnace	To be performed after hardening, conduct a second tempering at a temperature no more than 30 °C below the initial tempering temperature

5 Through Hardenability

The high performance of hardenability for a thickness of 1300mm, is obtained by an optimized balance of chemical composition and a special manufactured process.



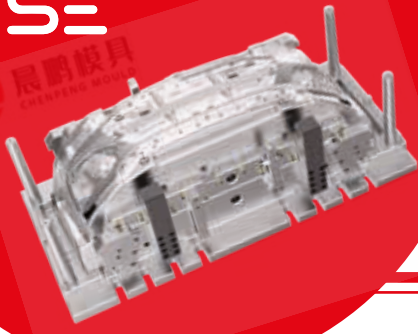
6 Production Route

EAF - LF - VD - Forging - Heat treatment QT



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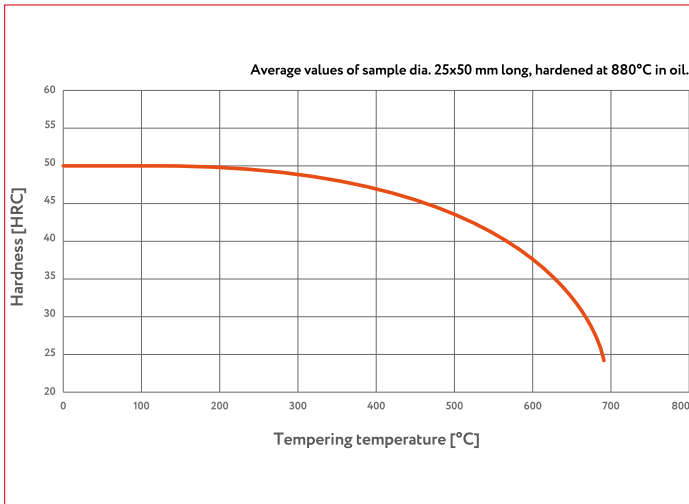


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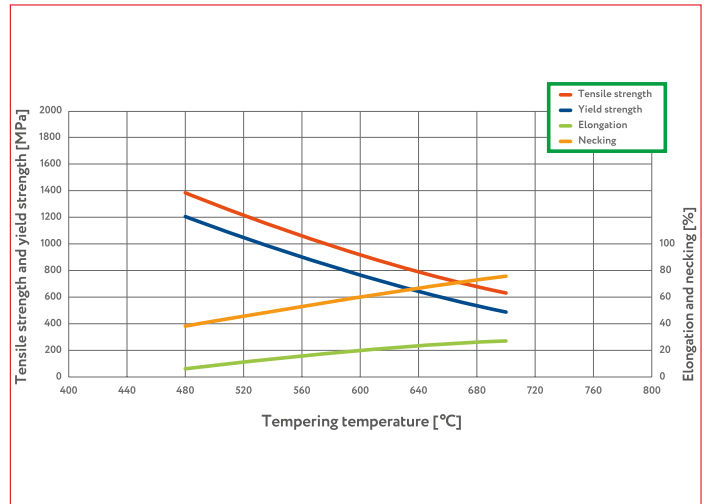
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8 Tempering Curve



10 Mechanical Properties



9 C.C.T. Curve

