



銷售部:

GVG - Gröditzer Vertriebsgesellschaft mbH • Halskestrasse 23-25 • D-47877 Willich

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郵箱: vertrieb@stahl-groeditz.de • 公司網址: <http://www.stahl-groeditz.de>**W.1.2344 (相應標準AISI H13)**

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常規熔煉 (EF+LF+VD)**主要特性**

- 優良的機械加工性能及拋光性能
- 高韌性及可塑性
- 高低溫下的高耐磨性
- 出色的整體硬化性
- 良好的抗高溫疲勞、耐熱性佳
- 熱處理時變形率極低

主要應用

- 擠壓模(模仁，墊板，支承件，襯套，流塊，擠壓墊)
- 塑膠模具（熱塑性的注塑模具和表面要求高的注塑模具）
- 冷剪切，飛邊，熱剪，耐磨部件

化學成分%

C	Si	Mn	P	S	Cr	Mo	V
0.38 – 0.42	0.8 – 1.2	0.3 – 0.5	≤ 0.025	≤ 0.005	4.8 – 5.5	1.2 – 1.5	0.9 – 1.1

物理性質

熱膨脹系數 [10 ⁻⁶ m/(m x K)]	20-100 °C	20-200 °C	20-300 °C	20-400 °C	20-500 °C	20-600 °C	20-700 °C
	10.9	11.9	12.3	12.7	13.0	13.3	13.5
熱傳導性 [W/(m x K)]	20° C		350° C		700° C		
	25.2		27.0		30.3		

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熱處理

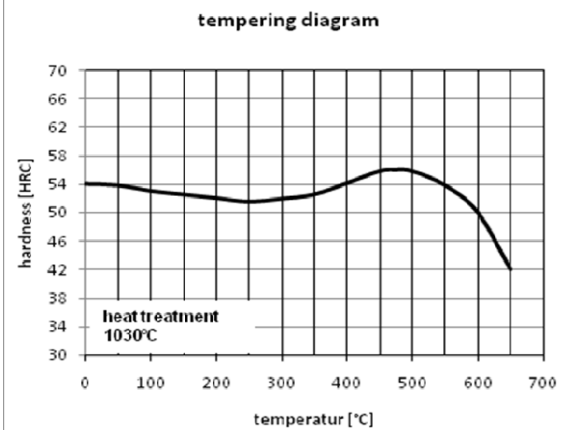
鍛造	軟性退火	淬硬	回火
1050 – 850 °C	820 – 840 °C	1010 – 1050 °C	520 – 700 °C

回火圖

HRC

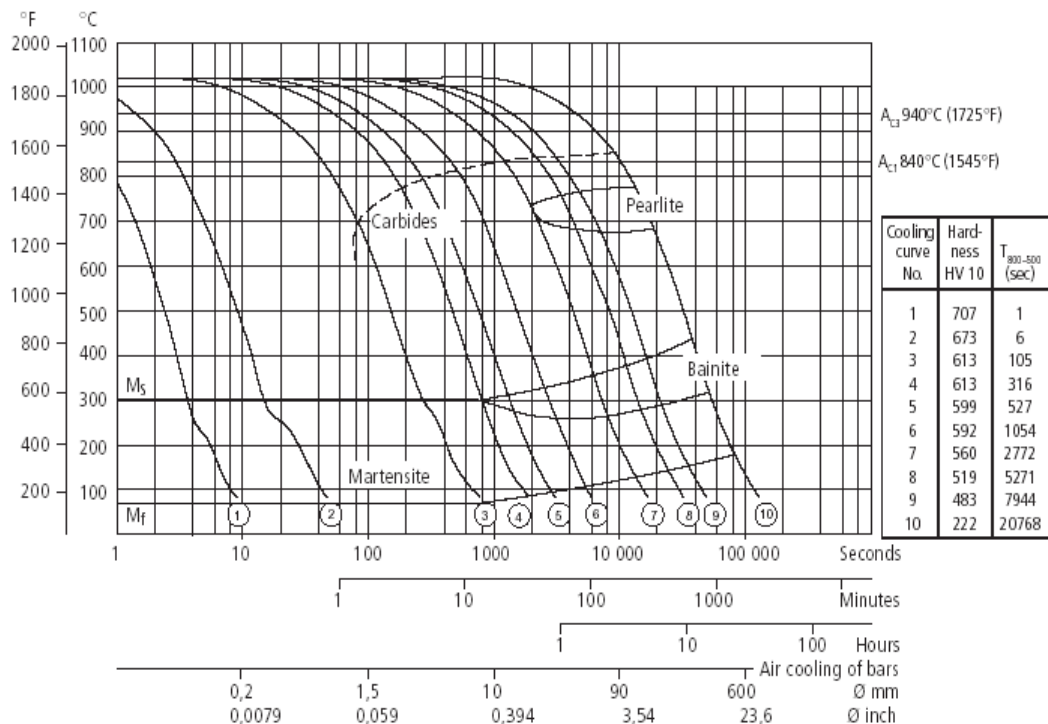
試樣直徑為25 x 50 mm長

油淬溫度為1030 °C



CCT圖

Austenitizing temperature 1020°C (1870°F). Holding time 30 minutes.



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出廠狀態

軟性退火，調質硬度最大至229HB
或者 調質到客戶所要求硬度

應用狀態

30 - 56 HRC

衝擊強度

无凹槽試樣 10x7x55 [mm]
VDG M82 Ed.02/1993 或者 SEP 1614
285 J/cm²
或者
按客戶要求

超聲檢驗

ASTM A388 - FBH max. 5 mm (1/5 inch)
或者
SEP 1921 – test group 3 – class D , d
或者
按客戶要求

純淨度

按照ASTM E45方法A，A硫化物 ≤ 1.5 ，B氧化物、C硅酸鹽和D球狀氧化物各 ≤ 2
或者 DIN 50602– K4 ≤ 20
或者 按客戶要求

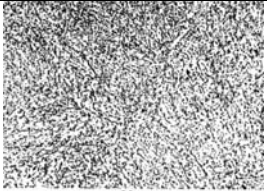
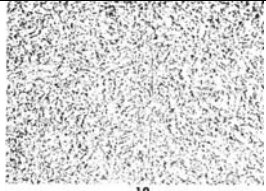
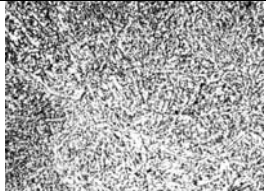
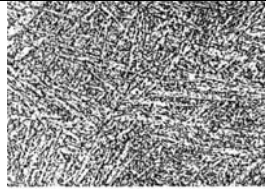
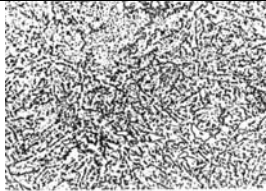



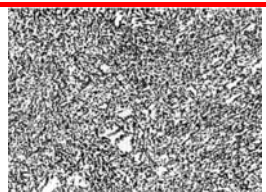
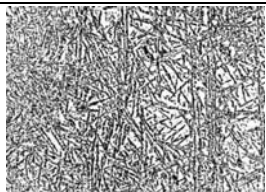
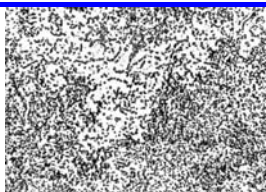
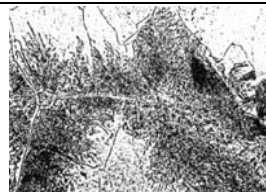
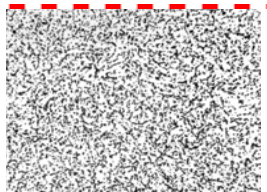
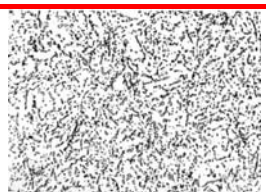

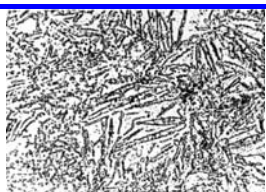


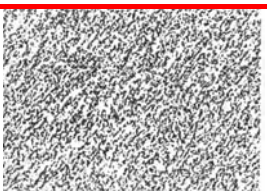
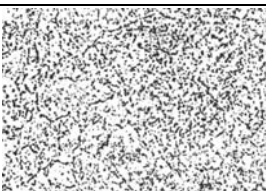


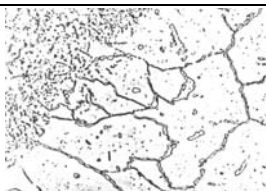

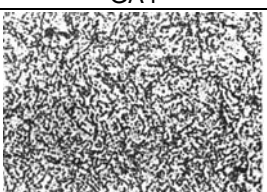
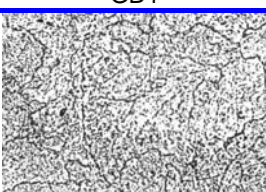
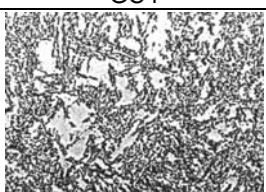

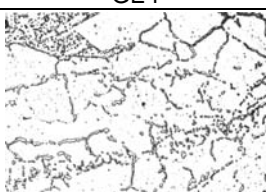

鋼材組織

細退火組織
(參考下一頁)

尺寸規格

圓鋼直徑至600 mm
模塊厚度至500 mm
或者 按客戶要求

退火熱作工具鋼顯微組織對照圖

	GA	GB	GC	GD	GE	GF
1	 GA1	 GB1	 GC1	 GD1	 GE1	 GF1
2	 GA2	 GB2	 GC2	 GD2	 GE2	 GF2
3	 GA3	 GB3	 GC3	 GD3	 GE3	 GF3
4	 GA4	 GB4	 GC4	 GD4	 GE4	 GF4
5	 GA5	 GB5	 GC5	 GD5	 GE5	 GF5
	EFS退火/ EFS annealed		ESU至400 mm / ESR up to 400 mm		ESU至250 mm / ESR up to 250 mm	