16MnCr5 冷镦钢丝

标准与产品参考资料 / Material reference sheet

本资料按来源网页整理，保留所列标准、单位、条件与脚注。网页内容的审核范围及标准版次以原始来源说明为准；不构成供货、材料替代、性能保证或订单放行依据。实际尺寸、状态、数量、检验及交付条件需经技术评审和订单确认。

生成日期：2026-10-25；这是资料生成日期，不是原文首次发布日期。

来源：https://chqwire.net/zh/products/16mncr5-chq-wire/

01执行标准ISO 4954	02材料牌号16MnCr5	03材料形态冷镦钢丝	04交货说明按订单技术条件确认

表 B.7 已按 ISO 4954:2018(E) 正文第31–32页核对：保留本牌号 +HH / +HL 上下限，移除不属于本牌号的误附行，恢复原文未规定值符号“—”。本项核验不代表本页其他表格的全标准复核。

STANDARD & PROPERTIES

材料技术参数

询价此牌号

1.交货条件的组合

表B.1-交货时热处理条件、产品形式和适用要求的组合

Heat-treatment condition at delivery	Symbol	Products form a			Applicable requirements in cases where the steel concerned has been ordered with reference to the steel names indicated in					
		Wire rod	Bar	Wire	T a b les B. 2,B.3,B.4 or B.5		Ta bles B. 2,B.3,B.4,B.5,B.6 or B,7			Optional
As hot-rolled or peeled	+AR or +PE	X	X	X	Chemical composition as specified in Table B.2	Mechanical properties as specified in Ta b le s B.3 ,B.4 and B.5	Chemical compositior as specified in Table B.2	Mechanical properties as specified in Tables B,3, B.4 and B.5	Values for hardenability according to Ta ble s B.6 and B.7	Supplementa- ry or special requirements as specified in Annex Eh
Cold drawn	+AR+C	-	X	X						
Cold drawn + spheroidized	+AR+C+AC	-	X	X						
Cold drawn + spheroidized+skin passed	+AR+C+AC +LC	-	X	X						
Spheroidized or spheroidized+peeled	+AC or +AC +PE	X	X	X						
Spheroidized+cold drawn	+AC+C		X	X						
Treated to ferrite-pearlite structure and hardness range	+FP	-	X	-						
Others	Other delivery conditions may be agreed at the time of ordering									
a X=applicable,-=not applicable. b If agreed at the time of the enquiry and order.										

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2.化学组成

表B.2-表面硬化用钢的化学成分 (适用于熔炼分析)

Steel name b	% mass fraction a									
	C	Si c	Mn	P	S	Cr	Ni	Mo	B	Cu
16MnCr5	0,14 to 0,19	0,30	1,00 to 1,30	0,025	0,025	0,80 to 1,10		—	—	0,25
Elements not quoted in this table should not be intentionally added to the steel without the agreement of the purchaser,except those intended for finishing the heat.All reasonable precautions shall be taken in order to prevent the addition of such elements from scrap or other materials used in the production process,which can affect the hardenability, mechanical properties and applicability To improve the performance of cold heading,it is possible to add Al:0,020 %to 0,050 % a Maximum values unless otherwise indicated. b In the case of steels with hardenability requirements (see Tables B.6 and B.Z),minor deviations from the specified limits are permitted (with the exception of sulfur and phosphorus),provided that they do not exceed 0,01 %for carbon and the values indicated in Table 2 for the other elements. c A lower silicon content or a specific silicon range may be agreed at the time of ordering									

3.力学性能

表B.5-合金钢牌号的力学性能

Steel name	Diameter		Delivery condition									
			+AC		+FP		+AR+C+AC		+AR+C+AC+LC		+AC+C	
	above mm	up to mm	Rm max. MPa	Za min %	HB Min.max.		Rm max. MPa	Z min %	Rm max. MPa	Z min. %	Rm max. MPa	Z min. %
16MnCr5 16MnCrS5 16MnCrB5	2	5					550	64	590	62	—	
	5	10	550	62	140	187	530	64	570	62	660	59
	10	40	550	62	140	187	530	64	570	62	650	59

4.淬透性要求

表B.6-标准淬透性钢种的硬度限值 (H级)

Steel name	Symbol	Austenitizing temperature ℃ ±5℃	Limits of range	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of	Hardness HRC at a distance from quenched end of test piece(in mm)of
Steel name	Symbol	Austenitizing temperature ℃ ±5℃	Limits of range	1.5	3	5	7	9	11	13	15	20	25	30	35	40
16MnCr5	+H	870	max.	47	46	44	41	39	37	35	33	31	30	29	28	27
16MnCr5	+H	870	min.	39	36	31	28	24	21	—	—	—	—	—	—	—

表B.6-标准淬透性钢种 (H级) 的硬度限值 (续)

表B.7-具有限制淬透性散射带的钢种的硬度限值 (HH和HL等级)

Steel name	Symbol	Austenitizing temperature ℃ ±5℃	Limits of range	Hardness HRC at a distance from quenched end of test piece(in mm)of												
				1,5	3	5	7	9	11	13	15	20	25	30	35	40
16MnCr5 16MnCrS5	+HH	870	max.	47	46	44	41	39	37	35	33	31	30	29	28	27
			min.	42	39	35	32	29	26	24	22	20	—	—	—	—
	+HL		max.	44	43	40	37	34	32	30	28	26	25	24	23	22
			min.	39	36	31	28	24	21	—	—	—	—	—	—	—

表B.7-淬透性受限的钢种分散带 (HH和HL等级) 的硬度限值 (续)

TECHNICAL NOTE

使用与订购说明

化学成分、力学性能、交货状态及其他技术要求应以现行有效标准、客户图纸和订单技术协议为准；网页资料不替代正式质量证明文件。

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