OȚELURI PENTRU SCULE PENTRU LUCRU LA CALD

Application Segments

Lucrări la cald | Industria auto

Available Product Variants

Long Products

Product Description

BÖHLER W460 VMR is a double vacuum arc remelted (VAR) material that has been specially adapted for use in the motorsport sector. The steel purity achieved by this special manufacturing technology, combined with the high strength, ensures that a very high fatigue strength can be guaranteed. The high purity also results in very good polishability, which makes the steel a good choice as a tool material for minting coins.

Process Melting

Airmelted + VAR + VAR

Applications

- Driveshafts
- Inginerie mecanică
- Crankshafts
- Gears
- Camshafts
- Cold Forming / Coining

Technical data

Material designation	
BÖHLER patent	Market grade

Chemical composition (wt. %)

C	Si	Mn	Cr	Mo	V
0.50	0.20	0.45	4.60	3.00	0.75

Delivery condition

Recoaptă	
Hardness (HB)	max. 205

Heat treatment

Recoacere

Temperature	750 to 800 °C	Holding time 6 to 8 hours. Slow, controlled furnace cooling at 10 to 20°C/h (50 to 68 °F/hr) to approx. 600°C (1112°F), further cooling in air.

Eliminarea stresului

Temperature	650 to 700 °C	For stress relief after extensive machining or for complicated tools. Holding time depending on tool size after complete heating 2 - 6 hours in neutral atmosphere. Slow furnace cooling.

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Temperature	1,050 to 1,070 °C	Holding time after temperature equalization: 15 to 30 minutes; Quenching: Oil, salt bath (500 - 550°C [932-1022°F]), air, vacuum; After hardening, tempering to the desired working hardness (see tempering chart).

Thermal Expansions between 20°C | 68°F and ...

Temperature (°C)	**100**	**200**	**300**	**400**	**500**	**600**	**700**
Thermal expansion (10^{-6} m/(m.K))	11.1	11.5	11.9	12.3	12.8	13.2	13.6

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.

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