meusburger

MATERIAL NO.: 1.2210

DESIGNATION ACCORDING TO:

DIN:	115 CrV 3
AFNOR:	100 C3
UNI:	107 CrV 3 KU
AISI:	L2

TECHNICAL TIP:

» Silver steel 1.2210 is dispatched finish-ground to h9 tolerance.

TYPCIAL ANALYSIS:

C	1.18
Si	0.25
Mn	0.30
Cr	0.70
V	0.10

HARDNESS: max. 220 HB (≈ max. 750 N/mm²)

THERMAL CONDUCTIVITY AT 100 °C: 33 $\frac{W}{m\,K}$

COEFFICIENT OF THERMAL EXPANSION [10^{-6}/K]

100 °C	200 °C	300 °C	400 °C	500 °C	600 °C	700 °C
11.8	12.5	12.9	13.5			

CHARACTER:

» Chrome-Vanadium alloyed **cold-work steel** with high resistance; also known as silver steel.

APPLICATION:

» Small turned parts, core pins, punches and engraving tools

MACHINING:

» Polishing, etching, EDM, nitriding, hard chrome plating: not usual

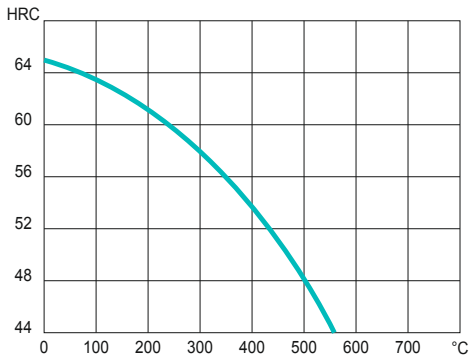
HEAT TREATMENT:

» Soft annealing:
710 to 740 °C for about 2 to 5 hours
slow controlled cooling inside the furnace: 10 to 20 °C per hour to about 600 °C
further cooling in air, **max. 220 HB**

» Hardening:
780 to 840 °C
keep curing temperature for 15 to 30 minutes
quenching in water/oil
obtainable hardness: **64–66 HRC**

» Tempering:
slow heating to tempering temperature immediately after hardening;
minimum time in furnace: 1 hour per 20 mm part thickness;
min. 2 hours/cooling in air

TEMPERING GRAPH:



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