RGS 4

saarschmiede Freiformschmiede

Short name	56NiCrMoV7
No.	1.2714
AISI	L6

Typical chemical composition, %	
C	0.54
Si	0.25
Mn	0.85
Cr	1.10
Ni	1.70
Mo	0.50
V	0.10

PROPERTIES AND USES

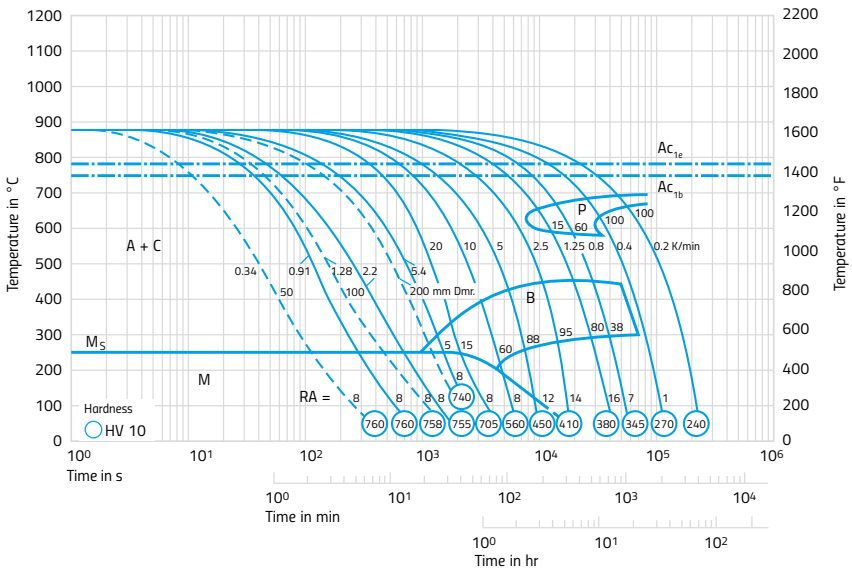
Heavy-duty die steel with improved depth of hardening and wear resistance at elevated temperature. As-delivered condition: preferably with 1000 to 1400 N/mm² strength (with subsequent heat-treatment to 1600 N/mm² by the customer).
Preferable for dies of all sizes and all types of cavities for processing hard steels as well as for jaws in forging machines, upper and lower press dies, punches and dies for the manufacture of bolts, nuts, rivets, die-sinking hobs and hot shear blades. In the processing of light and heavy metals for bar and tube extrusion stems, for bolster plates, die holder inserts subject to medium thermal stress as well as for drop forging dies. Recommended pre-heating temperature for hot-work tools: 250–300 °C.

HOT WORKING AND HEAT TREATMENT

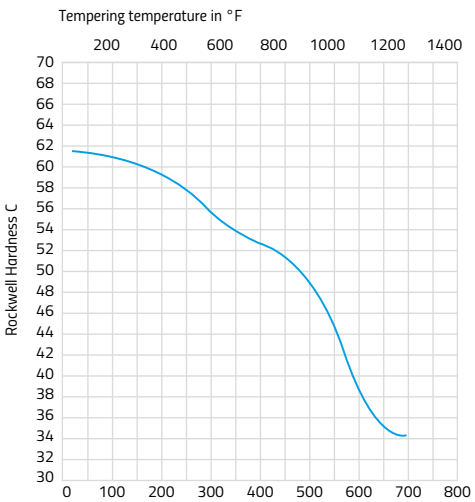
Forging	1150–800 °C (2100–1470 °F)
Soft annealing	650–680 °C (1200–1255 °F) 2–4 hrs/furnace cooling
Brinell Hardness in the annealed condition	Max. 248 HB
Stress relieving	650 °C (1200 °F)
Preheating for hardening	650 °C (1200 °F)
Hardening temperature	830–870 °C (1525–1600 °F)
Quenching	Oil[1] or salt bath of 180–220 °C (355–430 °F)
Tempering	According to tempering curve
Time	1 hr/25 mm (1 hr/in.)

[1] Take the pieces out of the oil while they are still warm (100–150 °C (210–300 °F))

CONTINUOUS TTT CURVE



TEMPERING CURVE (APPROX. VALUES)



Tempering temperature in °C (time 1 hr, air cooling)
Quenched from 850 °C / 1560 °F in oil
Average values obtained on Ø 25 x 50 mm long samples