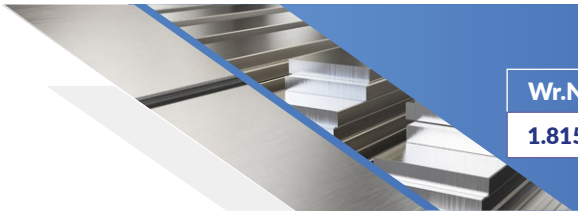
MULTISTAL
Lohmann



SPRING STEEL

Wr.Nr.	PN	EN	GOST	AISI
1.8159	50HF	51CrV4	50ХФА	6150

CHEMICAL COMPOSITION

Chemical composition (in weight %)

Element	C	Si	Mn	P	S	Cr	V	Cu
min	0.47	0.10	0.60	max.	max.	0.80	0.10	max.
max	0.55	0.40	1.00	0.025	0.025	1.10	0.25	0.40

APPLICATION

Steel for heat treating, for gears in machinery, automotive construction and gear manufacturing. For the production of coil springs and springs.

TREATMENT

Jominy test	850 ± 5 °C austenitizing time 30 - 35 min. (approx.)
Hardening	820 - 860 °C at least 30 min. (approx.) / Oil
Tempering	540 - 680 °C at least 60 min. (approx.)

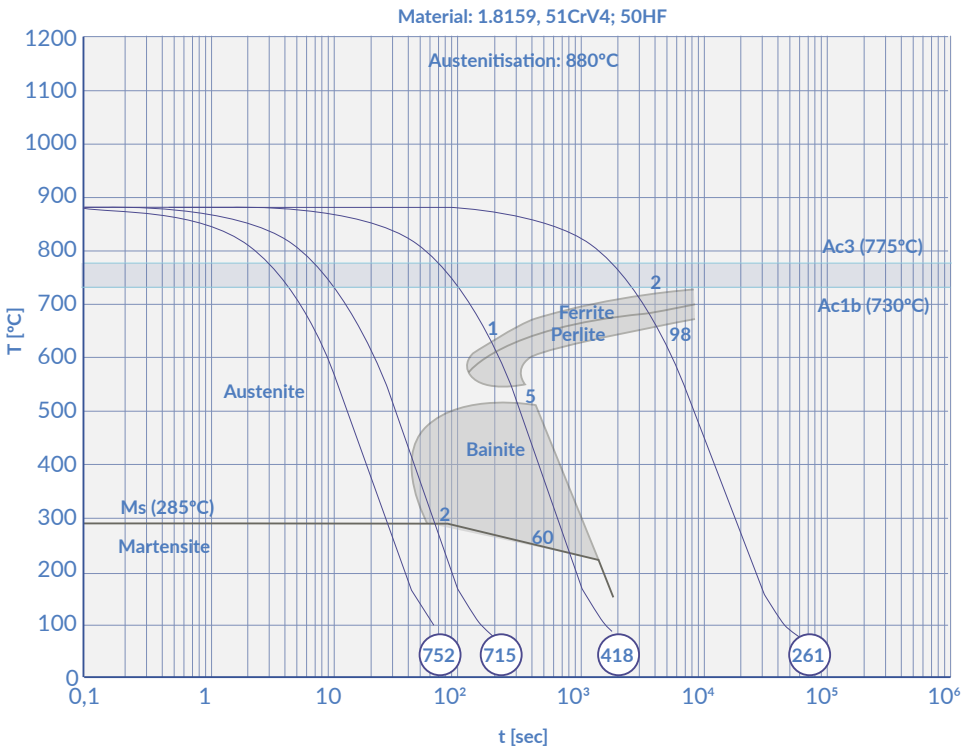
ADDITIONAL HEAT TREATMENT

Hot forming	1100 - 850 °C
Normalising	840 - 880 °C
Soft annealing	680 - 720 °C

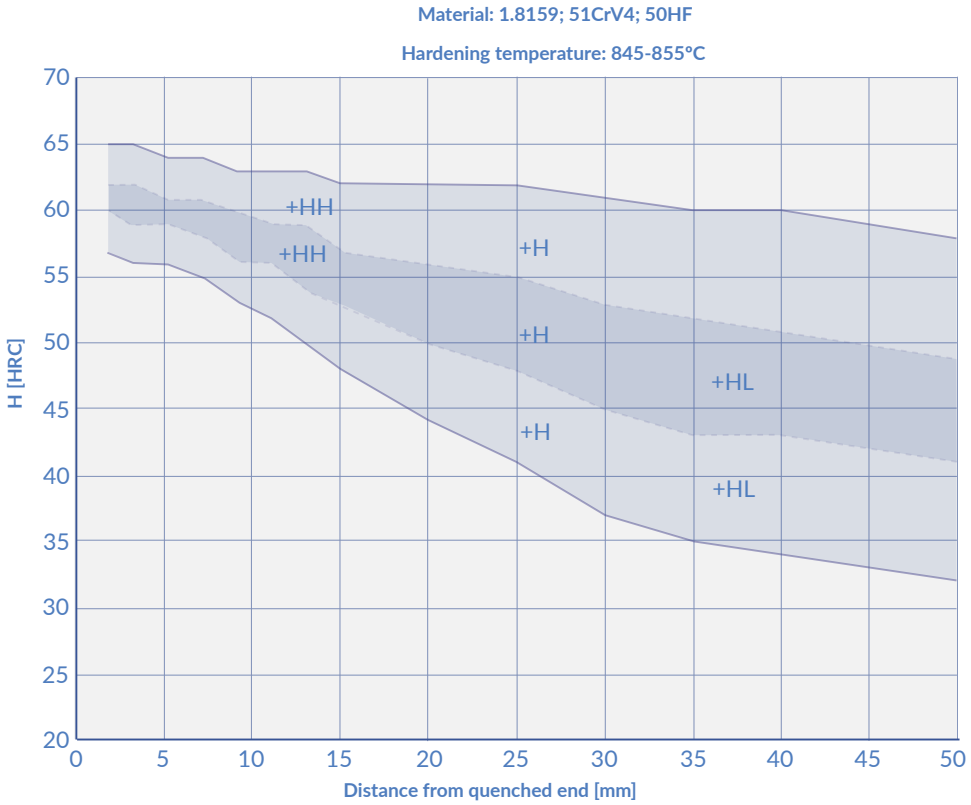
MECHANICAL PROPERTIES

Condition	Quenched and tempered (+QT)	Soft annealed (+A)
Hardness [HB]	Depend on diameter and thickness	max. 248

CONTINUOUS COOLING TRANSFORMATION (CCT) DIAGRAM



TEMPERING DIAGRAM



NOTE: All technical information is for reference only.