Quality	**50CrMo4**
According to Standard	**EN 10083 - 3 : 2006**
Number	**1.7228**

ALOK INGOTS
steel re engineered
AN ISO 9001:2008 CERTIFIED COMPANY

Comparable Standards	**German DIN**	**France AFNOR**	**Spain UNE**	**China GB**	**U.K. B.S.**	**Russia GOST**	**USA AISI - SAE**	**Japan JIS**
	50CrMo4	50CD4		ZG50CrMo		50Ch . 50XM	4150	SCM 445

Chemical Analysis	**C% max**	**Si% max**	**Mn% max**	**P% max**	**S% max**	**Cr%**	**Mo%**	**Ni%**
	0.46 - 0.54	0.40	0.50 - 0.80	0.025	0.035	0.90 - 1.20	0.15 - 0.30	

Hot Work and Heat Treatment Temperatures

Temperature °C

Hot - Forming	**End Quench Hardenebility test**	**Soft Annealing +A**	**Isothermal Annealing +I**	**Normalising**	**Quenching**	**Spheroidizing**	**Tempering**	**Stress-relieving +SR**
1100 - 850	850	720 air	790 furnace cooling to 660, then air	860 air	860 Oil, polymer		540 - 680	50° under the temperature of tempering
	Water	HB max 248	(HB 222)	(HB ~ 321)	840 water		air	

Mechanical Properties at Room Temperature

Hot Rolled Mechamical Properties in Quenched & Tempered condition EN 10083 - 3 : 2006

Size d/t mm Testing at Room Temperature (Longitudinal)

Dia.	**Thick**	**R**	**Rp 0.2**	**A%**	**C%**	**Kv**	**HB**
From	**To**	**N/mm2**	**N/mm2**	**min.**	**min.**	**J min.**	**for information**
	16 / 8	1100 - 1300	900	9	40		331 - 380
16 / 8	40 / 20	1000 - 1200	780	10	45	30	298 - 359
40 / 20	100 / 60	900 - 1100	700	12	50	30	271 - 331
100 / 60	160 / 100	850 - 1000	650	13	50	30	253 - 298
160 / 100	250 / 160	800 - 950	550	13	50	30	240 - 286

d = diameter t = thickness