Quality	**S355J2 (Fe 510 D)**
According to Standard	**EN 10025 - 2 : 2004**
Number	**1.0577**

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**
	St52 - 3N				50D	17G15 . 171C	A 50 LF2	

Chemical Analysis	**C% max**	**Si% max**	**Mn% max**	**P% max**	**S% max**	**N% max**	**Cu% max**
	0.20 - 0.23	0.55 - 0.60	1.60 - 1.70	0.025 - 0.035	0.025 - 0.035		0.40 - 0.45

Hot Work and Heat Treatment Temperatures

Temperature °C

Hot - Forming	**Supply State +U**	**Soft Annealing +A**	**Isothermal Annealing +I**	**Normalising & Tempering**	**Quenching & Tempering QT**	**Stress-relieving +SR**
1100 - 850	natural state	700 air		920 air	880 - 900 water	50° under the temperature of tempering
		(HB max 180)		550 - 650 air	550 - 650 air	

Mechanical Properties at Room Temperature

Minimum Yield Strength R^{eH}
Mpa
Nominal Thickness mm

	≤ 16	**> 16**	**> 40**	**> 63**	**> 80**	**> 100**	**> 150**	**> 200**
		≤ 40	**≤ 63**	**≤ 80**	**≤ 100**	**≤ 150**	**≤ 200**	**≤ 250**
	355	345	335	325	315	295	285	275

Tensile Strength R
Mpa
Nominal Thickness mm

< 3	**> 3**	**> 100**	**> 150**
	≤ 100	**≤ 150**	**≤ 250**
510 to 680	470 to 630	450 to 600	450 to 600

Minimum percentage elongation after fracture %

	L = 80 mm. Normal thickness mm				**L = 5.65 $\sqrt{S_o}$ Nominal thickness mm**					
	≤ 1	**> 1**	**> 1.5**	**> 2**	**> 2.5**	**> 3**	**> 40**	**> 63**	**> 100**	**> 150**
		≤ 1.5	**≤ 2**	**≤ 2.5**	**< 3**	**≤ 40**	**≤ 63**	**≤ 100**	**≤ 150**	**≤ 250**
l	14	15	16	17	18	22	21	20	18	17
t	12	13	14	15	16	20	19	18	18	17