Quality	**F22**
According to Standard	**ASTM A 182/A 182M - 10a**
Number	**-**

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

Comparable Standards	**EN**	**W.N.**	**BS**
	16CrMo4-4	1.7337	-

Chemical Analysis - Class 1	**C %**	**Mn %**	**Si %**	**P%**	**Cr %**	**Ni %**	**Mo %**	**S%**	**Other Elements**
	0.05 to 0.15	0.30 to 0.60	0.50 max.	0.040	2.00 to 2.50	—	0.87 to 1.13	0.040	—

Class 3	**C %**	**Mn %**	**Si %**	**P%**	**Cr %**	**Ni %**	**Mo %**	**S%**	**Other Elements**
	0.05 to 0.15	0.30 to 0.80	0.50	0.040	2.00 to 2.50	—	0.87 to 1.13	0.040	—

Hot Work and Heat Treatment Temperatures

Grade	**Heat Treat Type**	**Austenitizing/Solutioning Temperature, Minimum or Range, °F [°C][A]**	**Cooling Media**	**Quenching Cool Below °F [°C]**	**Tempering Temperature, Minimum or Range, °F [°C]**
		Low Alloy Steels			
F 22, Class 1, 3	anneal	1650 [900]	furnace cool	-	-
	normalize and temper	1650 [900]	air cool	-	1250 [675]

Mechanical Properties at Room Temperature

Grade Symbol	**Tensile Strength, min, ksi [Mpa]**	**Yield Strength, min, ksi [Mpa]**	**Elongation in 2 in, [50 mm] of 4D, min, %**	**Reduction of Area, min, %**	**Brinell Hardness Number, HBW**
F22 Class 1	**60 [415]**	**30 [205]**	**20**	**35**	**170 max.**
F22 Class 3	**75 [515]**	**45 [310]**	**20**	**30**	**156-207**