

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



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	—
Chemical Analysis - 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

Grade	Heat Treat Type	Austenitizing/Solutioning Temperature,	Cooling Media	Quenching Cool Below °F [°C]	Tempering Temperature, Minimum or Range,
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