GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-508 Grade 22 Class 4

Standard Specification for Quenched and Tempered Vacuum-Treated Carbon and Alloy Steel Forgings for Pressure Vessels

Group - Ferrous Mild Steel Alloys

Sub Group - ASME SA-508 Grade 22 Class 4 Quenched and Tempered Vacuum-Treated Carbon and Alloy Steel Forgings for Pressure Vessels

Application - Intended for Valve, Pump, General Engineering, Automotive and other Industries

Grade Belongs to the Industry - Forging

Chemical Composition		
Carbon	C %	0.110 - 0.150
Manganese	Mn %	0.300 - 0.600
Phosphorus	P %	0.015 max.
Sulphur	S %	0.015 max.
Silicon	Si %	0.350 max.
Nickel	Ni %	0.250 max.
Chromium	Cr %	2.000 - 2.500
Molybdenum	Mo %	0.900 - 1.100
Vanadium	V %	0.020 max.
Niobium	Nb %	0.010 max.
Copper	Cu %	0.250 max.
Calcium	Ca %	0.015 max.
Boron	B %	0.003 max.
Titanium	Ti %	0.015 max.
Aluminium	Al %	0.025 max.

Chemical Composition		
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-
Heat Treatment		
Annealing or Quenching & Tempering		
Mechanical Properties		
Tensile Strength in Mpa	585 - 760	
Yield Strength in Mpa	415 min.	
Elongation in %	20 min.	
Reduction of Area in %	35 min.	
Hardness in HB	-	
Impact in Joule	55 @ -60°C	

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
K21390	UNS	USA	Steel
A 541 Grade 22 Class 3	ASTM	USA	Steel and Forging
A 541 Grade 22 Class 5	ASTM	USA	Steel and Forging
A 217 Grade WC9	ASTM	USA	Steel and Casting
10028-2 1.7380	EN	European Union	Steel
17175 10 CrMo 9 10	DIN	Germany	Steel and Tubing
17243 1.7380	DIN	Germany	Steel and Bars

Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email marketing@gravitycastindia.com

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