GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-508 Grade 1A

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 1A 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 %	0.300 max.
Manganese	Mn %	0.700 - 1.350
Phosphorus	P %	0.025 max.
Sulphur	S %	0.025 max.
Silicon	Si %	0.150 - 0.400
Nickel	Ni %	0.400 max.
Chromium	Cr %	0.250 max.
Molybdenum	Mo %	0.100 max.
Vanadium	V %	0.050 max.
Niobium	Nb %	0.010 max.
Copper	Cu %	0.200 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	485 - 655	
Yield Strength in Mpa	250 min.	
Elongation in %	20 min.	
Reduction of Area in %	38 min.	
Hardness in HB	-	
Impact in Joule	20 @ RT	

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
K03020	UNS	USA	Steel
SA-541 Class 1A	ASME	USA	Steel and Forging
SA-612	ASME	USA	Steel and Plates
A 508 Grade 1A	ASTM	USA	Steel and Forging
A 541 Class 1A	ASTM	USA	Steel and Forging
A 541 Grade 1C	ASTM	USA	Steel and Forging
6447 SA 2 Si	MSZ	Hungary	Steel

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

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.