GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASTM A369 Grade FP91

Standard Specification for Carbon and Ferritic Alloy Steel Forged and Bored Pipe for High-Temperature Service

Group - Ferrous Stainless Steel Alloys

Sub Group - ASTM A369 Grade FP91 Carbon and Ferritic Alloy Steel Forged and Bored Pipe for High-Temperature Service

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

Grade Belongs to the Industry - Pipe and Forging

Chemical Composition		
Carbon	C %	0.080 - 0.120
Manganese	Mn %	0.300 - 0.600
Phosphorus	P %	0.025 max.
Sulphur	S %	0.025 max.
Silicon	Si %	0.200 - 0.500
Chromium	Cr %	8.000 - 9.500
Molybdenum	Mo %	0.850 - 1.050
Nickel	Ni %	0.400 max.
Vanadium	V %	0.180 - 0.250
Niobium	Nb %	0.060 - 0.100
Nitrogen	N %	0.030 - 0.070
Aluminium	Al %	0.040 max.
Iron	Fe %	Balance
-	-	-
-	-	-

Heat Treatment
As-Raw or Annealing or Normalizing or Normalizing & Tempering

Mechanical Properties	
Tensile Strength in Mpa	585 min.
Yield Strength in Mpa	415 min.
Elongation in %	27 min.
Reduction of Area in %	-
Hardness in HB	-
Impact in Joule	-

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
K90901	UNS	USA	Steel
A 831 T91	ASTM	USA	Bars and Forging
A 989 K91560	ASTM	USA	Steel
A 182 F 91	ASTM	USA	Pipe
A 335 Grade P91	ASTM	USA	Pipe
A 336 Grade F91	ASTM	USA	Forging
A 234 Grade WP91	ASTM	USA	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.