



**GRAVITY CAST PVT. LTD.**  
GRAVITY GROUP OF COMPANIES

## Material - IS 13505 Grade 2

**Standard Specification for Centrifugally Cast High Alloy Steel and Nickel Base Tubing for Pressure Application at High Temperature**

**Group - Ferrous Stainless Steel Alloys**

**Sub Group - IS 13505 Centrifugally Cast High Alloy Steel and Nickel Base Tubing for Pressure Application at High Temperature**

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

**Grade Belongs to the Industry - Casting**

Chemical Composition			Heat Treatment	
Carbon	C %	0.080 max.	Solution Annealing	
Silicon	Si %	2.000 max.		
Manganese	Mn %	1.500 max.		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.040 max.		
Chromium	Cr %	18.000 - 21.000		
Nickel	Ni %	9.000 - 12.000		
Molybdenum	Mo %	2.000 - 3.000		
Iron	Fe %	Balance		
-	-	-		
-	-	-		
-	-	-		
-	-	-		
-	-	-		
-	-	-		
			Mechanical Properties	
			Tensile Strength in Mpa	480 min.
			Yield Strength in Mpa	205 min.
			Elongation in %	30 min.
			Reduction of Area in %	-
			Hardness in BHN	-
			Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
A743 CF8M	ASTM	USA	Casting
316	AISI	USA	Bar, Wire, Strip, Plate, Sheet and Forging
1.4409	DIN	Germany	Casting
1.4409	EN	European Union	Casting
316 S 17	BS	British	Wire for Cold Forged Fasteners
SUS 316	JIS	Japan	Hot Rolled Equal Leg Angles
03CH17N14M3	GOST	Russia	Pipes, Fittings, Bar, Sheet and Forging

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

**ONE STOP SOLUTION FOR METAL PARTS**