

## Material: IS 3444 Grade 20

### Standard Specification for Corrosion Resistant High Alloy Steel And Nickel Base Castings for General Applications

**Group:** Non-Ferrous Nickel Alloys

**Sub Group:** IS 3444 Grade 20 Corrosion Resistant High Alloy Steel And Nickel Base Castings for General Applications

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

**Grade Belongs to the Industry:** Casting

Chemical Composition			Heat Treatment	
Carbon	C %	0.400 max.	As-Cast or Annealing or Age Hardning	
Silicon	Si %	3.000 max.		
Manganese	Mn %	1.500 max.		
Phosphorus	P %	0.030 max.		
Sulphur	S %	0.030 max.		
Chromium	Cr %	14.000 - 17.000		
Iron	Fe %	11.000 max.		
Nickel	Ni %	Balance		
-	-	-	Mechanical Properties	
-	-	-	Tensile Strength in Mpa	480 min.
-	-	-	Yield Strength in Mpa	190 min.
-	-	-	Elongation in %	27 min.
-	-	-	Reduction of Area in %	-
-	-	-	Hardness in BHN	-
-	-	-	Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
C-NiCr15Fe	AFNOR NF	France	Pump, Valve and Fitting
NC16Fe11-M	AFNOR NF	France	Pump, Valve and Fitting
NC6040	AFNOR NF	France	Pump, Valve and Fitting
10774 Grade 12	IS	India	Casting
NCrFC	JIS	Japan	Casting
A 743 Grade CY-40	ASTM	USA	Casting
A 744 Grade CY-40	ASTM	USA	Casting

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