



Steel, Stainless Steel, High Alloy & Super Alloy-
Castings, Spares, Replacement Parts & Custom Made Components
Manufacturer - Supplier to OEM's, Plants and Process Industry
Heat, Wear, Abrasion, Pressure and Corrosion Resistant Alloys for Specific End Applications
Conversion to an Integrated Casting from Fabrications, Forgings and Welded Assemblies
Fabricated and Welded-Parts, Components & Assemblies in Steels and Stainless Steels
Engineering & Metallurgical Consulting

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Poured Alloy Range (Alloy Portfolio)

- ASTM A27** Steel castings, Carbon, for General Applications
 Grades N1, N2, U 60-30 and alike
- ASTM A48** Gray Iron Castings
 Grades- 10,15, 20, 25, 30, 35, 40, 50, 55, 60
 (DIN GG10, GG15, GG20, GG25, GG30, GG35, GG40, GG50, GG60)
- ASTM A128** Steel Castings, Austenitic Manganese Steels
 Grades- A, B1, B2, C, D, E1, E2, F
 ACME® Proprietary Modified A128, Titanium/ Niobium Killed, Solution Annealed
 With Controlled Non-Metallic Inclusions S, P, H, N, O in parts per million (ppm) levels
 Expected Delivered Hardness in Work Hardened End Condition HRC 60-66
 (Indian Standard IS 276: Grade 1 to 7)
- ASTM A159** Automotive Gray Iron Castings
 Grades- 1800, 2500, 3000, 3500, 4000
- ASTM A216** Steel Castings, Carbon, Suitable for Fusion Welding for High Temperature Service
 Grades- WCA, WCB, WCC
- ASTM A217** Steel Castings, Martensitic Stainless & Alloy For Pressure Containing Parts Suitable for
 High Temperature Service
 Grades- WC1, WC4, WC5, WC6, WC11, C5, C12, C12A
- ACME®**
Chromoalloy L, M, H (Pearlitic Chrome Moly Cast Steels)
 Work Hardenable; Low-, Medium-, High- Carbon, Chromium Molybdenum Pearlitic Cast
 Steel
 (IS: 4896)
- ASTM A278** Gray Iron Castings for Pressure Containing Parts for Temperatures up to 650°
 Up to 230°C : Class 40, 50, 55, 60
 230°C-350°C : Class 275, 300, 325, 350, 380, 415

ASTM A297 Steel Castings, Iron-Chromium (Fe-Cr), Iron-Chromium-Nickel (Fe-Cr-Ni)
Heat Resistant, for General Applications

Grades

Iron-Chromium (Fe-Cr)	HA, HC, HD
Iron-Chromium-Nickel (Fe-Cr-Ni)	HE, HF, HH, HI, HK, HL
Iron-Nickel-Chromium (Fe-Ni-Cr)	HN, HP, HT, HU
Nickel-Iron-Chromium (Ni-Fe-Cr)	HX, HW

ACME®

Modified A297 ACME® offers proprietary alloys and modifications of standard alloy grades, that involve strengthening of the alloy solid solution with single or multiple additions of the elements aluminium, molybdenum, niobium, rare earth metals (REM)-Ce, La, Ta, Re, Y, titanium, tungsten and zirconium are added to improve specific properties; such as high-temperature strength, carburization resistance, and resistance to thermal cycling and fatigue. Research reveals that in Fe-Ni-Cr and Nickel Base Alloys following objectives can be achieved with element alloying additions:

Solid solution strengthening	Mo, Ta, W, Re
Precipitation strengthening	Al, Ti, Ta
Grain boundary strengthening	B, C, Zr, Hf
Surface protection	Al, Cr

Grades-HP, HP-40, HK-40, HK-30, HP-45, HP-45 Nb/Cb, HT-Nb/Cb,

Micro-Alloyed (MA) Grades

Rare Earth Metal (REM) Modified Grades

Proprietary and Semi-Proprietary Grades

Many of the proprietary alloys or proprietary compositions that are now in public domain can be classified broadly into three groups, with the following base compositions:

20Ni-25Cr Grades: HK-Nb-Ti, HK-Nb, HK-Co-W

35Ni-25Cr Grades: HP-Nb, HP-Nb-Si, HP-Nb-LC, HP-Nb-Ti, HP-Nb-W, HP-Nb-W-Mo
HP-Mo, HP-W, HP-W-Co

45Ni-30Cr Grades: 30-45-Nb-W, 30-45-Nb-Ti, 30-45-W, 30-45-W-Co, 30-45-W-Al

ASTM A297 Gray Iron Castings for Elevated Temperatures for Non-Pressure Containing Parts
Class-I, Class-II, Class-III

ASTM A351 Castings Austenitic for Pressure Containing Parts
Grades CFxx, CHxx, CKxx, HK30, HK40, HT30, CNxx, CExx, CGxx, CK

ASTM A352 Steel Castings, Ferritic & Martensitic for Pressure Containing Parts;
Suitable for Low Temperature Service

Grades LCA, LCB, LCC
LC1, LC2, LC2-1, LC3, LC4, LC9
CA6NM

ASTM A389 Steel Castings, Alloy Specially Heat Treated for Pressure Containing Parts;
Suitable for High Temperature Service

Grades C23 (UNS J12080)
C24 (UNS J12092)

- ASTM A436** Ni-Resist (Nickel Alloyed Irons)
Austenitic Gray Iron Castings
Type- 1, 1b, 2, 2b, 3, 4
- ASTM A439** Ni-Resist (Nickel Alloyed Irons)
Ductile Gray Iron Castings
Type- D2, D-2B, D-2C, D-3, D-3A, D-4, D-5, D-5B
- ACME®**
Modified A439 Ni-Resist Titanium and Niobium Modified, Molybdenum Alloyed 0.70-1.00%
- ASTM A447** Steel Castings, Chromium-Nickel Iron Alloy (25-12 Class) for High Temperature Service
Type I for service temperatures 815°C-1095°C
Type II for service temperatures 730°C-815°C
- ASTM A487** Steel Castings, Suitable for Pressure Service
Grades 1 to 16
CA15, CA15M, CA6NM
- ASTM A494** Castings, Nickel & Nickel Alloy
Grades Nickel CZ100
Nickel-Copper (Ni-Cu) M25S, M30C, M30H, M35-1, M35-2
Nickel-Molybdenum (Ni-Mo) N3M, N2M, Ni2MV
Nickel-Chromium (Ni-Cr) Cu5MCu, CW2M, CW6M, CW6MC, CW12MW
CX2M, CX2MW, CYNO
CY5SnBiM
- ASTM A518** Silicon Alloyed Irons (Sial)
Corrosion Resistant High Silicon Iron Casting
Grades 1, 2, 3
- ASTM A532** Abrasion Resistant Cast Irons (High Chromium Irons, High Chromium White Irons)
Class I, II, III
Types A, B, C, D

Ni Hard 1, 2, & 4
- ACME®**
Modified A532 High Chromium-High Alloyed Abrasion Resistant Alloys
ACME Taurus 12, 18, 20, 25, 30 (% Chromium- Ni, Cu, W, Mo, Ti, Nb, V micro-alloyed)
- ASTM A560** Castings, Chromium-Nickel Alloy
Grade 50Cr-50Ni (R20500)
60Cr-40Ni (R20600)
50Cr-50Ni-Nb/Cb (R205010)

- ASTM A570** Cast Tool Steels
Grade CA-2, CA-6
CD-2, CD-3, CD-6, CD-7
CH-11, CH-12, CH-13
CL-6, CL-M-2
CM-2, CM-4, CM-42, CM-43
CO-1, CO-2, CO-7
CS-1, CS-2, CS-4, CS-5, CS-7
CT-1, CT-2, CT-6
- ASTM A571** Austenitic Ductile Iron Castings for Pressure Containing Parts Suitable for Low Temperature Service
Class 1, 2, 3 & 4
- ASTM A743**
ASTM A 744 Castings, Fe-Cr-Ni, For General (A743) and Severe (A744) Corrosion Resistant Service
Grades All
- ASTM A958** Steel Castings, Carbon & Alloy with Tensile Requirements, Chemical Requirements Similar to Standard Wrought Grades
Grades SC 1020, 1025, 1030, 1040, 1045
SC 4130, 4140, 4330, 4340
SC 8620, 8625, 8630
- ASTM A995** Castings, Austenitic–Ferritic (Duplex) Stainless Steels, for Pressure Containing Parts
Type 1B, 2A, 3A, 4A, 5A, 6A
- ASTM A1002** Castings, Nickel –Aluminium Ordered Alloy (Nickel Alumide Intermetallic)
- Other Specialty Alloys**
Cast Nickel Base Corrosion Resistant Alloys
Cast Nickel Base Heat Resistant Alloys
Cast Cobalt Base Alloys–Wear Resistant & Heat Resistant
Nickel –Aluminium Inter-metallics
Iron-Chromium Inter-metallics

Talk to us of requirements of components, spares and replacement parts. In case, drawings are not available, new replacement part could be developed from sample, old or used OEM part.



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