# HEAT RESISTANT

Castalloy produces the following heat resistant materials for a variety of applications:

## "H" SERIES STEEL

| ASTM A297 | Wrought Equivalent | Characteristics |
|---|---|---|
| HA | A200 (T9) | |
| HC | 446 | Good high temperature stability in ore roasting furnaces, fuel oils, grate bars, baffle plates |
| HD | 327 | Good resistance to high temperature flue gases, where only moderate stresses exist. Furnace blowers, copper melting equipment |
| HE | 312 | Excellent resistance to sulfur bearing flue gases; has good high temperature strength to 1800°F, radiant tubes, dampers, furnace parts, rabble arms |
| HF | 302B | Good high temperature properties up to 1400°F. Industrial furnace parts, aluminum heat treat fixtures, oil still parts |
| HH | 309 | Excellent strength up to 1800°F in moderate amounts of sulfur fuels. Furnace parts, radiant tubes, rails, shafts, and rollers |
| HI | | Similar to the HH material with better resistance to oxidation |
| HK | 310 | Excellent strength and stability up to 2000°F. Furnace parts, radiant tubes, carburizing fixtures, cement kiln parts, shafts, and rails |
| HL | | Similar to the HK material with better resistance to sulfur |
| HN | | Similar to the HT material with better ductility |
| HP | | Higher stress rupture properties than HK and HN also increased resistance to carburization |
| HT | 330 | A high strength alloy in the range of 1600°F – 1800°F in carburizing atmospheres and furnace atmospheres without sulfur. Carburizing fixtures |
| HT+Cb | | |
| HU | | Modified 35/15 has better strength and surface stability; good thermal fatigue and high temperature corrosion properties |
| HU+Cb | | |
| HW | | Good resistance to oxidation, carburization, thermal fatigue, and neutral salts |
| HX | | Excellent resistance to oxidation up to 2150°F; good resistance to thermal fatigue and quenching applications |

## SUPER ALLOYS

| | Characteristics |
|---|---|
| Hastalloy X | Exceptional oxidation and high strength characteristics at temperatures up to 2100°F. Provides greater service life in severe applications. Used for trays, furnace rolls, etc. |
| Supertherm | Provides exceptional strength in high temperature applications up to 2150°F. Used for radiant tubes, walking beams, and furnace parts where high temperature strength is required. |
| CC233 | High strength at elevated temperatures 1800°F – 2150°F |
| CC435 | Extreme high temperature applications with excellent oxidation and carburization resistance |
| CC535 | Similar to CC435; but without Cobalt. |
| CC1735 | High creep strength and oxidation resistance in application temperatures of 2100°F – 2400°F. |