

We claim:

1. A chromium-bearing, cobalt-based alloys amenable to wrought processing with improved resistance to both chloride-induced crevice corrosion and galling, comprising:

up to 3.545 wt.% nickel;
0.242 to 0.298 wt.% nitrogen;
22.0 to 30.0 wt.% chromium;
3.0 to 10 wt.% molybdenum;
up to 5.0 wt.% tungsten;
up to 7 wt.% iron;
0.05 to 2.0 wt.% manganese;
0.05 to 2.0 wt.% silicon;
0.02 to 0.11 wt.% carbon;
0.005 to 0.205 wt.% aluminum; and
cobalt plus impurities as the balance.

2. The chromium-bearing, cobalt-based alloy of claim 1 comprising:

1.07 to 3.17 wt.% nickel;
27.96 to 28.12 wt.% chromium;
4.90 to 6.84 wt.% molybdenum;
2.04 to 2.26 wt.% tungsten;
2.71 to 2.92 wt.% iron;
0.77 to 0.90 wt.% manganese;
0.24 to 0.29 wt.% silicon;
0.058 to 0.067 wt.% carbon;

0.262 to 0.278 wt.% nitrogen;
0.08 to 0.13 wt.% aluminum; and
cobalt plus impurities as the balance.

3. The chromium-bearing, cobalt-based alloy of claim 1 comprising:

0.695 to 3.545 wt.% nickel;
26.46 to 29.62 wt.% chromium;
4.40 to 7.34 wt.% molybdenum;
1.54 to 2.76 wt.% tungsten;
1.71 to 3.92 wt.% iron;
0.52 to 1.15 wt.% manganese;
0.04 to 0.49 wt.% silicon;
0.038 to 0.087 carbon;
0.242 to 0.298 wt.% nitrogen;
0.005 to 0.205 wt.% aluminum; and
cobalt plus impurities as the balance.

4. The chromium-bearing, cobalt-based alloy of claim 1 comprising:

up to 3.545 wt.% nickel;
0.242 to 0.298 wt.% nitrogen;
24.0 to 27.0 wt.% chromium;
4.5 to 5.5 wt.% molybdenum;
1.5 to 2.50 wt.% tungsten;
2.0 to 4.0 wt.% iron;

0.5 to 1.0 wt.% manganese;
0.30 to 0.50 wt.% silicon;
0.04 to 0.08 wt.% carbon;
0.005 to 0.205 wt.% aluminum; and
cobalt plus impurities as the balance.

5. The chromium-bearing, cobalt-based alloy of claim 1 wherein the alloy is in a form selected from the group consisting of wrought products, castings, weldments, and powder products.