

Alloy 20 Advantages

- Alloy 20 is specifically designed to withstand environments containing sulfuric acid. Nickel, chromium, molybdenum and copper all help to provide excellent general corrosion resistance.
- Restricted carbon levels in addition to columbium stabilization allow for Alloy 20 to be used in corrosive environments, normally without post-weld heat treatments.
- In applications with sulfuric acid and elevated chloride levels Alloy 20 may not be the best option for service due to lower molybdenum contents.

Nominal Chemical Composition, %

	Cr	Ni	Mo	Si	Fe	Cu	Cb	Mn	C	N	PRE _N *
Alloy 20 UNS N08020	20	33	2.2	0.4	40	3.3	0.5	0.4	0.02	–	27.76
904L UNS N08904	21	25	4.5	0.5	45	1.6	–	1.7	0.01	–	35.85
AL-6XN® UNS N08367	20.5	24.5	6.3	0.4	48	0.3	–	0.3	0.02	0.22	44.81

*PRE_N = CR + 3.3Mo + 16N

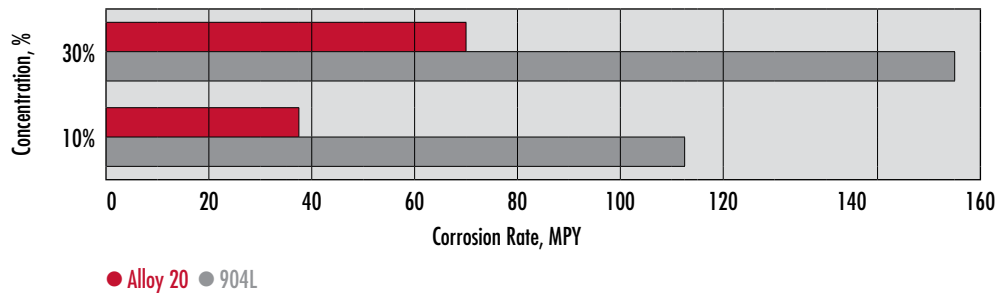
Cost Ratio

	PMP	CMP
316	1.00	0.65
Alloy 20	4.00	4.05
904L	2.35	2.50
AL-6XN®	3.10	3.00

ASME Design Stresses Section II, Part D

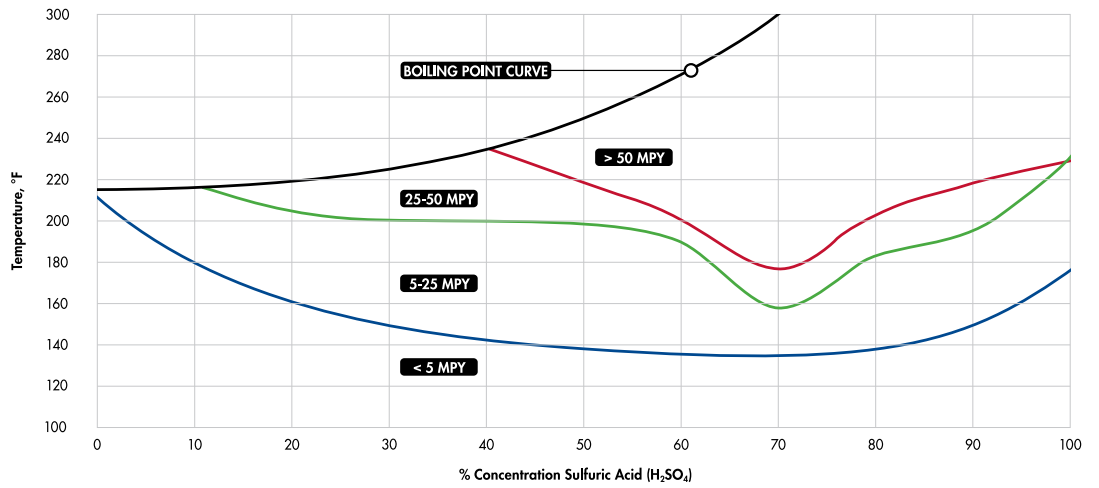
	100	200	300	400	500	600	700	800
Alloy 20	22.9	20.6	19.7	18.9	18.2	17.7	17.4	16.8
904L	20.3	16.7	15.1	13.8	12.7	11.9	11.4	–
AL-6XN®	27.1	26.2	23.8	21.9	20.5	19.4	18.6	18

Corrosion in Sulfuric Acid +10,000 ppm chlorides @ 80°C



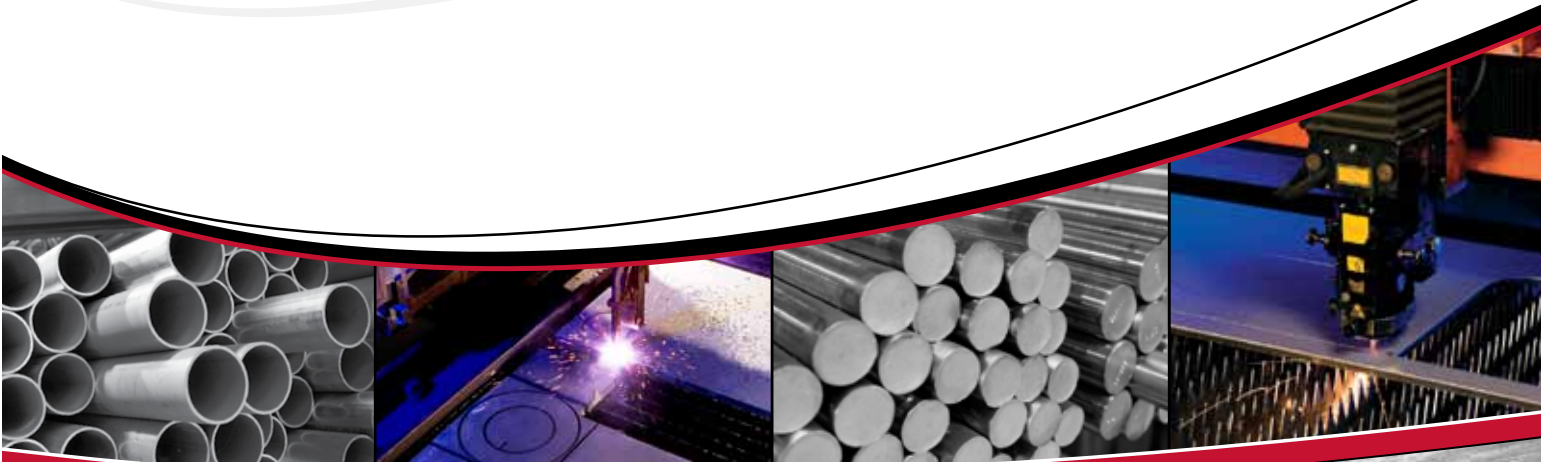
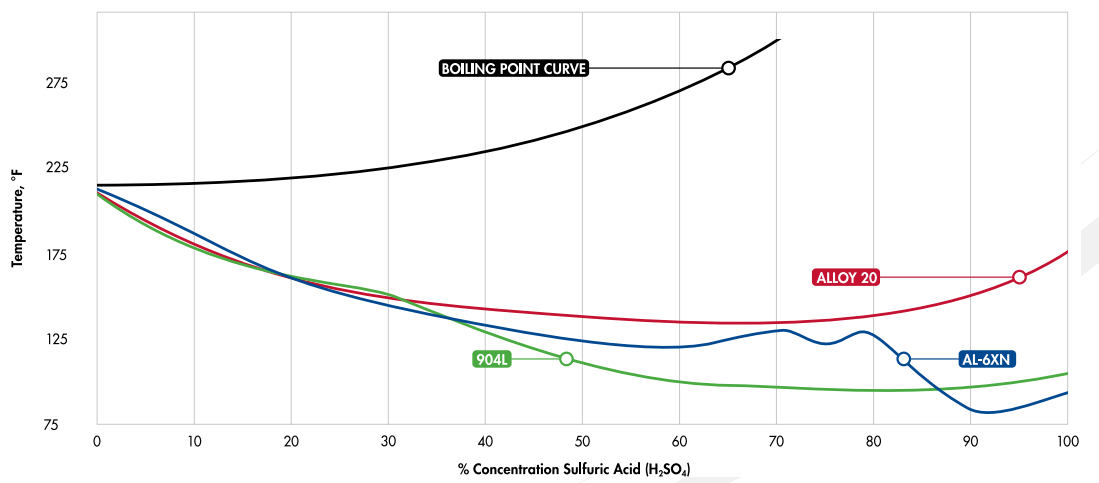
Alloy 20 Iso-Corrosion

Sulfuric Acid



Iso-Corrosion

Sulfuric Acid (< 5 MPY)



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