# HUISHIH FORGING \_\_\_

## AL-6XN

AL-6XN (UNS N08367/F62) is a super-austenitic stainless steel containing chromium, molybdenum and nitrogen, which exhibits far greater resistance to chloride pitting, crevice corrosion and stress-corrosion cracking than standard 300 series stainless steels due to its high chromium, molybdenum, and nitrogen level, and is less costly than the traditional nickel-base corrosion resistant alloys. It is suitable for service temperatures up to approx. 425°C. It is listed in NACE MR 0175 for sour service and has gained ASME Approval for Pressure Vessel applications.

### **Chemical Composition**, %

element	Fe	Cr	Ni	Мо	Mn	Cu	Ν	С	Si	Р	S
min.	bal.	20.00	23.50	6.00			0.18				
max.		22.00	25.50	7.00	2.00	0.75	0.25	0.030	1.00	0.040	0.030

Chemical Composition according to ASTM. Some compositional limits of other specifications may vary slightly.

#### **Designation and standards**

National	Material	Chemical	Familiana	Rod and	Plate and	Chuin	Seamless
Standards	designation	composition	Forgings	bar	sheet	Strip	tube
ASTM	UNS N08367 F62	A959 SA959 MR0175	A182	A479			A269
			SA182	SA479	A240	A240	SA269
			B462	A194	SA240	SA240	A312
ASIVIE			SB462	SA194	B688	B688	SA312
NACE			B564	B691	SB688	SB688	B690
			SB564	B691			SB690

#### **Density** 8.06g/cm<sup>3</sup>

#### **Corrosion resistance**

- excellent resistance to pitting and crevice corrosion in halide media
- high resistance to chloride-ion stress-corrosion cracking
- excellent resistance to a wide range of chemical media, even at higher temperatures and concentrations, incl.

sulpuric acid, wet-process phosphoric acid, sour gas, seawater, salts and organic acids

#### **Applications**

Typical applications are:

- air pollution control such as coal-fired power plant FGD systems
- chemical processing equipment
- food and beverage process equipment
- coal mining wastewater brine treatment
- offshore oil and gas production such as seawater filtration, heat exchangers, piping systems
- petroleum refining
- Power Generation such as condensers, pumps, feed-water heaters, piping systems
- desalination systems in seawater Treatment
- chlorine dioxide bleaching plants in pulp and paper industry

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