

## AL-6XN® Alloy Pipe Provides Fourteen Years of Excellent Reverse Osmosis Seawater Desalination Service



### Specifications

**UNS:** N08367 **ASTM:** B 688, A 240, B 675, A 312, B 676, A 249, B 804, B 691, A 479, B 462, A 182, B 564, B 366, B 472  
**ASME:** SB-688, SA-240, SB-675, SA-312, SB-276, SA-249, SB-691, SA-479, SB-462, SA-182, SB-564, SB-366 Code Case N-438-3, B-31.1 Case 155-1

### Chemical Composition, %

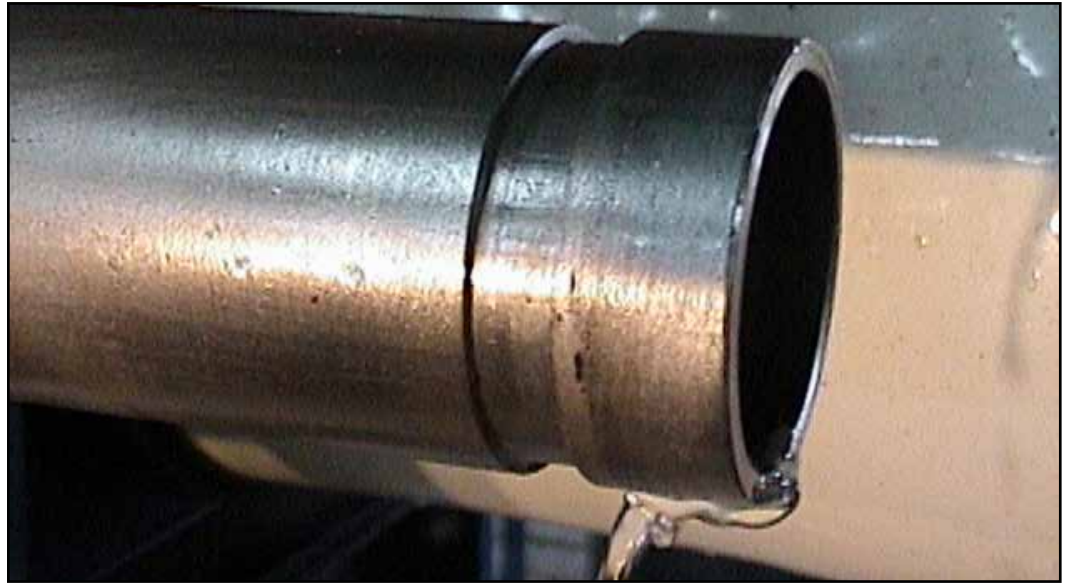
	Ni	Cr	Mo	Mn	Cu	Si	C	N	S	P	Fe
MIN	23.5	20.0	6.0	—	—	—	—	0.18	—	—	—
MAX	25.5	22.0	7.0	2.0	0.75	1.0	0.03	0.25	0.03	0.04	balance

### Case History

The Dunes Hotel & Beach Resort, on the Island of Margarita, Venezuela, gets potable water from the Caribbean Sea through its own desalination plant. The first of their two 75,000 gallon per day seawater reverse osmosis systems was put into continuous service at The Dunes in October 1993 and was joined by a matching unit in December of 1997. These units are equipped with AL-6XN alloy piping and have been in continuous service since start-up.

After sixteen years of operation, the AL-6XN alloy is still reported to be in excellent condition. At this location, this 6% molybdenum super-austenitic alloy, is used in a variety of applications including the high pressure feed piping system, as well as the concentrate discharge piping and discharge ports.

Rigby's RO Services of Caracas, Venezuela has been contracted to administer the operation and maintain the Dunes desalination plant. For over twenty years Rigby's has specialized in reverse osmosis in seawater and brackish service, providing installation, start-up and repair services. Intake seawater contains 21,000 ppm chlorides, with 38,026 ppm total dissolved solids, making for severe operating conditions.

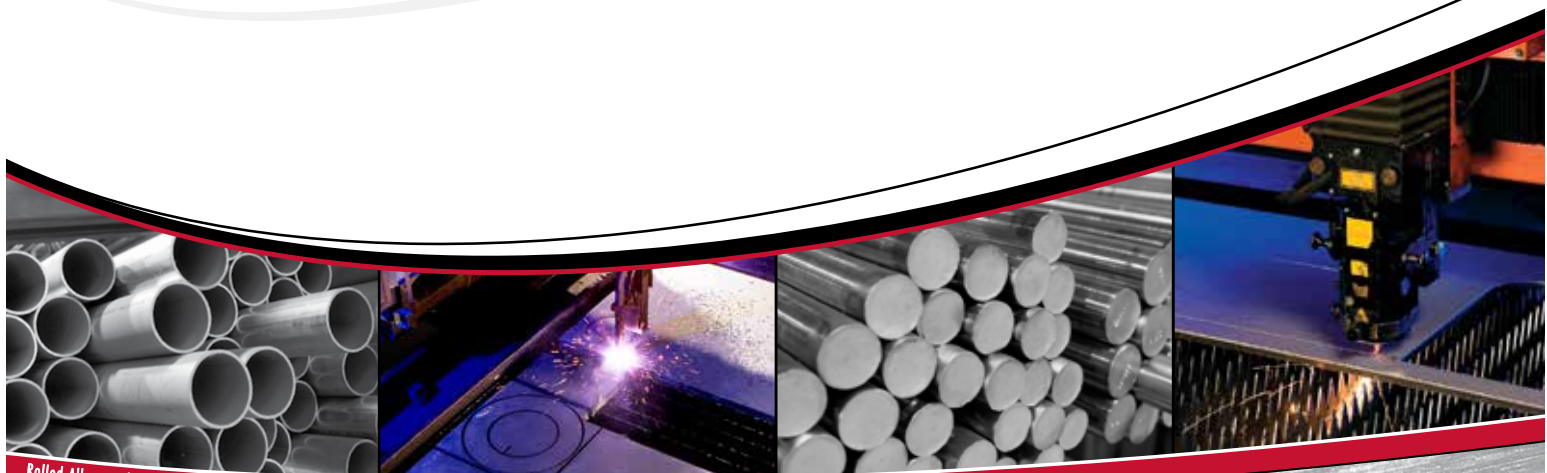


### Case History, Continued

Orville Rigby has been instrumental in replacing inferior materials with AL-6XN alloy at several locations, and has plans for further use of the alloy both here and at other plant sites they service.

Orville reports minimal problems with AL-6XN alloy and says, "You have an excellent product there, that is well worth the cost. It truly pays for itself by drastically reducing costly repairs and even more costly downtime. There is good reason that AL-6XN alloy is the preferred alloy by many companies that own and operate seawater RO's."

AL-6XN alloy was developed for seawater service and was an improvement over its predecessor, AL-6X alloy that first went into seawater service in the early 1970's. The nitrogen containing AL-6XN alloy has been widely used in a variety of piping and heat transfer applications since the mid 1980's. AL-6XN alloy is supplied by Rolled Alloys® and is available as plate, sheet, bar, pipe and fittings.



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