

AL-6XN® Fractional-Distillation Columns Still Producing After 20 and 24 Years



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

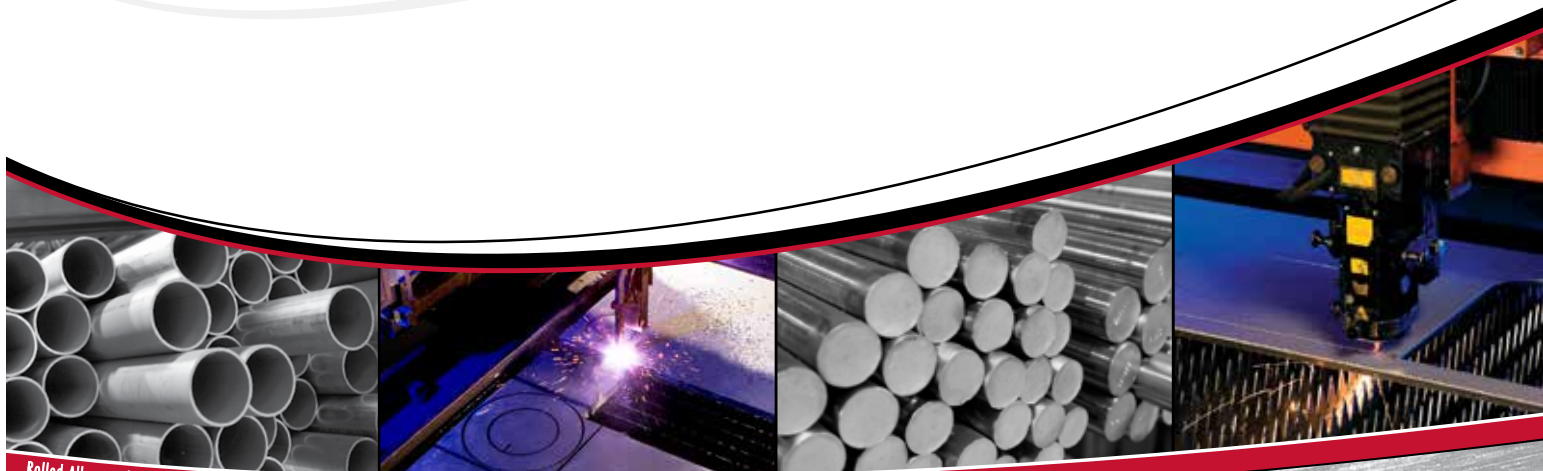
One of the nation's leading forest products companies, installed two AL-6XN alloy fractional-distillation columns for separating tall oil at their Georgia facility. Tall oil is a by-product in the papermaking process. Measuring approximately 14 feet in diameter and 60 feet tall, the columns, heat exchangers, packing, reboiler, piping, vapor lines, jacket piping and pumps, were all constructed out of AL-6XN material. Both columns have been corrosion free during their operation.

The columns follow the Swiss design, introduced in the late sixties. However, the unit is a modified system that utilizes both packing and trays. Using DOWTHERM as the sole heating medium, nearly all the heat is recovered by the exchangers producing all the steam needed in the process. The system also increased yield, improves quality, and reduces pollution problems.



Case History, Continued

Because of AL-6XN, two additional weeks of production have been gained each year through decreased maintenance and inspection requirements. Previously, a similar tower made of a 316L stainless would routinely be taken out of service for repairs two weeks out of every six months, and after three years noticeable corrosion was found. By comparison, the tower is now taken out of production for only two weeks every twelve months. The column is packed with 0.005" AL-6XN alloy packing which was supplied by Koch-Glitsch. Fabrication of the column was done by Allied Industries of Houston, Texas, with the exchangers supplied by Manning and Lewis of Union, New Jersey.



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