



Thermal Processing

STRESS RELIEVING

Stress Relieving diminishes the residual stress in steel caused by working the material (i.e. flame cutting, forming, rolling, casting, machining, welding, bending, straightening). This is accomplished by reheating the steel then cooling it at a slower rate.

- Stress relieving can be performed before grinding on parts that require light machining
- Often used on weldments



Our furnaces are 96" wide x 144" long x 54" high

NORMALIZING

Normalizing is accomplished by heating the metal above the transformation temperature, then cooling it in still or slightly agitated air. Benefits include:

- Refines/reduces the grain size of steels that have been subjected to high temperatures
- Prepares steel for heavy machining
- When machined, provides a better surface finish



These furnaces have a weight capacity of 30,000 lbs.

ANNEALING

Annealing is accomplished by heating the metal just below the transformation temperature, then cooling in a controlled cycle which limits the cooling rate and brings the temperature down slowly. Benefits include:

- Softens metal
- Changes mechanical/electrical properties
- Aids in dimensional stability
- Greatly improves forming and bending



Order flame cut pieces to your specifications, annealed and ready to ship to your location.

CAPABILITIES

Thermal Process	Temperature	Length of Program	Minimum Hole Size	Max Plate Capacity	Approved Materials
Annealing	1400°F (max)	23 hours	n/a	96" x 144"	Carbon / Alloys Only
Normalizing	1650°F (max)	9 hours	n/a	96" x 144"	Carbon / Alloys Only
Stress Relieving	1300°F (max)	9 hours	n/a	96" x 144"	Carbon / Alloys Only

This chart is a guideline only. For more specific information please contact your Alro representative.



Alro Steel

Metals • Industrial Supplies • Plastics

SINCE
1948

Integrity. Loyalty. Honesty. These principals have guided Alro Steel since our founding in 1948 by brothers, Al and Robert Glick. From a small garage in Jackson, Michigan, Alro Steel has grown to over 70 locations in 13 states. Alro distributes metals, industrial supplies and plastics. A wide variety of processing services are available including cut-to-size metals and plastics with next day delivery to over 50,000 customers in North America. Focused on exceeding our customers' expectations, we build relationships with all our customers, large and small.

METALS & SHAPES

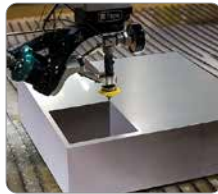
	Bar	Pipe & Tube	Plate & Sheet	Structural	Grating & Exp. Metal
Alloy	●	●	●		
Aluminum	●	●	●	●	●
Brass	●		●		
Bronze	●	●			
Carbon Steel	●	●	●	●	●
Cast Iron	●	●			
Copper	●	●	●		
Stainless Steel	●	●	●	●	●
Tool Steel	●		●		



METALS PROCESSING



Precision Plate and Structural Saw Cutting



Waterjet Cutting



Oxy-Fuel Cutting



Plasma Cutting



Plate Laser Cutting



6-Axis Laser Cutting



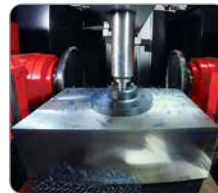
Shearing



Press Brake Bending & Forming



Tube Cutting and Chamfering



Precision Milling and Squaring



Plate Grinding



Thermal Processing

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