

## FOUNDRY OVERVIEW

### Sand Casting

- \* The goal of the foundry at Geronimo is to produce 100% defect free castings to be machined.
- \* Our patterns are designed to produce a casting that has no defects and is designed to machine in the most economical manner.
- \* Geronimo designs and builds our own patterns and core boxes to be poured in stainless steel, nickel, and cobalt based alloys.
- \* One of the advantages of solid models is that the cores can be fitted in the mold and checked for metal flow.
- \* The patterns are used to make sand and shell molds and cores.
- \* The ability to make shell cores allows tighter tolerances and better surface finishes on the interior products such as valves.



Pattern/Mold

### Centrifugal Casting

- \* Water-Cooled Horizontal Centrifugal Casting Machine.
- \* Centrifugal Casting up to 32" OD.
- \* Centrifugal Casting up to 48" Length

### Pouring

- \* The foundry has the ability to pour up to a 1300 lb. pour which would produce a casting of 455 lbs. with a 35% yield.
- \* This amount is available because we have two power supplies and can melt the 1,000 lb. furnace and the 250 lb. furnace at the same time.
- \* Normal operation gives us a choice of melting in a 250 lb., 750 lb., or 1,000 lb. furnace. We can do the equivalent of 10, 1000 lb. heats per 10 hour shift for a total of 10,000 lbs. per day.



Sand Cast Pouring

### Heat Treating, Quenching, Cutting, Sandblasting

- \* We have 4 heat treat ovens that are more than adequate for the pouring capacity, along with our induction heat capabilities.
- \* Quenching is done in a 6' x 6' x 4' tank where the liquid is bubble aerated with compressed air to dissipate heat.
- \* We can water quench 1,000 lbs. per hour and "polymer" quench 300 lbs./hour.
- \* Use of Odysseus saw allows a 20" cut up to a 32" OD w/7" wall or 14" round bar.
- \* 12' x 10' x 8' Sandblasting booth.

***The Highest Quality Delivered On-Time, Every Time!***



Centrifugal Casting



Sand cast molds



Cupolas



Pouring alloy



Raw bars



Centrifugal Cast