

Foundry

Capabilities

- Traditional wood patterns are used when the part size or the order quantity exceeds our 3D printer capabilities. We use solidification software to optimize the design of gates and risers before pattern development.
- Our experienced molders and core makers assemble sand molds prior to the pouring process.
- All pours begin with certified ingot and we pour a wide range of ferrous metals. Included in our pouring capabilities are exotic alloys such as Hastelloy and Inconel metallurgies. We supply all materials to ASTM specifications with supplemental specifications as required.
- All heats are certified to governing specifications through analysis on our Angstrom 32 channel spectrometer.

- Heat treating is performed in-house using PLCs to control our furnaces ramp, soak and cooling cycles.

Customer Benefits

- Quality control “in-house” from mold production to pouring and to heat-treating.
- Flexible and responsive to customer’s static casting requirements.

Equipment Utilized

- Four (4) electric induction furnaces.
- Angstrom model 950—Arc-spark PMT based 32 channel spectrometer.
- Two gas and two electric heat-treat ovens controlled by a Honeywell processor.



Foundry Equipment

1		Air-Set Molding System
2	1000 lb.	Induction Furnaces
2	500 lb.	Induction Furnaces
1	4' x 4'	Annealing Oven-Electric
1	2000 lb.	Goff Automatic Spin Blaster
2		Centrifugal Casting Machines
1		Miller Arc-Air Machine
1		Lincoln Ideal-Arc Welder
1		Angstrom V-950 Spectrometer
1	200 lb.	Induction Furnace
1	28" x 21"	Annealing Oven-Electric
2	3' x 2-1/2'	Heat-Treat Ovens – Electric
1	5' x 56"	Heat-Treat Oven – Gas (82" deep)
1	5' x 4'	Heat-Treat Oven – Gas (84" deep)

(See back page for metallurgy and castings information.)

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Static and Centrifugal Casting Metallurgies

304 Stainless Steel	CA6NM Stainless Steel
309 Stainless Steel	17-4-PH Stainless Steel
310 Stainless Steel	CD4MCU Stainless Steel
316 Stainless Steel	CN7M Stainless Steel
316L Stainless Steel	Hastelloy B
317 Stainless Steel	Hastelloy C
317L Stainless Steel	Hastelloy G
329 Stainless Steel	Monel 400
410 Stainless Steel	Navy M Bronze
416 Stainless Steel	WCB (cast steel)
420 Stainless Steel	Cast Iron
440 Stainless Steel	28% Chrome Iron

Centrifugal Castings

The Sturm foundry offers a wide variety of centrifugal castings in several alloys. All 300 series and 400 series alloys are available as centrifugal cast products. Other alloys are available upon request. Listed below are the centrifugal casting dimensional specifications.¹

Casting OD	Casting Length	Maximum Wall
5-1/8	32-1/2	1
5-5/8	30-11/16	1-1/4
6-5/16	32-1/4	1-1/2
6-7/8	35	1-3/4
7-7/16	40	2
7-13/16	32-1/2	2-1/2
8	29	2-1/2
8-3/8	31-5/8	2-1/4
9-1/8	40-3/8	2
9-5/8	34	1-3/4
10-5/16	40-1/2	2
11	28	2-1/2
12-5/8	23-5/8	2
13-1/4	23-5/8	2
13-5/8	30-1/2	2
14-1/2	28-7/8	2
15-1/4	31	2

Notes: 1—The casting dimensions shown are rough dimensions. For finished dimensions, subtract 0.50" from the OD and add 0.50" to the ID.

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