



HAHN & CLAY



Hahn and Clay serves many industries as a single source supplier for pressure vessels and other custom fabricated products with markets in the petro-chemical, military, subsea, and marine industries. Hahn and Clay has the ability to provide fabricated products of varying sizes, weights and materials.

Pressure Vessels • Tray Towers • Columns • Reactors • Hydrotreaters • Multi-layer Vessels
Vessel Closures • Custom Fabrication • Heat Exchangers

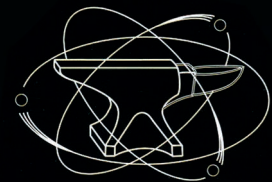
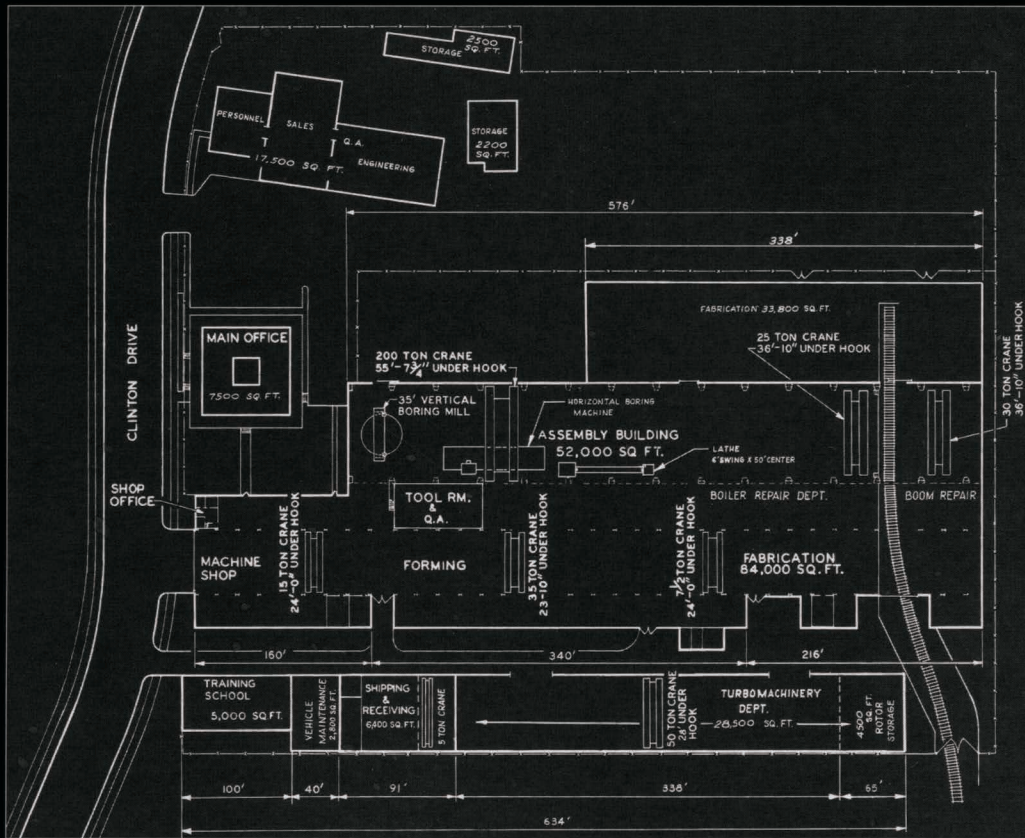
Capacity: Maximum Diameter 35'-6" • Maximum Length 200'
Maximum Weight 800,000 Pounds

Qualifications

- ASME Section VIII Division 1 – “U” Stamp
- ASME Section VIII Division 2 – “U2” Stamp
- ASME Section I “S” Stamp
- National Board Inspection Code – “R” Stamp

Materials

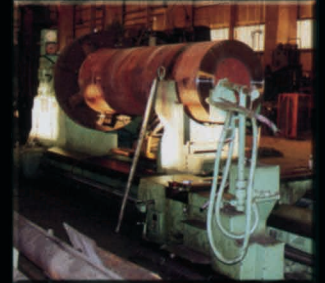
- Carbon Steel
- Chrome Moly
- Hastelloy
- Nickel
- Solid Wall and Layered Construction
- Stainless Steel
- Special Alloys including Monel
- Inconel
- Clad and Lined Construction



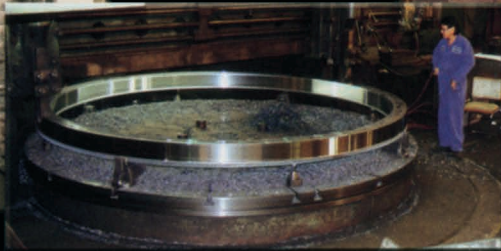
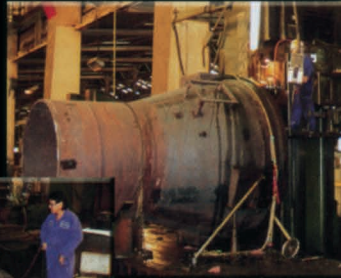
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HAHN & CLAY



Hahn and Clay is a major machine shop with over 75 years of experience in manufacturing quality parts and repair work for a variety of industries including construction, forging manufactures, forestry, mining, marine, oilfield, petro-chemical industries and plastic injection.

We produce superior quality parts to customers specifications in short lead time by using skilled workforce and our production area that is 220,000 square feet under roof with machinery capabilities to handle up to 35' - 6" diameter, 125' length and 800,000 lb. weight.

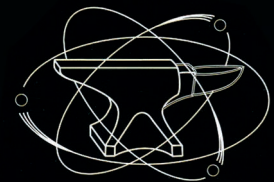
Hahn & Clay offers one of the largest machine shops in the United States and is an asset to the service it gives to the Gulf Coast area. The mobility of field service and support from a major fabrication department gives the customer an advantage to accomplish the most difficult projects in the right time frame under one roof.

Major Machinery

| <u>Description</u> | <u>Qty</u> | <u>Largest</u> |
|------------------------|------------|---|
| Vertical Boring Mill | 8 | 200 ton – 35' - 6" diameter swing x 20' rail height |
| Horizontal Boring Mill | 6 | 8" spindle, 12' vertical movement, 30' table travel, 20' between head and tailstock |
| Draw Bar Shaper | 3 | 10" square bar with live spindle |
| Precision Roll Grinder | 1 | 3' diameter x 20' long, 15 ton capacity |
| Planer | 1 | 5' height x 20' stroke |
| Lathe | 9 | 50' cenetr to center maximum, 102" diameter swing maximum |
| Drills | 4 | 8' arm maximum (radial arm, horizontal, magnetic and portable) |
| CNC Mill | 2 | 18" maximum height 30" length x 15" wide |

Capabilities

- Remove broken bolts or studs of any size
- Bore out and hone holes
- Machine weld preps
- Specialized pipe cutting and end prepping
- Flange facing and seat facing up to 35'
- Machine "O" Ring groove in any type of flange face
- Line Boring
- Machine various types of valve seats (examples: stainless, carbon steel, stellite, etc.)
- Machine journals and thrust collars on fans, turbine rotors and motors
- Repair threads on valves
- Mill any horizontal joints or motor base pads
- Mobilize milling machines, lathes, and surface grinder to machine or grind various types of turbine keys, shims, packing, etc.

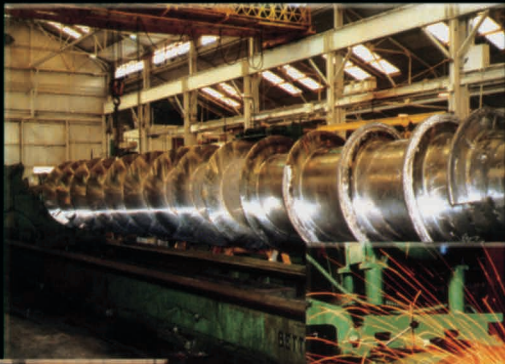
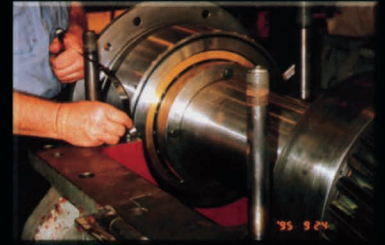
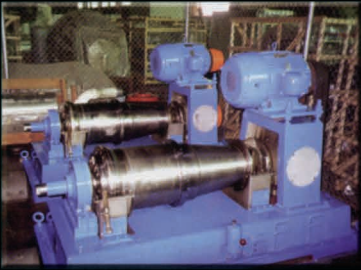


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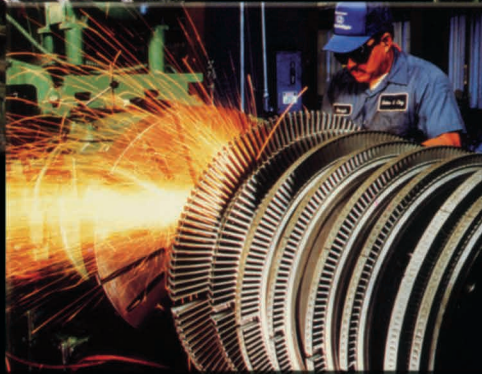
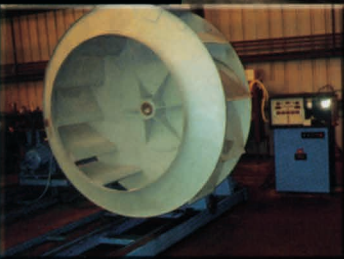
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Rotating Equipment



HAHN & CLAY



Hahn and Clay has served the industrial southwest since 1908 providing its customers with the finest in craftsmanship and service. Hahn & Clay's Rotating Equipment Division provides repairs, rebuilt and service to all types of rotating equipment onsite or in our plant. Our production area is 220,000 square feet under one roof with capabilities to handle up to 35'-6" diameter, 125' length and 800,000 lb weight.

Installation Maintenance • Shop & Field Balancing • Vibration Analysis
Alignment Machining (Boring, Facing, Grinding, Honing, Milling, Turning, Slotting and Welding)
Turnkey Overhauls • Engineering • Rotor Storage
Technical Consulting • Field Supervision

Repair Services

Pumps

- Vertical
- Horizontal Split Case
- Positive Displacement
- ANSI and Mag Drive

Steam Turbines

- Elliot, Murry, Terry
- Worthington, Westinghouse
- Coppus, GE, Demag-Delaval

Gear Boxes & Reducers

- Philadelphia, Falk, Flender
- Werner-Pfleiderer, Renke
- Lufkin, Baker Perkins
- JSW, Marley, Lighting

Centrifuges

- Bird, Sharples, Alfa Laval
- Krauss Maffei, Deleval
- Dorr Oliver, Flottweg

Compressors

- Elliot, Carrier, Clark, Sulzer
- Demag Delaval, Worthington
- Ingersol-Rand, Cooper

Extruders

- Baker Perkins, JSW, Farrel
- Werner Pfeiderer, Kobe
- Battenfield, Welding Engineer

Blowers & Fans

- Spencer, Buffalo, Skinner
- Dresser Roots, Sutorbuilt
- Robinson, Hoffman

Mixers

- Philadelphia, Lighting, Farrel
- JSW, Chimaneer, Stewart Bowling

Dryers

- Gala, Bepex, Krauss Maffei
- Luwa, Gatx, Sandvic

Services & Capabilities

Inspection

Visual, dye penetrant, magnetic particle, radiographic or ultrasonic.

Cleaning

Abrasive, water blast, steam, wire brush and grinding.

Reblading

Reclaiming by straightening and hand dressing or replacing.

Journals

Repairing by machining, grinding, sleeving, chrome plating, metallizing or shaft replacement.

Precision Grinding

Rotors up to 17' lengths with 53" O.D.

Dynamic Balancing

Service equipment up to 110" diameter, 35' of length and 20,000 pounds in weight. Portable balancing and vibration analysis for field work.

Shaft Straightening

2,500-ton capacity presses, cold peening and spot heating.

Rotor Storage

Environmentally controlled storage area for components and equipment.

Turnkey Overhaul

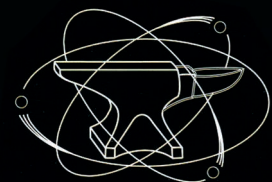
Hahn & Clay can respond to any schedule, 24 hours a day, 7 days a week. Whether it's a large or small overhaul, Hahn & Clay will have you operational with a minimum down time.

Installation

Hahn & Clay has the experience to install new equipment as well as refurbished. We have completed several installations from simple pump to extruder line.

Alignments

Hahn & Clay has the experience to undergo critical alignments on turbines, compressors and gearboxes, using reverse indicator or laser alignment.



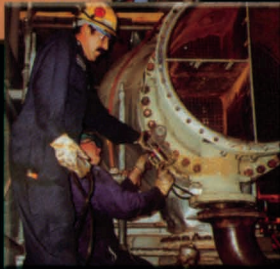
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Hahn and Clay serves many industries as a single-source supplier for plant maintenance and turnaround services. Hahn & Clay has provided a reliable, and trained, work force of Machinests, Fitters, Welders, Boiler-Makers and Millrights for the past 50 years. Hahn & Clay provides these services 24 hours a day, 7 days a week.

Field Machining • Vessel • Exchanger • Boiler • Tank Repair and Construction
Hydraulic Torquing • Tensioning • Rotating Equipment Repair

Services

Turnaround Services

Prime contractor for providing turnkey turnaround services, planning, estimating and execution. Providing a reliable, trained work force to assist in turnarounds.

Field Machining

Includes flange facing, pipe cutting, weld prep, line boring, drilling/tapping, journal turning, key way cutting, milling, grinding, lapping and honing.

Vessel Repair

ASME Section VIII Division I & II code repairs.

Vessel Construction

Field erected tanks, columns and towers.

Boiler Repair

ASME code repair, retubes, plugs and refractory repair.

Heat Exchanger

Air coolers, shell & tube and plate, extracting, retubes and shell repairs.

Valve Repair

Valve re-conditioning and complete overhaul to as-new condition.

Hydraulic Tensioning and Torquing

Precision bolting service and/or rental equipment.

Pipe Fabrication

Shop pre-fabricated pipe spools and field erected spools.

Field Machinery

Type

Milling Machine

Cut-off Beveling Machine

Flange Facing Machine

Magnetic Drill

Keyway Cutter

Journal Machining Set-up

Boring Bar

End Preparation Machine

Air Compressors

Portable Welding Equipment

Portable Generators

Portable Shop & Tool Trailers

Maximum

32" x 72"

60" diameter

125" diameter

4" diameter

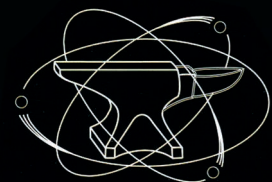
3 1/2" width

7" – 11" O.D. shafts

8" diameter x 35' long

10" diameter

10' x 10' x 40'



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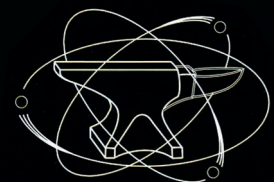


Hahn & Clay Pipeline Services

At Hahn & Clay Pipeline Services we cater to the customer's needs. We can offer the customer a vast array of maintenance and new construction packages that fit the customer's budget.

Services Offered by Hahn & Clay Pipeline Services:

- New pipeline construction
- New well-tie construction
- Compressor station installation
- Complete compressor and pump repair field shop
- Tank battery installation
- Complete cathodic protection services
- Maintenance on existing piping
- Respond to one calls
- Pigging
- Hydrotest
- GPS plotting
- Erosion prevention
- Dig inspections
- Field and shop sandblasting and painting



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