



COMPANY INFORMATION

Founded in 1996, Orbital Tool Technologies (OTT) Company was founded on the principal of being customer driven, as their slogan states our business revolves around you. The company started with an upper level of managers and owners that have over 100 years of combined on site field machining background in all heavy industry.

OTT is a single source supplier of quality on-site services designed to efficiently modify and/or restore damaged equipment. They maintain a highly advanced equipment inventory, which enables them to address virtually every on-site machining need regardless of industry. All field service processes are accomplished by highly skilled individuals thoroughly trained in their specific service capabilities. All service processes are verified utilizing state-of-the-art calibration measuring and testing equipment. OTT can provide the following services: on-site machining services i.e. journal and shaft restoration without shaft rotation, boring bar machining, milling, inside and outside diameter honing, tapping and threading up to 10", flange facing, stud removal conventional and MDM for the hardest materials, welding, and providing all types of machining services on steam turbines and steam turbine high pressure valves.

OTT main focal point was shaft and journal restoration without shaft rotation, the company has grown to a complete on-site and off-site field Service Company providing all types and aspects of machining services and repair of steam turbines and steam turbines high pressure valves. The company has set many new standards for what their customers have grown to expect not only from OTT but their competition as well. They have set the stage for quick response time and timely completion of emergent work and scheduled outage repairs.

OTT provides their customers with a single source solution for all steam turbine high pressure valves including the disassembly, inspection, reassembly, and upgrades for all types of GE and Westinghouse valves. They can also provide on-site services of valve chest repairs and upgrades along with providing their customers with one single report of all sizes and dimensions for the entire repair or upgrade project.

OTT currently has over 75,000 sq. ft. of shops with over 50 tons of crane capacity with up to 50' horizontal mills and 70" swing lathes, and all of the latest CNC machining centers and lathes for the manufactured of parts for your existing valve bonnet repairs or upgrade along with the newly manufactured parts.

Over the past three years OTT has been in the R&D of new upgraded materials for valve internals to prolong life expectancy. They currently have these materials in valves all over the USA in the test phases, many of these valves will be coming out in the Spring and Fall of 2009 for first time inspections, their expectations are: no blue blush, no scale, and no valve sticking caused by scale.

With this type of upgrade their customers will no longer have the need to perform valve inspections every 10-18 months, and have to replace the stems that would normally erode due to steam cutting in high temperature and high pressure areas of the valves.

OTT parts include but not limited to: Allis-Chalmers, GE and Westinghouse turbine studs, cap screws and all styles of nuts and washers, Allis-Chalmers, GE and Westinghouse turbine valve internals: Stems, discs, bushings, crossheads, pins, balance chambers, and all types of movable satellite inlayed seats. Additionally, OTT provides satellite inlayed bushings for all types of steam valves when Inco 901 steams are used.

OTT stocks the following materials: 410, 422 stainless steel, most 300 series stainless steel, 1 ¼ chrome & 2 ¼ chrome forgings, and 9 chrome forgings for Westinghouse inlet sleeves, B16, Inco 718 and 901, all common bronze, aluminum bronze, aluminum all grades including heat treated. All materials are made in USA with certificate of origin and material composition. All certificates are current not dated back to 2000 or earlier.

OTT maintains over \$750,000.00 of materials on hand and over \$2,000,000.00 off-site, available for customer emergency orders.

Industries Served: Power Generation (fossil, hydro, nuclear), Pulp & Paper, Marine (Commercial & Military), Mining, Processing Plants, Chemical & Petrol-Chemical, Scrap, Cement, Steel & Aluminum, Manufacturing, Government Installations, and Industrial Service Group



OUR BUSINESS REVOLVES AROUND YOU

WHY TRUST OTT?

OTT houses the industry's most experienced and innovative Research & Development, Manufacturing, and Services Teams. The OTT Service Team is staffed with dedicated and experienced field technicians with many years of specialized field service training. Their commitment to quality and job site professionalism has been the focus of many client testimonials and the key to our repeat business.

TOTAL SERVICE CAPABILITY- GUARANTEED

We are the world's only company that specializes in stationary shaft and journal machining. Standard OTT services include advanced in-house and on-site welding and machining, optical and laser alignment, reverse engineering, and turbine part replacement. Most importantly, we never leave the worksite until you are completely satisfied.

THE DOWNTIME REDUCTION SPECIALISTS

Because we recognize the staggering costs associated with equipment failure and delayed production, we are dedicated to eliminating unnecessary downtime-in the front end with our rapid response emergency service teams and in the back end with a quality of service that will ensure longevity of the repair. Our trucks and manpower stand ready 24-hours a day, 7-days a week, 365-days a year. Some of today's most advanced field service technicians and field service equipment is mobilized from our site in Belvidere, Illinois, you'll get the manpower and equipment you need to do the job right, the first time. We can also supply a complete portable machine shop to assist in site support services. When compared to conventional service companies, the OTT Service Team is able to complete the most jobs in a fraction of the time and often at significantly lower costs. When it comes to emergency response, nobody gets there faster than Orbital Tool Technologies.

AT ORBITAL TOOL TECHNOLOGIES WE

- Operate in strict accordance with ISO 9002 guidelines and MIL-I-45208-A specifications
- Uphold working alliances with world-class Service and OEM leaders
- Use only the most advanced CAD/CAM design software
- Rigorously test all customer equipment prior to shipment
- Maintain a late-model truck fleet with the most up to date portable equipment inventory
- Follow an extensive in-house Fitness for Duty regimen to ensure a drug free staff and environment



SERVICES AND CAPABILITIES

Shaft Repairs

- Tooling, Grinding and Polishing of Journals, Collector Rings, Thrust Faces, Hydrogen Seals. (Applicable to Turbines, Generators, Motors, Pumps, Drive Shafts, Propulsion Shafts, FD & ID Fan Shafts)
- Welding & Reconditioning of Damaged or Worn Shafts
- Reverse Engineering of Old Shafts and manufacturing of New Replacement Shafts and Components

Boring Bar Machining

- Line Boring All types
- Turbine Casings and Inner Cylinders, Nozzle blocks, Bearing Seats (Including Spherical Seats)
- Turbine Valves all Types and Sizes (Seat Breach Areas, Valve Bodies, Seats, etc.)
- Manways, Equipment Stands/Frames
- Upper, Intermediate, & Lower Seal and Wear Ring/Surfaces
- Gate Valve Sealing Faces, Wicket Gate Bores, and Discharge & Throat Rings
- Pump and compressor Housings & Cylinders, Gearboxes of All Types (including Multiple Bore Alignments)
- Stern Tubes and Rudder & Propulsion Shaft Bushing Bores & Bushings
- Coupling Bolts of All Kinds (Straight or Tapered)
- Counter Boring and Spot-Facing to Virtually Any Size

Milling

- Machining of Support Ledges for Generator Spider Assembly (Hydro Power Units)
- Machining of Platens, Die Blocks, Hammers, Anvils, Rails, etc.
- Horizontal Joint Milling for Turbines, Pumps, etc.
- Machining Foundations for Engines, Pumps, Generators, Compressors, Motors, Winches, etc.
- Sole Plate and Motor Base Machining & T-Slot and Keyway Cutting

O.D. & I.D. Honing

- Honing in Virtually All Positions
- O.D. Honing of Shafting and Bearing Journals
- I.D. Honing to Virtually Any Size and Depth
- Grinding, Honing and Lapping

Tapping & Threading

- Tapping to 10"
- O.D. & I.D. Single Point Threading

Flange Facing (Round, Square, Elliptical)

- Turbine Casings, Pressure Vessels, Heat Exchangers, Process Reactors etc.
- Coupling Flanges & Rabbit Fit Areas
- Hand Holes, Manway Flanges, Access Doors, Valve Sealing Surfaces,
- Heat Exchanger Faces, Mud Drums, etc.

Shop Capabilities

- Turning, milling, Drilling, Grinding, Lapping, Boring, Facing, Tapping, and Threading
- Large Turning Capabilities to 55" Diameters
- Large Milling Capabilities to 38' Horizontally and 10' Vertically
- Complete CNC Capabilities
- Reverse Engineering and Manufacturing Services
- Turbine Replacement Parts
- 50-Ton Overhead Crane Capacity



SERVICES AND CAPABILITIES (continued)

Stud Extraction

- MDM extraction, Mechanical and Machining Extraction
- Stud Hole Modifications/Restorations
- Applicable to all Power Plant Studs

Welding

- Manual, Semi-Automatic, Automatic, and Remote
- Automatic TIG & MIG Processes

Valve Repairs

- Complete Valve Repair and Modification
- Turbine & Valve Replacement Parts
- Stellite & Restellite Weld Repairs
- Large Steam Throttle Valve Gaskets, Seat Modifications & Restorations
- Bonnet Stud Hole Restoration