



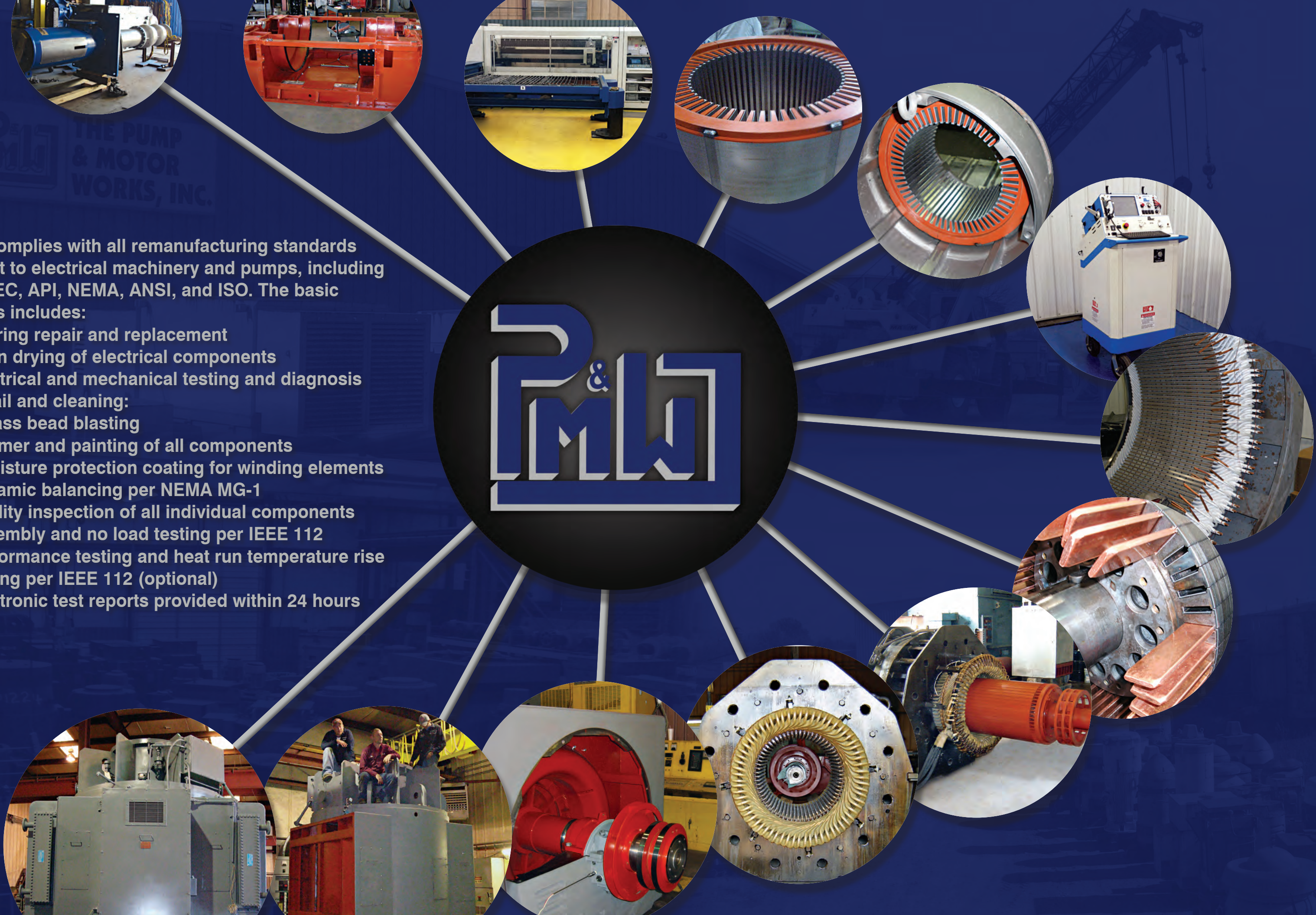
***Your One Stop Shop
For Industrial Equipment***

**The Pump &
Motor Works, Inc.**
1900 N. Wood Drive
Okmulgee, OK 74447
(918) 752-0309

THE PUMP
& MOTOR
WORKS, INC.

PMW complies with all remanufacturing standards relevant to electrical machinery and pumps, including IEEE, IEC, API, NEMA, ANSI, and ISO. The basic process includes:

- Bearing repair and replacement
- Oven drying of electrical components
- Electrical and mechanical testing and diagnosis
- Detail and cleaning:
 - Glass bead blasting
 - Primer and painting of all components
 - Moisture protection coating for winding elements
- Dynamic balancing per NEMA MG-1
- Quality inspection of all individual components
- Assembly and no load testing per IEEE 112
- Performance testing and heat run temperature rise testing per IEEE 112 (optional)
- Electronic test reports provided within 24 hours



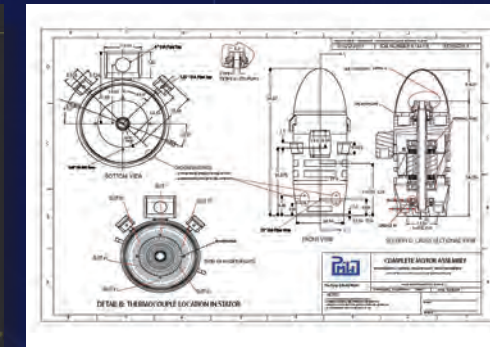
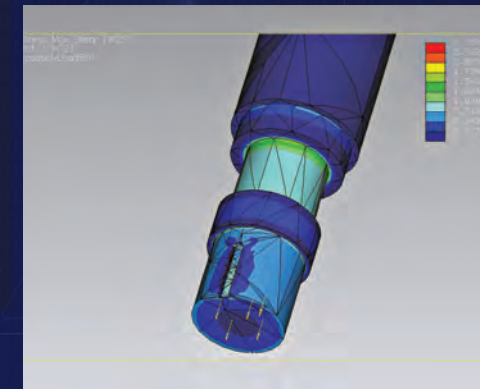
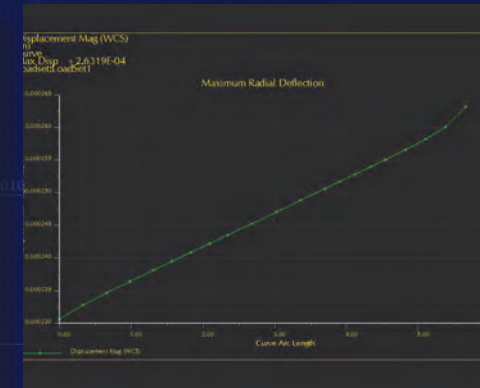
Incorporated in 1991, The Pump & Motor Works has since evolved from a small office-based business into a complete manufacturing facility. PMW is strategically located in Mid America, just 30 miles south of Tulsa, Oklahoma, making it convenient to serve all four corners of the continental United States. The headquarters consists of a 60,000 square foot facility, complete with high capacity overhead cranes, manufacturing equipment, and enough space to store over 1.5 million horsepower in new, used, and obsolete electrical equipment, and thousands of new and used vertical and horizontal industrial pumps.



At PMW, the customer's production is our top priority. The impact that a breakdown can have on a business can be very costly, which is why PMW has invested so much capital into its machinery. Our crew of experienced machinists run a machine shop consisting of multiple high capacity manual horizontal lathes, vertical turret lathes, horizontal boring mills, drill presses, and more. PMW has a full fabrication department, with skilled welders who can manufacture and repair end bells, shafts, bonnets, pump impellers, pump cases, and a multitude of other machine components. Our Trumatic 2530 Plus Laser CNC Machine amplifies these capabilities by allowing us to manufacture new rotor and stator cores for electrical equipment in-house. With these capabilities, PMW has control over its entire production process - yielding a much faster turn around when compared to the competition. This assures that customers are up and running in hours and days, as opposed to weeks and months. The PMW crew is available 24 hours a day, 7 days a week.

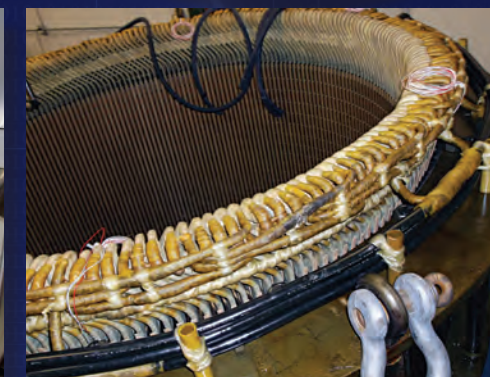


Obsolete Westinghouse 509P frame with brand new internal components, custom designed to extend motor life.



PMW caters to customer specifications. The goal is to provide the easiest transition from one motor to the next. Design changes can be costly and time consuming, making it desirable to change as little to the overall system as possible. PMW has the technology to eliminate or limit the need for system design changes.

In order to build strong business relationships with our customers, PMW looks beyond the product and focuses on the application. The ability to customize, reverse engineer, and redesign machinery to suit a specific application is what makes a difference. Our skilled engineers have the ability to modify the design of a given piece of equipment in such a way that it will improve overall performance - therefore saving the customer money. In many cases the application is designed around the driver, resulting in the driver not always being able to perform at its design point. By reverse engineering the application and determining the required output parameters, PMW engineers are able to guarantee the customer is getting the most out of their machine. This powerful resource, combined with a large inventory of diverse industrial equipment, gives PMW the cutting edge over the competition.

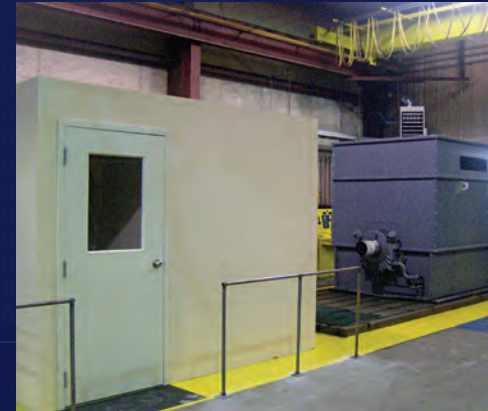
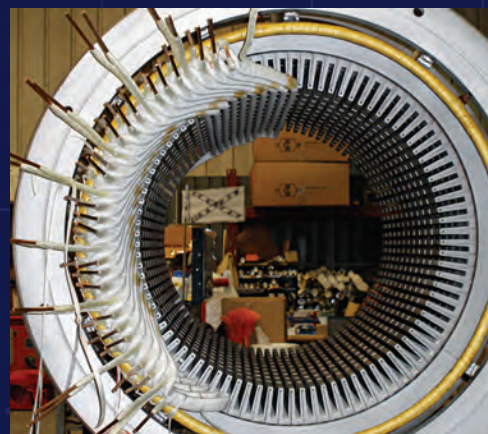




At PMW, the critical nature of electrical components is never taken lightly. Bare stators are cleaned excessively post burnout, and inspected for foreign materials prior to core testing. New coils are kept in a clean, climate-controlled room, where they are to be inserted into the bare core and connected afterwards.



Once the connection is complete, windings are tested and subjected to a vacuum pressure impregnation system cycle. The resin used is a high dielectric strength polyester blend suitable for Class H temperature ratings. All insulating materials must be tested for compatibility and approved by the engineering department prior to use. Stators with old windings are never placed inside the VPI tank, as this could cause resin contamination. The resin is tested after every cycle for proper concentration and viscosity. Our goal is to create the best possible environment that is conducive to quality output.



All machines purchased under PMW warranty are subject to a battery of tests, from the moment of disassembly to the point of shipment. There are several options, aside from standard offline and online, uncoupled tests. Service and quality are key features that gain a customer's trust, which is why all PMW products are scrutinized by our in-house quality assurance program. PMW's procedures, forms, and quality manual are available by request.

Offline Electrical Testing

- Insulation Resistance and Polarization Index
- Rotor Integrity via Thermal Analysis
- Stator Core Loss and Integrity per IEEE 432
- Surge Comparison and D.C. High Potential
- Winding Resistance Verification
- Post VPI Resin Penetration Verification
- Submergence Test per NEMA MG-1 By Request

Mechanical Checks

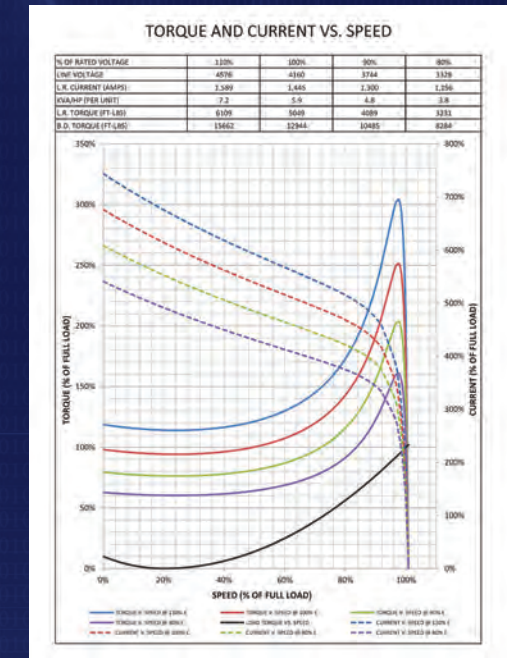
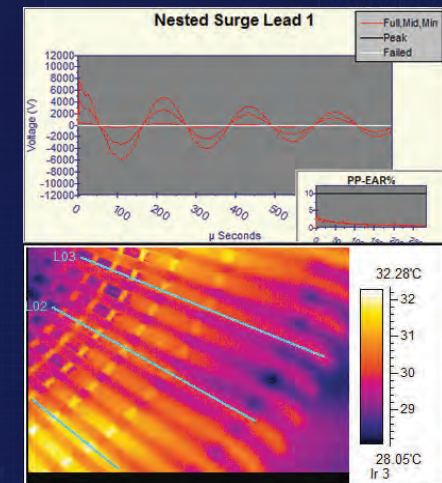
- Total Indicated Run Outs (Rotor, Bearings, Shaft, End bells, Mechanical Fits and Faces)
- Frame Perpendicularity
- Overall Concentricity
- Static and Dynamic Balancing per NEMA
- Bearing Clearances
- Air-gap Clearances and Alignment
- Magnetic Center Alignment
- Proper Bearing Pre-Loading
- Proper Dimensional Finish and Tolerances

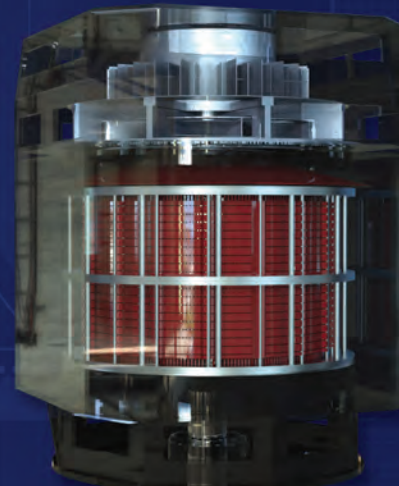
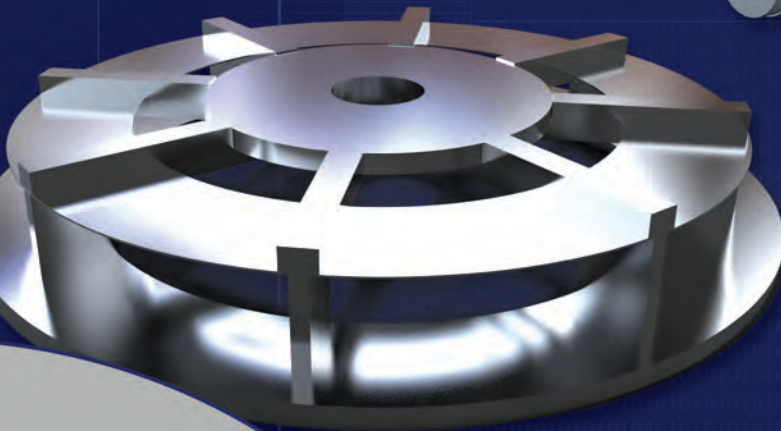
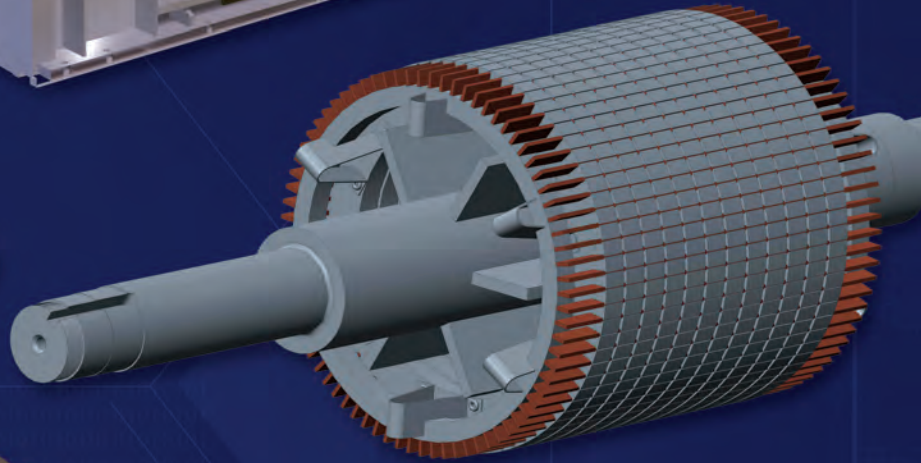
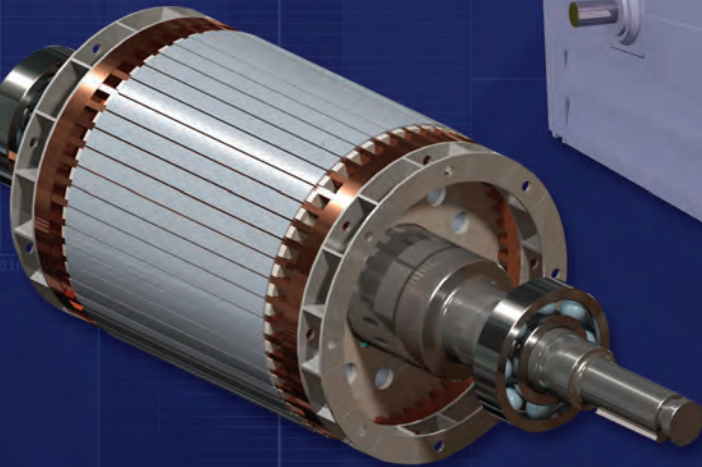
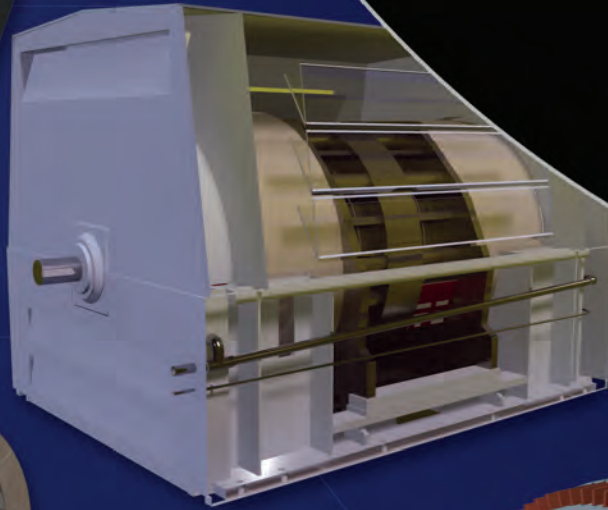
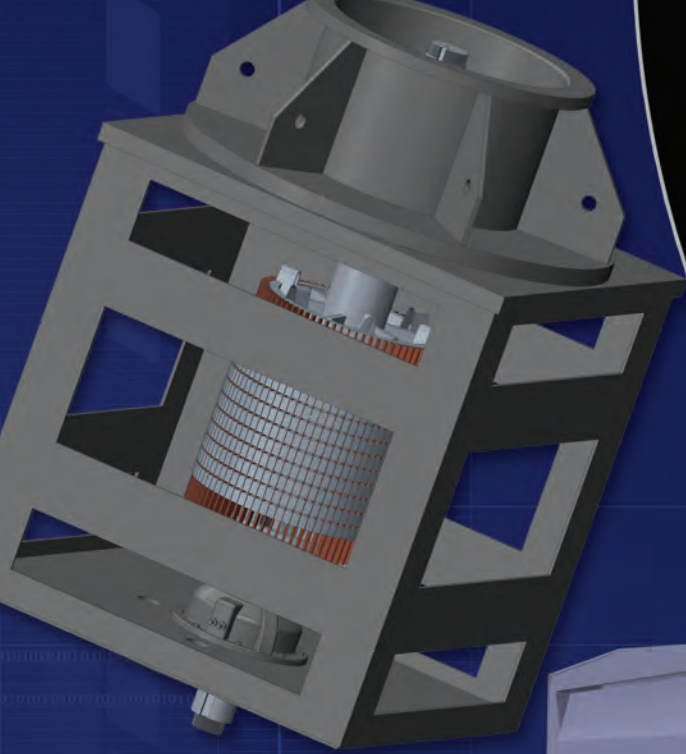
In-House Quality Program

- Complies with IEEE, NEMA, ISO, API, and EPRI
- Procedures, Forms and Q.A. Manual Available By Request

Final Testing

- Unloaded Peak Vibration Readings
- Unloaded Bearing Temperature Stabilization
- Unloaded Winding Temperature Stabilization
- Sound Measurement per NEMA MG-1
- Rate of Air Flow for Open Machines
- Segregation of Losses
- Impedance Performance Testing per IEEE 112
- Coast Down, Critical Speed and Natural Frequency





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