Extending Turbomachinery Equipment Life with One-Source Service

For nearly 70 years, HFW Industries has been **a trusted partner to the power generation industry**, offering full-service capabilities in manufacturing and repair. **From turbine shafts and rotors to seal housings, bearing housings, and turbocompressor components**, we apply deep technical knowledge, advanced coatings, and precision machining to extend equipment life and minimize downtime.

Turbomachinery Demands Precision—We Deliver It

Our customers operate in high-stakes environments—utilities, oil & gas, and industrial energy—where equipment reliability is non-negotiable. Whether you're working with turbocompressors, steam turbines, or balance pistons, **HFW delivers OEM-quality repairs and manufacturing that restore critical components to spec—or better**.

We routinely manufacture and restore:

- Turbine and turbocompressor shafts
- Rotor assemblies
- Shaft sleeves and seal housings
- Bearing housings and balance pistons
- Valve components, bushings, couplings, and gearbox bores

Some of these components are coated, others are not. Nevertheless, each undergoes thorough inspection and quality control at every step.

One Source for Thermal Spray, Machining, & Assembly

Our one-source service model sets us apart. We handle precision machining, thermal spray coatings, hardfacing, finishing, and final inspection under one roof. That means:

- Lower costs and fewer vendors
- Faster lead times
- Simplified procurement
- Consistent quality assurance

For example, if you're working with a turbine shaft:

- We can supply material, **machine the part complete, apply thermal spray coatings** (for wear, corrosion, or high-temp resistance), grind it to tolerance, and inspect it using electrical mechanical runout (EMRO) and TIR checks down to .0002".

If you're repairing a shaft or housing:

- We can **rebuild worn diameters, apply high velocity oxy-fuel (HVOF) coatings** (like tungsten carbide or chrome carbide), and return the part to OEM specifications—or better.

Thermal Spray Coatings for Turbomachinery

Thermal spray coatings are at the heart of our repair and wear-prevention strategy. We use HVOF, plasma spray, and hardfacing processes depending on application needs.

Here's how we typically choose a coating:

- **Tungsten Carbide** (HVOF) – best for wear protection in applications under 1000°F
- **Chrome Carbide** (HVOF) – used above 1000°F or when corrosion + wear resistance is critical
- Stainless steel or custom blends – used for buildup, dimension restoration, or when customer spec dictates

Each coating is selected to **extend surface life, improve resistance** to abrasion, erosion, and corrosion, and **reduce maintenance cycles**.

EMRO: Tight Tolerances, Precision Runout Control

Quality matters throughout the entire process, and especially at the final stages. HFW's climate-controlled inspection lab allows us to perform **EMRO (electrical runout) and mechanical runout inspections using laser technology**. Burnished probe areas ensure accurate measurement and balance in sensitive rotating components. This is essential for applications involving high-speed turbines and turbocompressors.

Trusted by Reliability Engineers and Plant Managers

HFW is proud to be **ISO 9001:2015 certified**, and every operation on a job is reviewed and signed off by our quality control inspectors. We recently added a **5-axis CNC mill**

and **a CNC cylindrical grinder**, enhancing our ability to meet today's precision manufacturing demands.

Our customers in the power generation and oil & gas sectors continue to choose HFW because we combine:

- Decades of turbomachinery experience
- Veteran machinists mentoring the next generation
- Deep process knowledge of coatings, machining, and inspection
- An uncompromising commitment to customer satisfaction

When reliability engineers think of HFW, they think of quality, precision, and accountability

Looking for a Partner in Turbomachinery Repair or Manufacturing?

Whether you're facing shaft wear, seal degradation, or housing failure, HFW Industries offers cost-effective, high-performance solutions that keep your turbomachinery running reliably. Call us today to speak with our sales team about thermal spray coating options, materials compatibility, or full assembly rebuilds.

We'll help you decide what's right—whether it's tungsten carbide HVOF coating, chrome carbide for high-temp resistance, or a complete shaft rebuild and EMRO inspection.

📞 Call us at (716) 875-3380
📧 Email: RFQ@hfwindustries.com

Want to explore more? **Start with these resources from our Knowledge Base:**

- Overview of Thermal Spray Coatings: HVOF & Tungsten Carbide — Why these materials are key to high-performance surface protection
- HVOF -- A Superior Alternative to Chrome — Why HVOF coatings often outperform chrome in durability, cost, and turnaround time
- How HFW Extends Equipment Life — Real-world example of innovation in action
- What is Electrical Mechanical Runout (EMRO)? — Learn how EMRO shaft inspection can help ensure operations run smoothly
- What are HFW's hardfacing capabilities? — Explore how HFW's hardfacing expertise restores industrial equipment with proven weld procedures and precision inspection