The most cost-effective way to meet the future demand for electric power is to maintain and renovate existing generating plants. Turbine Consultants, LLC is the recognized leader in maintaining and aligning critical components of steam turbines. Our technology has been applied on steam turbines in service since the 1930’s to present day installations of up to 1000 MW.

Our solutions are based on experience. Experience measured by engineering staff expertise and proven technology and a proven track record. Our solutions have eliminated steam turbine throat problems from cracked and distorted steam turbine casings, problems that had reduced steam turbine efficiency, time and time again. It has required both proven and innovative methods to deliver a solution. Our solutions are guaranteed. We can a problem by preventing it happening. Our technology has proven itself internationally for major utilities in over 85 different applications.

Turbine Consultants is committed to supplying innovative technology in a prudent and conservative way to meet the needs of our clients. We go beyond the capabilities of other vendors by providing guaranteed, proven solutions and engineering services in a timely and economical manner. We’re proud of our commitment and our ability to deliver in-depth experience and innovative technology for your turbine needs.

Our goal is to exceed your expectations.

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One Call   One Source   Powerful Solutions

One Call   One Source   Powerful Solutions

Casing Life & Stress Analysis
Proven, Innovative Solutions
Turnkey Casing Repair Services
Heatrate Improvement
Stress Monitoring Software

5405 North 118th Court
Milwaukee, Wisconsin 53225
Phone: 414-527-3100
Fax: 414-527-1067

STRESS-CALC™ AND SEAL-CALC™ ARE REGISTERED TRADEMARKS OF TURBINE CONSULTANTS, LLC
TURBINE CONSULTANTS AND LOGO ARE REGISTERED SERVICE MARKS OF TURBINE CONSULTANTS, LLC
Thorough Analysis

Innovative Solutions.

Turbine Consultants is unique in that we first evaluate the cause of failure, hostility of repair options and the remaining operating life at point turbine before we implement a repair. Each repair, whether it be in a shop or making various components, is based on an analysis of the problem.

If a repair is the most prudent solution, TC provides proprietary methods and paperwork repair service. All repair procedures for coated, internal or external blades, and steam path are written in accordance with ASME code and nontechnical guidelines as well as our own proven procedures.

The final result is a proven repair solution with design capabilities, the latest technology and engineering expertise to ensure long-term service. Depending on the problem, TC customers can expect 15-25 years of repair reliability. And, all of our repairs are warranted for a minimum of 1 year.

Repairs can be performed on site or in one of our mass production repair for typically 25% of replacement costs. For more details, call us today to receive a free price, tested warranty and the best repairs available... we keep serving you best.

On-Time Performance, On-Budget . . . Always.

At Turbine Consultants, we have the quality assurance in the choice of materials and repair for completed as time and within budget. That’s why all of our repair quotations are fixed... so you’re never faced with unexpected costs. Our computerized scheduling system is used on all repair projects to ensure that the job is done right and on time and within budget. That’s why all of our repair quotations are fixed... so you’re never faced with unexpected costs. Our computerized scheduling system is used on all repair projects to ensure that the job is done right and on time.

24 Hour Response To Emergency Problems.

Most turbine casing problems are unannounced and found during normal turbine overhauls. TC can respond immediately to your needs. Within 24 hours, we’ll be at your site to begin our analysis and recommendation process. We can perform a metallurgical analysis within 1-2 days to determine the cause of failure and extent of damage to the overall casing. 

Additionally, we utilize a finite element analysis computer modeling capability to optimize and verify all repairs and heat treatment procedures. This prevents costly cracking and unacceptable repair failures.

The software with on-going technical support to ensure that the job is done right and on time. And, workscopes are fixed... so you’re never faced with unexpected costs. Our on-site analysis and repairs be completed on site to begin our analysis and software development. During field repairs, we use an independent NDE company... in addition to our own staff... to ensure defect free welds.

TC provides unparalleled turbine support... from computer aided stress monitoring software and innovative solutions to complete turnkey repairs and operating software. We quickly keep experience and technology working together to serve you best.

Cost Effective, Innovative Solutions.
Only Turbine Consultants approach each turbine problem with a complete forensic program. We conduct an on-site analysis of the turbine condition and determine the problem before we implement an appropriate repair. We provide the highest level of technical support as an ongoing technical support to prevent problems from recurring.

Our in-house Finite Element Analysis (FEA) computer modeling meets all operating conditions. FEA calculates the effects of heat, pressure, mechanical forces and vibrations on components. These calculations provide temperatures, stress levels and movement of components that are used to solve the cause of failure, crack growth rates and the effects of design improvements.

Operating data, on-site inspections and NDE data are used as inputs into our FEA evaluation. To accurately model the components, the FEA performs vast amounts of numerical calculations. The thoroughness of our analysis ensures that each turbine problem is solved in the most cost-effective manner.

FEA is used to accurately model all operating conditions. FEA calculates the effects of heat, pressure, mechanical forces and vibrations on components. These calculations provide temperatures, stress levels and movement of components that are used to solve the cause of failure, crack growth rates and the effects of design improvements.

Operating data, on-site inspections and NDE data are used as inputs into our FEA evaluation. To accurately model the components, the FEA performs vast amounts of numerical calculations. The thoroughness of our analysis ensures that each turbine problem is solved in the most cost-effective manner.

Turbine Consultants is unique in that we first evaluate the cause of failure, feasibility of repair options and the remaining operating life at your turbine before we implement a repair. The vast majority of repairs, whether in the field or making various components, are based on an analysis of the problem.

If a repair is the most prudent solution, TC provides proprietary methods and turbine repair service. All repair procedures for cracked, distorted or eroded turbine casings and diaphragms are performed in accordance with ASME Boiler & Pressure Vessel guidelines as well as our own proprietary methods and turnkey repair service. All repair procedures for cracked, distorted or eroded turbine casings and diaphragms are performed in accordance with ASME Boiler & Pressure Vessel guidelines as well as our own proprietary methods and turnkey repair service.

The final result is a proven repair solution with design expertise, the latest technology and engineering expertise to ensure long-lasting service. Depending on the problem, TC customers can expect 15-25 years of repair reliability. All of our repairs are warranted for a minimum of 1 year.

Repairs can be performed on-site or one of our repair procedures for cracked, distorted or eroded turbine casings and diaphragms are performed in accordance with ASME Boiler & Pressure Vessel guidelines as well as our own proprietary methods and turnkey repair service. All repair procedures for cracked, distorted or eroded turbine casings and diaphragms are performed in accordance with ASME Boiler & Pressure Vessel guidelines as well as our own proprietary methods and turnkey repair service.

24 Hour Response

At Turbine Consultants, we know how important it is to have turbine repairs be completed on time and within budget. That's why all of our repair quotations are fixed... so you never face any unexpected costs. Our on-site analysis and repairs be completed on time and within budget. That's why all of our repair quotations are fixed... so you never face any unexpected costs.

Additionally, we utilize on-site Finite Element Analysis computer modeling capability to optimize and verify all repair and heat treatment procedures. This provides solid cracking and unacceptable cracking detection.

In order to maintain schedules and contain costs, Turbine Consultants utilizes strict quality control procedures during all repairs. In-house analysis and software development. During field repairs, we use an independent NDE continuously... in addition to our own staff... to ensure defect free units. Additionally, we utilize on-site Finite Element Analysis computer modeling capability to optimize and verify all repair and heat treatment procedures. This provides solid cracking and unacceptable cracking detection.

Most turbine casing problems are unexpected and found during normal turbine overhauls. TC can respond immediately to your needs. Why turbine casing problems are unexpected and found during normal turbine overhauls. TC can respond immediately to your needs. Why

Most turbine casing problems are unexpected and found during normal turbine overhauls. TC can respond immediately to your needs. Why turbine casing problems are unexpected and found during normal turbine overhauls. TC can respond immediately to your needs. Why turbine casing problems are unexpected and found during normal turbine overhauls. TC can respond immediately to your needs. Why
Only Turbine Consultants approaches each turbine problem with a complete turnkey service. We conduct an on-site analysis of the turbine condition and determine the problem before we implement any repair procedures. We provide a turnkey service with on-going technical support to prevent problems from reoccurring.

Our in-house Finite Element Analysis (FEA) computer modeling of all operating conditions calculates the effects of heat, pressure, mechanical forces and vibrations on components. These calculations provide accurate estimates of stress levels and movement of turbine casings. Our computer modeling can evaluate the effects of design changes. FEA also calculates the effects of heat, stress and vibration into a comprehensive report that details the turbine’s problem... and outlines practical solutions and future operating and maintenance recommendations. The thoroughness of our analysis ensures that each turbine problem is solved in the most cost-effective manner.

FEA evaluation. To accurately model the turbine parts, the FEA performs vast amounts of numerical calculations.

FEA is used on all repair projects to prevent damage to critical turbine components. SEAL-CALC™ is a software program that is customized by TC to perform an assessment such as your turbine. It evaluates the economic benefits of replacing spill strips, shaft packing and blade根转.

To Emergency Problems.

24 Hour Response

On-Budget . . . Always.

At Turbine Consultants, we know how important it is that turbine analysis and repairs be completed on time and within budget. That’s why all of our repair quotations and workscopes are fixed... so you’ll never face any unexpected costs. Additionally, we utilize our in-house Finite Element Analysis computer modeling capability to optimize and verify all repair and heat treatment procedures. This prevents costly cracking and unacceptable operating defects.

Our in-house Independent Non-Destructive Evaluation (NDE) team is used on all repair projects to prevent damage to critical turbine components. Every repair is inspected and verified using top-of-the-line NDE techniques.

On-Time Performance.

On-Going Quality Control,

Efficiency Improvement.

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Our solutions are based on experience. Experience measured by engineering staff expertise, proprietary technology, and proven solutions over the years. Helical problems have caused unbalanced vibrations, problems that had reduced steam cycle efficiency and thermal efficiency. Time and time again, TC has responded with proven and economical methods to determine... Why a turbine failed? What are the repair options? And... How can a problem be prevented from happening? Our technology has proven itself internationally for major utilities... in over 85 different applications.

Turbine Consultants is committed to supplying innovative technology in a prudent and conservative way to meet the needs of our clients. We provide guaranteed, proven solutions and engineering services in a timely and economical manner. We are proud of our commitment and our ability to deliver in-depth experience and innovative technology for your turbine needs.

Our goal is to serve you best.
The most cost-effective way to meet the future demand for electric power is to maintain and renovate existing generating plants. Turbine Consultants, LLC is the recognized leader in maintaining and aligning critical components of steam turbines. Our technology has been applied on steam turbines in service since the 1930’s to improve the efficiency, life and time to repair. We have extensive experience in developing and implementing methods to diagnose and repair cracked and distorted components. We respond to your problem in one day with a written recommendation. You name the problem, we will name the solution. Our technology has proven itself internationally for major utilities in over 85 different applications.

Turbine Consultants is committed to supplying innovative technology at a price and performance level that would be envy of our competitors. We go beyond the capabilities of other vendors by providing guaranteed, proven solutions and engineering services in a timely and economical manner. We’re proud of our commitment and our ability to deliver in-depth experience and innovative technology for your turbine needs.

Our goal is to serve you best.