

## Your Service Partner for Inspection and Analysis



# Optimize Systems and Processes

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*Sulzer is a global partner with reliable and sustainable solutions for your key applications. We offer repair and maintenance services for your pumps, turbines, compressors, generators, and motors from one access point. Operating one of the largest service networks in the industry, Sulzer is close to you with more than 100 service locations and more than 3,600 employees around the world. We focus on lifetime extension and performance improvements of your rotating equipment.*

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Problems with rotating machinery can be caused by a wide range of conditions, or combinations of factors, many of which are not related to the equipment. This can make it difficult to isolate the root cause.

Sulzer is your ideal partner to identify and repair the cause of a poorly performing pump system.

Our inspection and analysis process typically begins with a thorough study of the complete installation shaft line, from motor and turbine, through hydraulic-coupling and gearbox, to pump, and more. We also review existing instrumentation schematics to assess their suitability for the inspection process and ongoing monitoring of the installation.

During a site inspection, we:

- Confirm pump duty during normal operation and under process upset conditions (e.g., flow, head, speed, balance line flows)
- Record vibration parameters (absolute and relative figures)
- Collect data during the start up and run down phases
- Measure temperature (bearings, cooling systems, seal flushes, etc.)
- Check mechanical seals for leaks
- Review operation of minimum flow valve or other control device
- Check for other external leaks or abnormal noises



## Analysis and recommendations

After site inspection Sulzer engineers analyze all the data and prepare a detailed report comparing the current hydraulic and mechanical pump performance to original test of expected performance. Where applicable, we will also estimate of balance system wear. Our complete report to customers provides recommendations for changes to:

- General operation (e.g., temperature limits)
- Existing maintenance regimes
- System or process
- Spare parts holding
- Pump modifications, as appropriate

In most cases, our inspection and analysis process can be completed with no interruption to your routine operations. By following up on proposed action, you can achieve the following long term benefits:

- Extended pump operating time between scheduled maintenance periods
- Optimized systems and processes
- Enhanced spare parts stocking
- Upgraded pump technology and materials
- Direct and indirect cost savings

Your local Sulzer representative can provide further information on our inspection and analysis services.



[www.sulzer.com](http://www.sulzer.com)



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