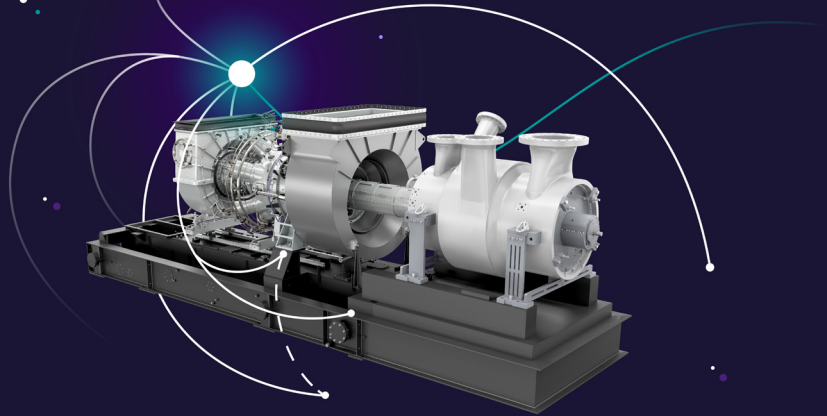


Remote Diagnostic Service for turbo compressors



siemens-energy.com

Background

Siemens Energy offers its Remote Diagnostic Service (RDS) to satisfy the increasing requirements placed on turbo compressors by various industries and applications.

We collect the operating parameters of your equipment and have them evaluated by our expert engineering team using modern, custom-tailored diagnostic methods. Based on the results, we offer recommendations and advise you on optimizing equipment operation, preventing operational disturbances and unplanned outages, and performing preventive maintenance.

Operation and procedures

To ensure maximum protection from unauthorized access, your equipment's operating data isn't read out directly from the I&C system; instead, it's made available at a standardized interface (OPC UA server) for access by a data collector.

The Siemens Energy myConnect data collector accesses this interface as a client. myConnect satisfies the highest international cybersecurity standards, including IEC62443 and ISO27001. The data collected is saved by myConnect and transferred at regular intervals to the Siemens Energy database (STA-RMS; see Figure 1).

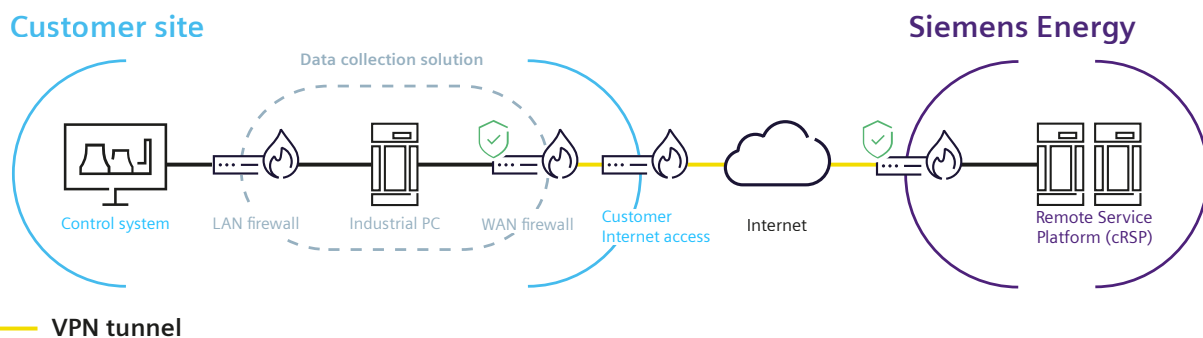


Figure 1: Secure data transfer

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The data is evaluated by specialist diagnostics engineers once a day during business hours. In the event of unusual incidents like a compressor trip, data is immediately transmitted to the Siemens Energy database to enable our engineering teams to provide fast and expert assistance in rectifying any problems. You'll be notified as quickly as possible of relevant or critical observations. Our engineering teams consult with and support you to prevent or correct problems impacting your operation. You receive a periodic summary of all observations in a clearly designed report and can access data and insights through a secure web portal and mobile application.

Diagnostics

Siemens Energy has developed a number of algorithms that optimally evaluate the wide range of turbo compressor configurations, from single shaft to integrally geared compressors and from centrifugal to axial flow compressors. These algorithms are calibrated for each unit by experienced engineers using reference data to provide you with precise and customized analyses and prognoses. Comparisons with calibrated reference data enable any deviation in the operating performance of your machine to be detected quickly and reliably. The comprehensive analysis takes into account both the operating reliability and safety of the machine: for example economic considerations like performance, efficiency, and more (see Figure 3) as well as vibration, gas pressure, and temperature (see Figure 4). Ask for our sample reports, or make an appointment for a demonstration and consulting on your specific solution.

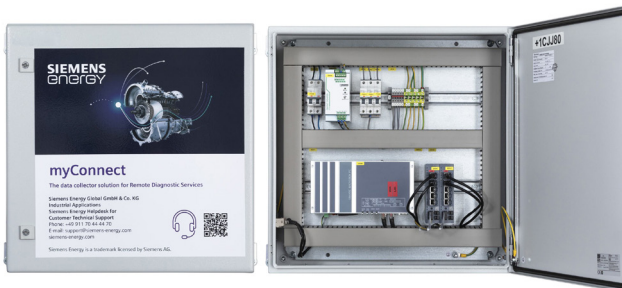


Figure 2: myConnect data collector

myConnect data collector

myConnect meets the highest cybersecurity standards to protect your valuable data and equipment from malicious cyber attacks. It's typically supplied in a control cabinet separate from the I&C cabinet (see Figure 2). With a correctly configured OPC UA server, installation can be performed with the system in operation so as not to disturb or interrupt your ongoing operating processes. We're happy to provide other installation options on request. We also offer a variety of options for encrypted data transmission via the common Remote Service Platform (cRSP). Ask for our Cybersecurity brochure.

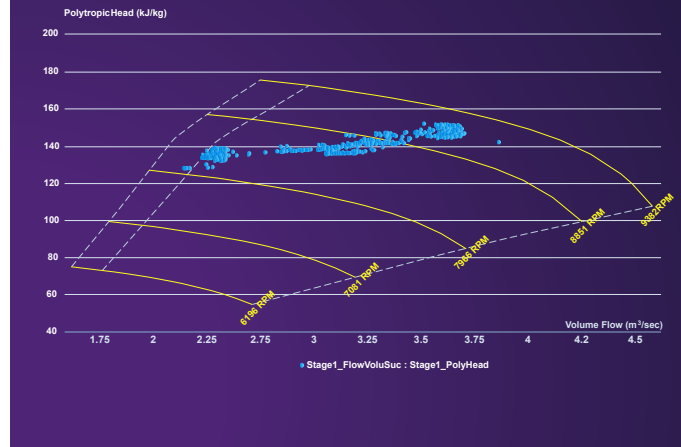


Figure 3: Compressor performance monitoring

Your benefits

- Compressor performance monitoring and improvement
- Increasing equipment availability thanks to continuous monitoring by experienced engineering teams
- Fewer unplanned outages and better recommendations for preventive maintenance
- Access to 24/7 Operational Service Desk (OSD) for an immediate response on technical issues

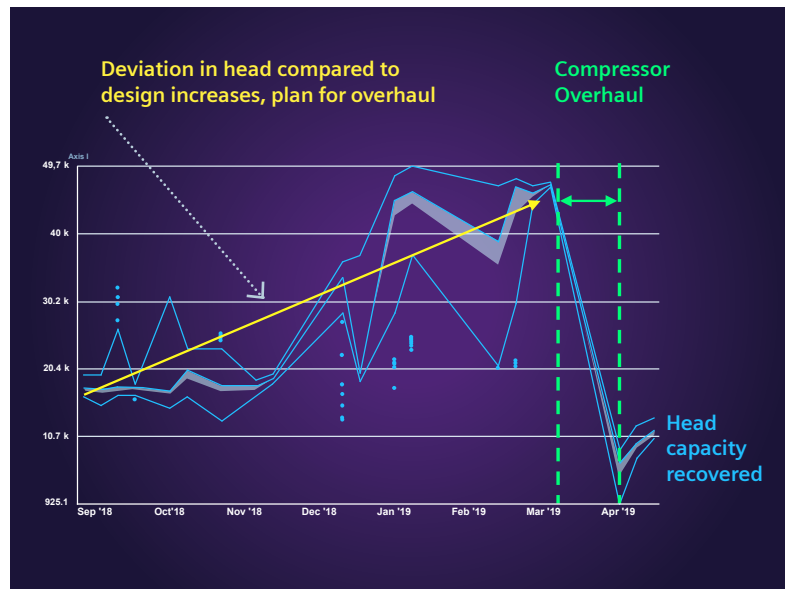


Figure 4: Detecting compressor deterioration



More information

For more technical information on RDS, please scan the QR code.

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