OncQue™

OncQue Corporation

Intelligent Vibration | Locking Force

Monitoring Solutions

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Do you encounter the same issues in your manufacturing process?

Limitations of Traditional Methods

Traditional locking force and vibration monitoring rely on manual experience, lacking real-time monitoring and alert capabilities.

Lack of data integration and analysis.

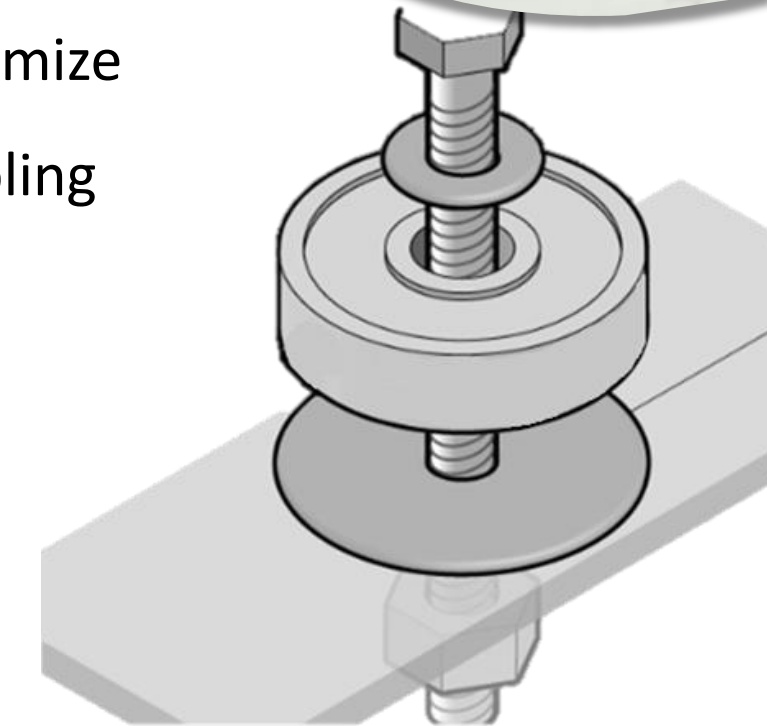
No historical data records or data analysis capabilities, making it impossible to perform precise process optimization.

Compatibility and installation issues.

Traditional sensors are bulky, difficult to install, and not suitable for diverse industrial environments.

1. Solution Background

OncQue Corporation's latest series of force and vibration sensors integrates locking force and triaxial vibration monitoring technologies, providing revolutionary monitoring tools for industrial production and precision machining. This solution aims to optimize equipment performance through real-time data analysis, enabling preventive maintenance and enhancing production efficiency.



2. Features and Benefits

1

High Sensitivity Torque Monitoring

Using strain gauges and full-bridge circuits, voltage signals proportional to the load force are generated, ensuring accuracy.

2

Precise Vibration Data Feedback

Vibration anomaly monitoring quickly identifies issues such as tool breakage or collisions during equipment operation. By combining locking force data with vibration analysis, predictive maintenance and alerts are achieved.

3

Customized Solutions

Based on the customer's specific application needs, we provide intelligent value-added services, combining customized software, firmware, and hardware designs to create a comprehensive, one-stop solution. Whether for varying locking force requirements or precise vibration monitoring, our solutions are adaptable, helping customers achieve efficient operations and enhanced value across diverse application scenarios.

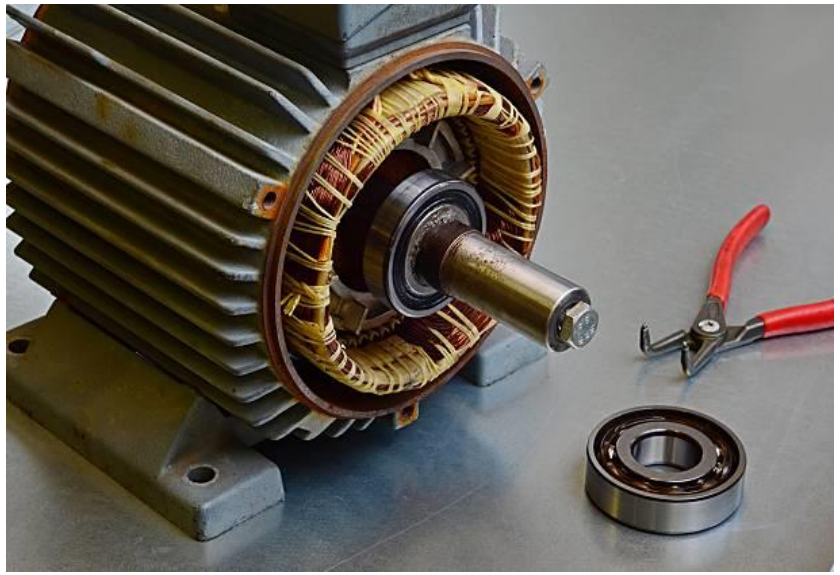
3. Scope of Application

Locking Force Platform Management

Real-time analysis of platform data to reduce equipment anomalies during machining, thereby minimizing defect rates.

Equipment Vibration Monitoring

Suitable for precision vibration measurement of linear rails, motors, and various types of automation equipment.



Smart Factory

Intelligent maintenance, combined with a database, predicts potential equipment issues and enables preventive maintenance.

4. Customization Scope

Chatter Vibration Occurrence

Vibration Sensing Locking Force Sensing

Customized According to Customer Needs

- Locking Force
- Vibration Amplitude
- Vibration Frequency
- Axis Count

Sensor Control Box

Customized According to Customer Needs

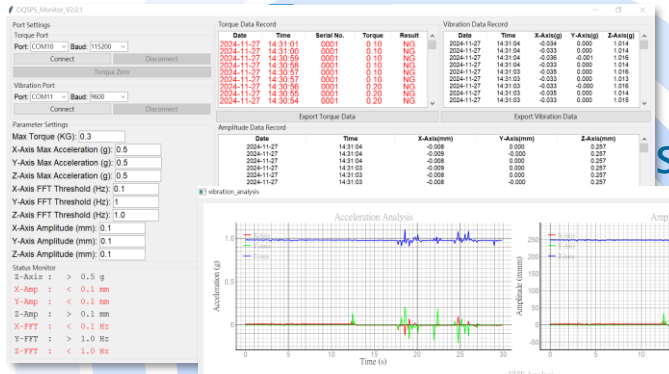
- Environmental Requirements
- Communication Protocol
- Wiring and Installation

Vibration and Locking Force Monitoring System

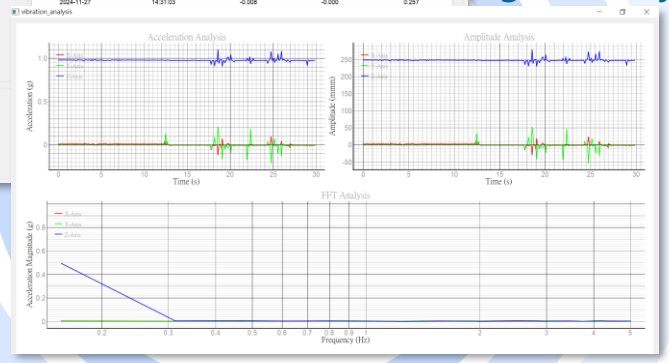
Customized According to Customer Needs

- Data Download Format
- Data Display Method
- Time and Limit Setting Determination
- Integration with Customer SPC Analysis Format

Database File Creation



Signal Analysis



5. Application Examples

Challenges Faced by Customers...

Q1 Unable to predict the magnitude of the applied torque?

2 Unable to determine if the machine is operating abnormally?

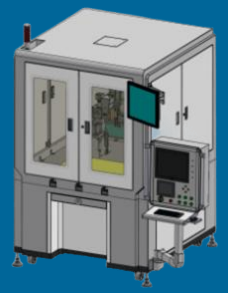
3 Unable to trace historical machining data?

Rework: Unable to determine whether the issue is caused by human error or equipment malfunction.

Occurrence of the Issue

Before

Torque Wrench Locking



Failure to apply the standard force during tightening.

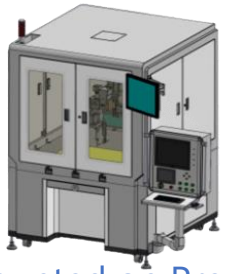
Measured NG

Measured OK

After

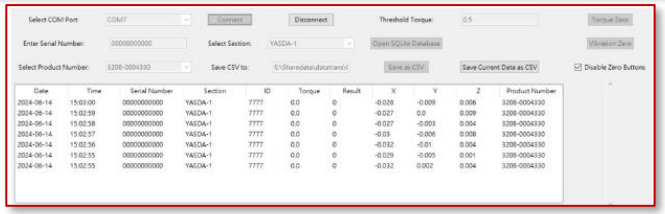
Locking Force / Vibration Sensor Integrated Sensor Control Box

(Customer Requirement: Waterproof, Resistant to Cutting Fluid)



Mounted on Precision Machining Equipment

Verify that the applied force meets the standards through data analysis.



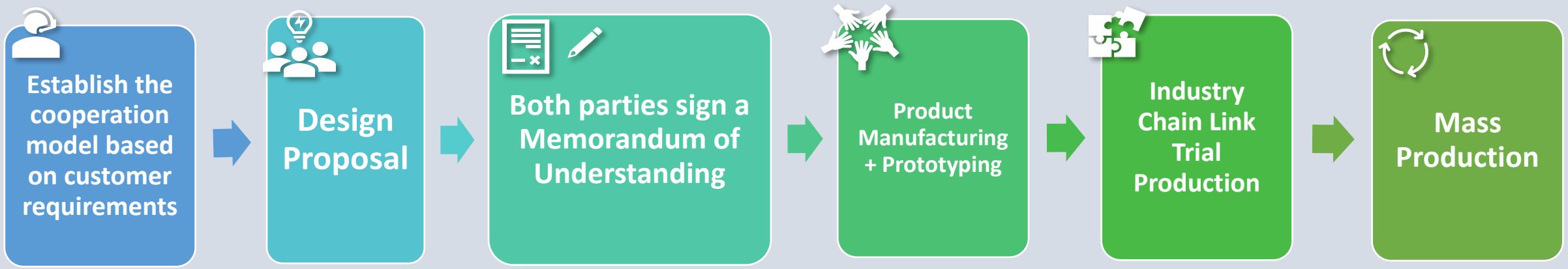
Trace historical locking data to further optimize future strategies.

The system can instantly pinpoint the source of issues, enabling quick and efficient troubleshooting. At the same time, it effectively collects and records relevant data, providing support for subsequent analysis and improvements.

Occurrence of the Issue

Reduce inspection time and lower costs!

7、Collaboration Process



OncQue™

Thank you!

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