FASTENING WITH ASSURANCE

MINGDENG METROLOGY SERVICES

FASTENING
WITH ASSURANCE

DIGITAL TORQUE ASSURANCE SOLUTION (DTAS)

PRODUCT BROCHURE

ST Engineering

The Future of Torque Fastening Operations

Digital Torque Assurance Solution (DTAS) is a cutting-edge digital torque testing system designed to provide high-precision and reliable torque measurements. It is built to cater to various applications in industries that require accurate and consistent torque measurements for their products and processes.

Assurance

Provides digital assurance that torque tools are performing optimally, reducing the risk of costly errors and improving overall operational efficiency

Automation

Enables fully automated testing of torque tools, eliminating the need for manual testing and ensuring consistent and accurate results.

Analytics

Leverages advanced analytics to provide users with valuable insights on tool performance and potential issues, allowing for proactive maintenance and de-risking of tool failure.

Digital Torque Assurance Solution – Key Features

DTAS CONTROLLER

- **Flexibility** - Connects to compatible torque tester to enable data acquisition and analysis (Check with us for compatibility list)
- **Ease-of-use** - Intuitive touchscreen interface for ease of use
- **Automation** of user and tool identification for streamlined testing workflows
- **Export** and save test data in various formats

DTAS SOFTWARE & CLOUD

- Utilizes advanced analytics to verify and provide assurance of tool performance
- Allows for customizable torque testing profiles and job requirements
- Enables remote monitoring and management of torque testing operations
- Enables secure, centralized storage of torque testing data
- Provides real-time access to torque testing data and analytics for decision-making
- Enables seamless integration with other business systems and tools

Take Control of Your Torque Testing with DTAS

DTAS provides significant benefits and value proposition to users, such as cost savings through increased accuracy and reduced rework, de-risking through consistent and reliable torque tool performance, improved efficiency through automation, and enhanced data visibility and analytics.

HOW CAN WE MEASURE THE BENEFITS?

Cost Savings

- Reduced Calibrations Cost of Torque Tools
- Reduced Logistical Costs and Downtime from Calibrations
- Reduced Costs from Recalls & Rework

De-Risking

- Reduce Out-of-Tolerance Risk Exposure from Months to Days
- Eliminates the risk of product failures caused by improperly torqued fasteners

Efficiency

- Automated data collection and analysis
- Reduce time and effort required for manual data-entry and analysis.

Compliance

- Ensures compliance with industry standards and regulations
- Preventing the risk of fines, legal action, and damage to your reputation.

Data-Driven Decision-making

- Real-time data insights to enable informed decision-making
- Analytics: Utilization, Reliability, Calibration Interval

DATA VISUALIZATION

- Displays torque test readings in real-time during testing, with a clear and easy-to-read interface.
- Graphical visualization of continuous applied torque over time
- Clear visual indication of set, max permissible and acceptable tolerance range

GUIDED WORKFLOW

- Guided workflow for streamlined testing
- Automated identification of operator and tool serial number (through optional RFID add-on)
- Test procedures to ensure compliance
- Real-time feedback and error reporting for immediate corrective actions (Calibration Due, Fault Risk)

INTEGRATION WITH TORQUE TESTER

- Works with compatible digital torque testers to enhance torque analysis capabilities

STAHLWILLE
SmartCheck
(Or other compatible models)

1. **Initialization**
   - Register DTAS that are deployed using dedicated software
   - User creates user profiles for each operator (Optional)
   - User sets up tool profiles for each tool
2. **Testing**
   - Operator logs in to DTAS software
   - Operator selects job and tool
   - Operator follows guided workflow to conduct test
   - DTAS controller records test data
3. **Data Analysis**
   - DTAS software analyzes test data for accuracy and compliance
   - User can generate reports on individual tests, operator performance, and overall compliance

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Contact Us at +65 67591189 or sales@mdmetrology.com.sg

DIGITAL TORQUE ASSURANCE SOLUTION (DTAS)

DTAS SOFTWARE & ANALYTICS

Standard Commercial Version (Cloud)

DTAS software is a powerful tool for managing and analyzing torque data. With its user-friendly interface, DTAS software makes it easy to perform torque tests, analyze data, and generate reports.

Features

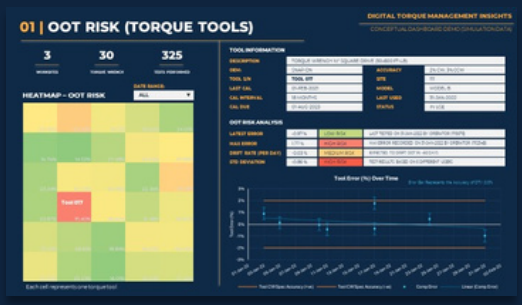
1. **Real-time Data Acquisition**: Real-time data acquisition for accurate and reliable torque measurements.
2. **Automated Testing:** The software can guide users through the torque testing process, ensuring that tests are performed accurately and consistently.
3. **Data Analysis:** DTAS software allows users to easily analyze torque data and generate reports, providing valuable insights for process improvement.
4. **Cloud Connectivity:** DTAS software offers cloud connectivity, enabling users to remotely access and manage their data from anywhere.

Benefits

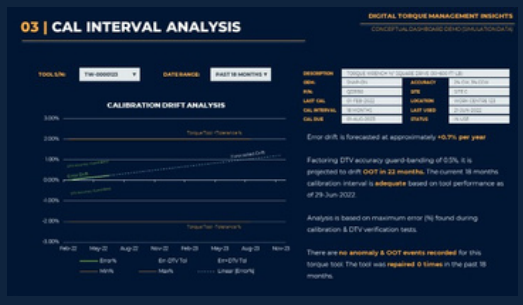
1. **Increased efficiency**: DTAS software streamlines the torque testing process, reducing the time and effort required to perform tests and generate reports.
2. **Enhanced accuracy**: With real-time data acquisition and automated testing, DTAS software ensures that torque measurements are accurate and consistent.
3. **Improved data management**: The software's cloud connectivity allows for easy data management and access, minimizing the risk of data loss or corruption.
4. **Process improvement**: DTAS software provides valuable insights into torque data, allowing for process improvements and optimization.

DTAS Analytics

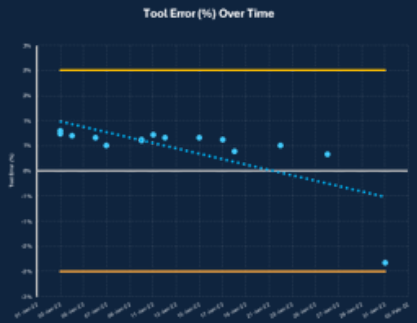
Arrest Error Before It Happens



Extend Periodic Calibration

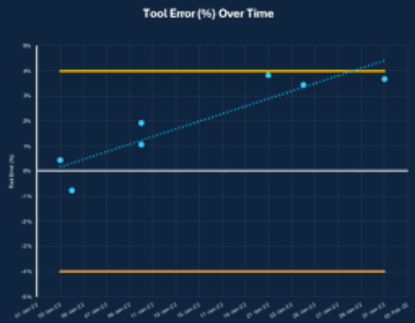


1. Near-Error Test Result



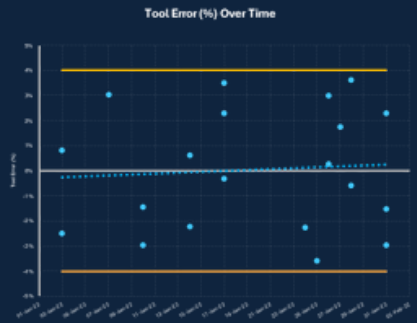
Outlier test point exhibits error with contrasting polarity & near OOT

2. Significant Drift Rate



Variance is Low (Good) but Drift Rate is High (Bad) □ OOT Imminent

3. High Variance in Test Results



Drift Rate is Low (Good) but Variance is High (Bad) □ Large OOT Uncertainty

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DIGITAL TORQUE ASSURANCE SOLUTION (DTAS)

DIGITAL TORQUE TRANSDUCER

STAHLWILLE SmartCheck Digital Torque Transducer

Product Features:

- For verifying and setting clockwise torque wrenches and torque screwdrivers.
- Easy-to-understand operation and user interface ensure fast, reliable results and a high level of safety.
- Splash-proof display and membrane keyboard.
- Can be placed almost anywhere - horizontal or vertical mounting possible.
- Turning and swivelling display for perfect readability in any position
- Display deviation of maximum +/- 1% guarantees highly reliable measurement data
- Provides three operating modes (track, first peak, peak hold) and three units (N-m, ft-lb, in-ft).
- Operation either via power pack or battery

N·m	ft·lb	in·lb	○"	b mm	h mm	t mm	g
1-10	0.74-7.4	8.9-88.5	1/4	120	124	167	5210
1-10	0.74-7.4	8.9-88.5	1/4	120	124	167	5210
10-100	7-74	89-885	3/8	120	124	167	5310
40-400	30-295	354-3540	3/4	120	124	167	5690
80-800	59-590	708-7081	3/4	120	124	167	5690
150-1500	111-1106	1328-13276	1	120	164	167	5912

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