TORQUE VALIDATION SURVEYS

DESIGN SYSTEMS, INC.

Specializing in Manufacturing Process Design & Integration

Torque Validation Surveys

Proper fastening is a major issue concerning the quality of vehicles leaving the plant. Torque testing prior to launch and as an ongoing quality validation tool, could significantly reduce downtime and warranty costs.

Torque testing is used to measure multiple criteria determining the quality of a connection:

- Dynamic Torque -measured by an Electronic Torque Transducer during the tightening process.
- Dynamic Angle- - revolutions required to secure a fastener
- Residual Torque- - Torque required to restart a tightened fastener

Purpose of Torque Validation:

- Ensure process repeatability
- Validate that engineering specifications are met
- Track repeatability of each tool during production
- Reduce repair/warranty issues.
- Provide supporting data for torque related issues

Torque Validation Surveys are performed:

- Design Systems provides all tools and services necessary to gather, report and file valid data.
- Database driven analysis allows for results reporting in a consistent format.
- Statistics revalidated on a frequent basis for comparison analysis.
- Data can be used to show negative or positive trends necessary for prompt resolution.

"BOTTOM-LINE" RESULTS:

- "First time" quality assurance at launch
- Customer satisfaction assurance
- Mitigate warranty claims costs
- Improve product reliability results
- Second audit verifies and documents that specifications have been met
- Dedicated personnel allows "Lower Task Cost" and a higher degree of accuracy
- "Real time" statistics will be documented
- Daily reporting for immediate notification of out of spec processes

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