LiFE

Limitorque Fatigue Evaluation Software

Product Description

With over 12 years of plant application experience, *LiFE* (formerly *LTAFLA)* is a validated and proven software that computes the design life of Limitorque actuators operated at thrust and torque loads exceeding the published ratings. The design life predictions are based on first principles models validated against extensive laboratory test data developed by Kalsi Engineering, Inc. The software is applicable to Limitorque SMB/SB/SBD actuators ranging from size 000 to size 2.

Key Benefits

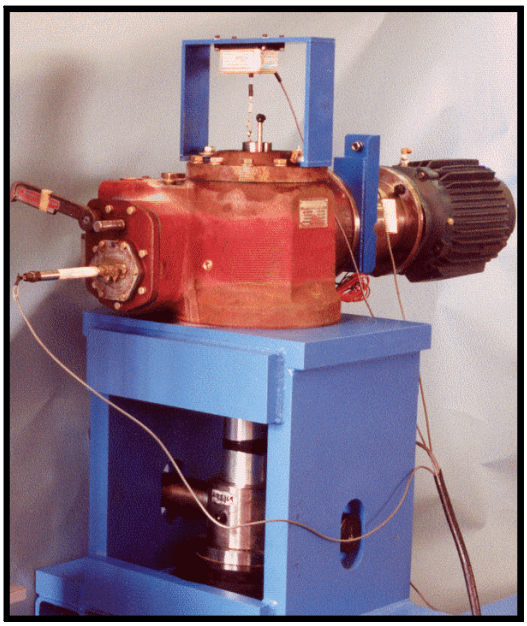
- Can provide margin increase in MOVs by permitting operation at torque and thrust load levels well above the published ratings
- Increase margin and reduce testing frequency when implementing JOG MOV Periodic Verification Program recommendations
- Eliminate unnecessary actuator/component replacements and forced outages
- Capable of evaluating the effect of multiple static and dynamic load cases in a single run
- User-friendly interface with built-in default values for geometry, material, and load histories
- Enhanced software is compatible with Windows 2000 and XP

Quality Assurance

- Meets 10CFR50 Appendix B requirements
- Predictive model validated against extensive test results

Training and Technical Support

- Comprehensive two-day training seminar
- Complete technical support



How It Works

The design life evaluation modules are based on the comprehensive analytical and experimental research program conducted by Kalsi Engineering in the early 1990s. This research included subjecting Limitorque actuators to 4,000 cycles at loads which exceeded the actuator thrust and torque ratings. Based on the understanding of fatigue failures experienced during this extensive testing project, detailed first principle stress and fatigue models were developed to accurately predict the design life of the life limiting torque components in the actuator. The design life predictions utilize the same evaluation approach as that was used for ASME Section III pressure vessels, thus providing highly reliable predictions.

Proven to increase torque/thrust capability and MOV margins.

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