

CVAP[®] – Check Valve Analysis & Prioritization Software

Product Description

The CVAP computer software quantifies the rate of degradation of check valve internals, including hinge pin wear and disk stud fatigue, and may be used to prioritize valve maintenance, diagnose problems, and improve reliability. It is capable of analyzing swing, tilt, double-disc, lift and nozzle check valves. CVAP methodology has been used analyze *thousands* of valves in U.S. nuclear power plants, and has been called a "model" for the industry by INPO.

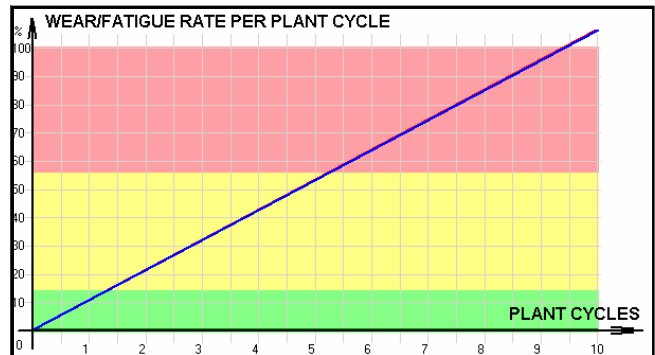
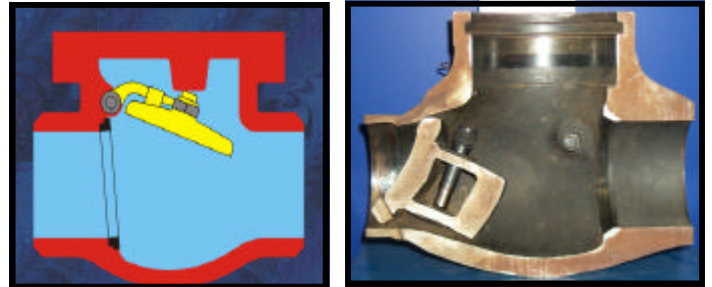
CVAP is based on rigorous testing and analytical research performed at Kalsi Engineering and reported in NUREG/CR-5159 & /CR-5583. It incorporates the technical guidelines provided by EPRI NP-5479 *Application Guide for Check Valves*.

Benefits

- Develops a sound basis for a check valve condition based maintenance program through analysis, tracking & trending
- Identifies problem check valves
- Quantifies levels of valve degradation
- Characterizes check valve performance
- Prioritizes maintenance and inspection
- Reduces unnecessary inspection of properly functioning valves
- Enhances effectiveness of non-intrusive diagnostic examination

Typical Applications

- Condition monitoring of check valves
- Plant-wide application review for check valve program development
- Evaluation of replacement valve candidates prior to selection & installation
- Prediction of valve performance under altered system operating conditions, piping modifications, etc.



Key Features

CVAP calculates hinge pin wear and disk stud fatigue life for applications where the flow velocity is below minimum required flow (V_{min}) based on:

- Valve design, including geometry and materials
- Valve installation including orientation and upstream disturbances
- Flow conditions & duration under various plant operating modes
- Level of severity of disc fluctuation & frequency

Training and Technical Support

- Comprehensive two-day training seminar
- Complete technical support

Quality Assurance

- 10CFR50 Appendix B Qualified
- CVAP predictive models are validated against observed in-service degradation & test results

CVAP – A key to check valve condition monitoring and improved reliability

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