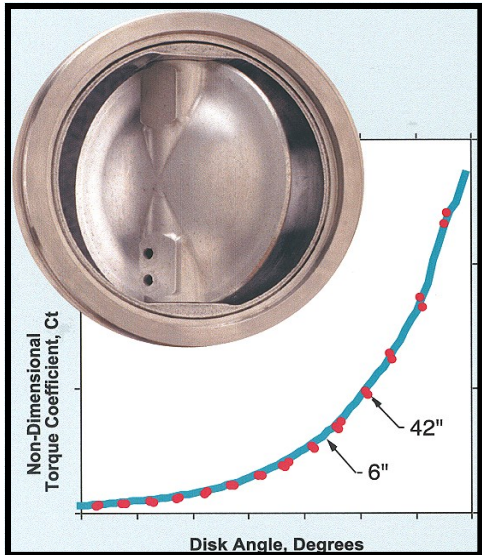


# Kalsi Engineering

## Flow Loop & Mechanical Test Facility



*Scale model test results verified against a full-size valve*

### Background

The Kalsi Engineering flow loop / mechanical test facility was designed to investigate valve problems and establish flow and torque coefficients for valves used in typical plant applications. It has been used to perform thousands of tests on nuclear and commercial check valves, quarter-turn valves, linear valves, and chokes for many clients including valve manufacturers, power generation utilities, and research organizations such as EPRI.

### Mechanical Test Capabilities

- Structural integrity, performance qualification, & fatigue life testing
- Strain gage testing
- Friction, wear, lubrication, & galling tests
- Testing under high pressure, high and low temperature conditions
- Unique test fixtures to simulate performance of complex systems

### Flow Loop Capabilities

- Capacity: 2,700 gpm & 270 psig
- Test specimen size range: 2-inch to 10-inch
- 5,500-gallon reservoir, a 180 HP diesel engine-driven variable speed centrifugal pump
- Flow metering section, in compliance with ANSI/ISA standards, utilizes orifice plates and a highly accurate differential pressure transducers to measure flow rate
- Test instrumentation feeds data directly to a high speed digital data acquisition system which can display and process the data in real time.
- A variety of pressure, temperature, load, displacement, and other transducers are available, along with a large inventory of pipe spools, fittings, & flow control valves to support testing activities
- Scale model flow testing available



*Flow loop can be rapidly reconfigured to simulate in-plant piping configurations*

**Operational verification through innovative mechanical and flow loop testing**

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