Canadian Nuclear Laboratories | Laboratoires Nucléaires Canadiens

Fluid Sealing Technology Metrology Facility

CNL's Fluid Sealing Technology Metrology Facility (FSTMF) is located at its Chalk River Laboratories. The FSTMF provides precision measurement and inspection services for CNL's pump seals program and other R&D products which have exacting demands on mechanical part dimensions and in particular surface flatness, which is a critical parameter in the pump seals business.

Specialty equipment in the FSTMF includes Coordinating Measuring Machines (CMMs), lapping machines, a profilometer, a roundness machine, optical flats and a variety of metrology hand tools which are used to achieve and measure high degrees of flatness. The Fluid Sealing Technology Metrology Facility is capable of achieving and measuring surface flatness up to light band or nano-scale. The FSTMF staff all have extensive experience working with extremely delicate parts that are lapped to a mirror finish.

While the primary mandate of the FSTMF is CNL's pump seals program, which include R&D programs for advanced technology including Gen IV reactor pump seals, supporting NRU, the CANDU® fleet and the international nuclear power plant industry, the FSTMF has worked in collaboration with the Mechanical Equipment Development and Mechanical Engineering Branches at CNL to perform pressure tube scrape inspections and examine sampling tool parts.

The Fluid Sealing Technology Metrology Facility would welcome future partnerships and synergistic collaborations with industry and universities, in particular those organizations that require metrology assistance.