

A NEXT GENERATION NEUTRON DIFFRACTION STRAIN SCANNER FOR STEADY-STATE SOURCES

R.B. Rogge, Canadian Neutron Beam Centre, National Research Council, Canada

Strain measurement by neutron diffraction is now a common technique that has reached the level of maturity that permitted the development of an ISO Standard. The technique was first developed and gained initial acceptance at steady-state sources but in general, instruments at reactor sources have undergone incremental improvements. In contrast pulsed neutron sources boost second and third generation instruments. A proposed next generation strain scanner incorporating a white-beam is proposed for steady-state sources will be presented along with preliminary prototyping and simulation results.