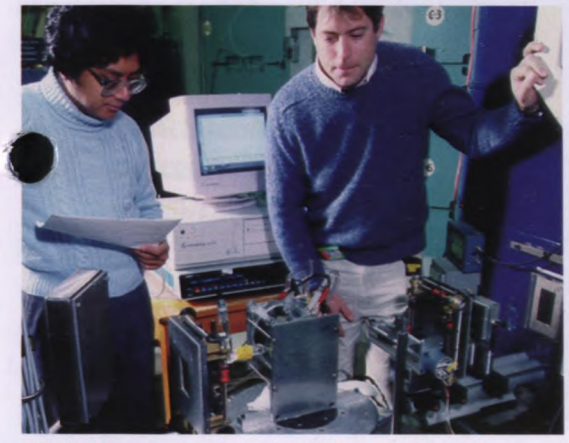
Neutrons are uniquely valuable as materials probes because they generally detect light elements as easily as heavier elements. This is in contrast with X-rays and gamma rays. Moreover, neutron contrast between isotopes of the same chemical element—for example, the isotopes hydrogen and deuterium—makes neutrons of enormous importance for the study of biological materials and polymers, as well as for alloys. As foreseen in the recommendation of the 1994 NSERC Committee, the Canadian Neutron Facility will, therefore, complement the Canadian Light Source through its different capabilities.



Chalk River and University of Western Ontario scientists see how corrosion develops through the thin film at the metal surface.

Training and Retaining Canadian Expertise

The CNF will help train top research talent in Canada. It will provide opportunities for small- and medium-sized Canadian firms to develop and commercialize new technologies spun off from the facility. And it will create a unique environment where Canadian researchers from varied disciplines will interact, exchange ideas and forge new collaborations. As well, the Canadian Institute of Neutron Scattering offers courses, summer schools and workshops to train young researchers from Canada and abroad.

The CNF will give Canadian industry easy and direct access to world-class facilities for proprietary research, thus helping to foster industrial research and retain this essential expertise in Canada.

"I am totally convinced, as are many of my colleagues, that neutrons can provide valuable information of benefit to an industry such as ours. It would be a great shame if the ability to do neutron scattering for industrial research in Canada were to disappear."

Dr. Stuart MacEwen
Principal Scientist
Alcan International Limited

Workshop on Neutron Scattering at Chalk River. The CNF will help train and retain top research talent in Canada.