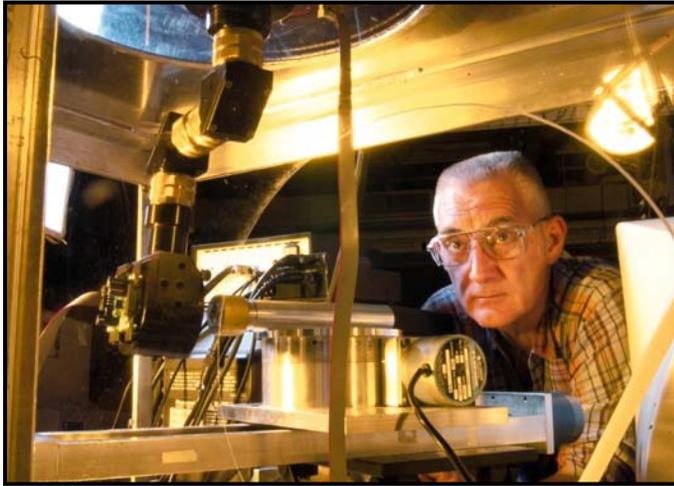


DRIFT Measurements at Y-12

Modeling & Simulation Group



Problem Statement:

Nondestructive methods are needed for the detection of corrosion & contamination on the surfaces of certain materials at the Y-12 plant.

Technical Approach:

Recognizing that DRIFT (Diffuse Reflectance Infrared Fourier Transform) spectrometry could be used for this application, computer codes were developed for collecting, processing, & analyzing spectrometric data to provide a measure of surface corrosion & contamination. These codes included automated movement of surfaces relative to the spectrometer head to produce a hyperspectral image.

Benefit:

DRIFT affords a sophisticated, reliable, & largely automated measurement procedure. It can be used in the lab for fundamental R&D & in manufacturing for inspection operations.

