



## NEWSLETTER FEATURING SPECTRUM NDT

Spectrum NDT is a service provider with over 38 years of experience in material testing that ensures quality requirements are met.

In addition to decades of experience, they offer the most advanced non-destructive examination techniques and technology. They use their expertise to provide non-destructive analysis techniques to assess material, component, and system properties without damage while providing reliable inspection capabilities for non-metallic components.

Its founder, Mark Edwards, is still running the company and performing some testing processes himself. This speaks to how much he enjoys what he does and how important it is for him to provide top-quality service.

Mark is originally from England, where he built his metallurgic background, and at age 24, he decided to move to Canada to start his own business in Calgary, Alberta. About 15 years ago, he moved to Victoria, British Columbia, and since has continued to provide the services that have made Spretum NDT a successful company. In Victoria, he has completed valuable testing for materials used in bridges, pipelines, and pressure vessels. To this day, the company continues to provide services both in Victoria and Calgary, where they have a team of 11 people focusing on the energy sector.

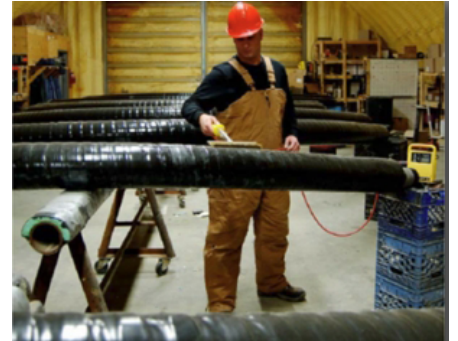
The services they provide include ultrasonic testing, phased array ut, radiography, Magnetic particle testing, liquid dye penetrant testing, electromagnetic testing, hardness testing, positive material identification, and visual inspection.

Rainhouse has relied on Spectrum NDT services for over eight years, specifically their non-destructive testing. Depending on the type of material and project, Spectrum has provided Ultrasonic Testing (UT), Magnetic Particle Inspection (MPI), and Liquid Dye Penetrant Inspection (LPI).

Ultrasonic Testing (UT) is the propagation of ultrasonic waves in material or parts being tested. A short ultrasonic pulse is transmitted into the material to detect internal flaws based on the changes represented in the pulse and can be implemented in metals, non-metals, and composites.

Magnetic Particle Inspection (MPI) is used to locate surface and subsurface discontinuities, such as cracks and seams, in ferromagnetic material. The electric current passes through the test object, forming a magnetic field in the material. Discontinuity in the material allows the magnetic flux to leak since air cannot support as much magnetic field per unit volume as metals. Dry or wet suspensions are applied to a part to identify where the leak is happening and find the material defects.

Liquid Dye Penetrant Inspection (LPI) is an inspection method used to check surface-breaking defects in all non-porous materials, both ferrous and non-ferrous, including metals, plastics, and ceramics. For inspection, red dyes make defects visible in ordinary light, and fluorescent dyes make defects visible under ultraviolet light. Both dyes are used with a developer, normally applied in aerosol to draw the penetrant out of any discontinuities and provide a contrasting background to increase the detection of discontinuities.



The three types of inspection previously discussed have been crucial for specific projects because their quality and sometimes people's lives depend on having reliable parts and materials.

Many of the parts and materials we request for Spectrum to test are for defense projects. For instance, to manufacture first-level fasteners, all materials and parts must undergo non-destructive testing as part of the contract requirements.

We've had a strong relationship with Mark and Spectrum because of the great lead times and responsiveness to our schedule and needs. Mark is very experienced and knowledgeable and has always shown his willingness to share his mastery with us. Overall, we love seeing Mark and having interesting conversations when he visits us and does some testing directly at Rainhouse.