



# Phased Array Ultrasonic Testing (PAUT)

With the growing industry demand for advanced inspection solutions, Powertech has expanded the capabilities of its Non-destructive Testing (NDT) Department with the next generation in ultrasonic inspection technologies: Phased Array Ultrasonic Testing (PAUT). PAUT offers a more accurate, more efficient, and safer inspection method than conventional techniques.

## Phased Array Ultrasonic Testing (PAUT)

PAUT's corrosion detection and mapping capabilities can be utilized to assess the health of aging assets, such as turbine blades, large-diameter piping, tanks, and penstocks. PAUT inspection can also be used for quality control and code compliance during fabrication and for service-related issues.

PAUT is similar in principle to the conventional ultrasonic inspection, but it employs an array of ultrasonic transducers instead of a single probe. The advanced imaging technology allows the information gathered from the array of transducers to be displayed in ways that can be more intuitively interpreted for accurate results.

Premade setup files can be created prior to inspection, increasing the efficiency of inspection and reducing the amount of time required in the field.

Critical components can also be scanned and inspected on site, and the resulting data can be reviewed and audited remotely.

## Capabilities

PAUT allows inspection of:

- Welding (both in-service and new fabrication)
- Forgings
- Castings
- Piping (for corrosion and erosion)
- Composites
- Pins, shafts, and bolts
- Any other material that can be tested with conventional ultrasonic testing.

## Regulatory Compliance

PAUT is an approved inspection method with standards such as ASME, ASTM, API, AWS, and CSA, and is often accepted in lieu of x-ray.

Powertech Lab's technicians have received training and are centrally certified through both BINDT's PCN and CGSB CAN/CGSB-48.9712 certification schemes (both are ISO 9712:2012 accredited).

## Safer Inspections

Like radiography, PAUT inspection produces a permanent record, but unlike radiography, it can be performed with no potential hazards to nearby workers.

## ABOUT POWERTECH LABS:

*Powertech Labs Inc. is one of the largest testing and research laboratories in North America, situated in beautiful British Columbia, Canada. Our 11-acre facility offers 15 different testing labs for a one-stop-shop approach to managing utility generation, transmission and distribution power systems.*

*Outside of the utilities industry, Powertech provides routine testing capabilities, product development, research and consulting services to support an array of industrial-type operations, electrical equipment manufacturers and automotive original equipment manufacturers.*

[www.powertechlabs.com](http://www.powertechlabs.com)

## FOR MORE INFORMATION CONTACT:

**Darren Bromley - 604.590.6616**  
Sr. Manager  
Generation Technology & Testing  
[darren.bromley@powertechlabs.com](mailto:darren.bromley@powertechlabs.com)

**Sasi Sasitharan - 604.590.7412**  
Sr. Engineer, Inspection  
Generation Technology & Testing  
[sast.sasitharan@powertechlabs.com](mailto:sast.sasitharan@powertechlabs.com)



**Powertech**  
[www.powertechlabs.com](http://www.powertechlabs.com)