



# PHASED ARRAY ULTRASONIC TESTING (PAUT) & TIME OF FLIGHT (TOFD) INTRODUCTION



**Get Recognized.  
Take charge!**

**Greater career  
opportunities!**

**Increase your  
industry  
knowledge.**

This 2-day introductory session provides a synergistic approach to phased-array technology for the PAUT (Phased Array Ultrasonic Testing) & TOFT (Time of Flight) Nondestructive Testing Methods.

## What's Involved and What do I Get?

This session is intended for managers, supervisors and inspection personnel and all individuals interested in the phased-array technology. It provides the basic testing principles, equipment usage, and current in-use applications for the petro-chemical, oil and gas industries and nuclear industries for welded structures.

### Topics Covered

#### Day 1: Phased-Array

- Introduction to PAUT
- Basic Principles
  - Multi-elements
  - Beam steering
  - Beam focusing
- Instruments and scanners
  - Phased-array instruments
  - Probe, wedges and scanners
- Applications
  - Nuclear, Oil and Gas, Bridges

#### Day 2: Time of Flight

- Introduction to TOFD
- Basic Principles
  - Probe configuration
  - B-Scan
- Applications
  - Nuclear, Oil and Gas, Bridges
- Synergy between PAUT and TOFD
  - Strengths and weaknesses
  - Integration of both techniques in an inspection

## Pre-Requisites

- None





# PHASED ARRAY ULTRASONIC TESTING (PAUT) & TIME OF FLIGHT (TOFD) INTRODUCTION REGISTRATION FORM



## 1 All sessions start at 8:30 a.m. and end at 5:00 p.m. Choose your Session

- |   |
|---|
| <input type="checkbox"/> March 6 & 7, 2012 – Calgary          |
| <input type="checkbox"/> March 26 & 27, 2012 – Laval (French) |
| <input type="checkbox"/> March 28 & 29, 2012 – Milton         |

Eligible QCC members will receive a 10% discount on approved training course fees. Prices are subject to change.

### Locations:

#### Calgary

INTEG Calgary Training Centre  
3231 – 58 Avenue SE, Calgary, AB T2C 0B4

#### Laval

INTEG Laval Training Centre  
CWB Group  
4321 Autoroute des Laurentides, Laval, QC, H7L 5W5

#### Milton

INTEG Milton Training Centre  
CWB Group  
8260 Parkhill Dr., Milton, ON L9T 5V7

## 2 Course Cost

- CWA Member Course Cost - \$600.00 + Applicable Taxes – Membership ID: \_\_\_\_\_
- Course Cost - \$650.00 + Applicable Taxes
- CWA Premium Membership - \$75.00 + taxes

**Benefits:** Privilege Card, Jobs portal, Networking, Newsletter + CWA Journal, 10% discount on CWB self-study modules and Marks Work Wearhouse, HUB Insurance, Event discounts.

### Cancellation Policy:

*The course cost, less a 25% enrollment charge per person, will be refunded if cancellation is made in writing no less than 5 working days before the course. There will be no refund for cancellation after that date. The CWB has the right to cancel the program 10 working days prior to the date of the course. Full refunds will be made to registered participants if the CWB cancels the program. Participants are eligible for one course transfer as long as notice is given no less than 5 working days before the original course date.*

## 3 Complete the registration form and fax to 905-542-1318 or e-mail to

**info@cwbgroup.org. Cheques are made payable to the CWB. Contact us early as space is limited.**

Company Name \_\_\_\_\_ Co. Code: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

Method of Payment: PO#: (CWB clients only) \_\_\_\_\_ Cheque # \_\_\_\_\_

VISA  MasterCard # \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Name on Card: \_\_\_\_\_ Signature: \_\_\_\_\_

- All registrants will receive a complimentary Basic CWA Membership. Check this box if you do not wish to receive this membership.