

# Time of Flight Diffraction II (TOFD)

Training Course Outline- 40 hour course

## **SCOPE**

This course prepares the candidate for Time of Flight Diffraction (TOFD) Inspections. TOFD is used for semi-automated and automated scanning of welds

## **PREREQUISITE**

Ultrasonic Level II – 80 hours

## **TRAINING**

Training Material is presented in Module followed by Quizzes  
Training will include scanning and conducting practical exercises

### **MODULE 1: Introduction**

- Principles of TOFD
- Diffraction Process

### **MODULE 2: TOFD Technique**

- Probe Selection
- Probe frequency
- Probe dia

### **MODULE 3: Depth calibration**

- Setting Probe Center Separation - PCS
- Setting on calibration block
- Acquiring data
- Depth calibration

### **MODULE 4: Flaw Height Measurement**

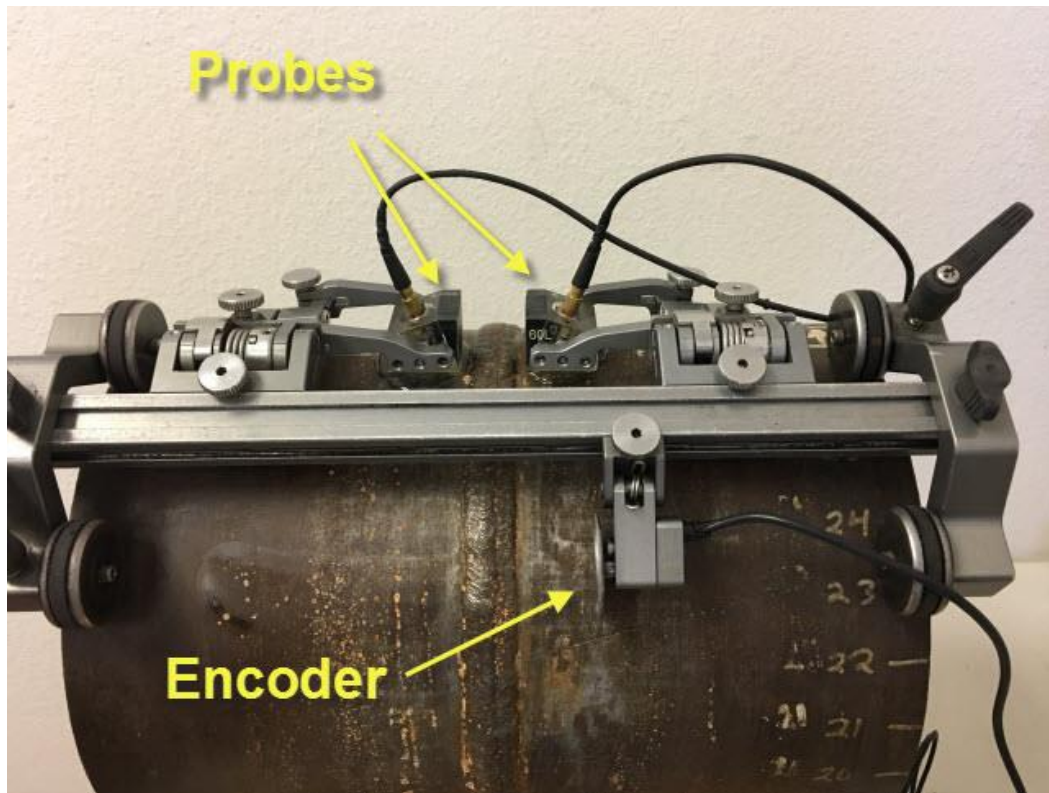
- Calibration
- Measurement
- Measurement on thicker samples

### **MODULE 5: Encoder Calibration and Scanning**

- Encoder calibration
- Location measurement
- Length measurement

### **MODULE 6: Flaw Length measurement**

- Encoder calibration
- Location measurement
- Length measurement



Basic TOFD Scanning

#### **MODULE 7: TOFD Limitations**

- Probe Selection

#### **MODULE 8: TOFD Standard ISO 10863**

- Probe Selection
- Selecting Beam intersection Point
- Setting scan sensitivity

#### **MODULE 9: TOFD parameters**

- Selection of TOFD parameters
- TOFD dead zone



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