Refresher Outlines:

Online Refresher UT

Our UT Refresher is based on ASNT and ISO Standards topical outlines. The refresher is divided in 3 sections: self-evaluation test, theory and interactive exercises. The refresher covers manual UT for 0-degree and angled inspections.

SECTION 1: SELF-EVALUATION TEST

- 40-question test
- Link to an explanatory video for each question
- Grade

SECTION 2: THEORY

- Measurement units, reflection & transmission
- Sine wave, frequency, wavelength, longitudinal waves, shear waves, dB system
- Casting, rolling, extruding, forging, corrosion
- Welding methods, SMAW, SAW, GTAW, GMAW
- Digital instrument, pulser/receiver, digitizer, gain, piezoelectric crystal, frequency spectrum
- Wedge, wedge height calculation, angled wedge
- Scanner, encoder
- A-Scan, B-Scan, C-Scan, full screen height, full screen width, gates, legs
- Transit time, PRF, wedge signal, beam, attenuation, near field, dead zone
- Snell's law, incident vs. refracted, critical angles, beam index point, beam angle,
- Probe selection, wedge selection, coverage
- Calibration, couplant, time base linearity, gain linearity, beam edge plot, transfer correction
- Calibration, beam Index point, pulse duration check, resolution check
- Scanning pattern, 0-degree, angled beam, weld scanning, root scanning
- Evaluation 0-degree, mapping flaws, depth & amplitude, length & width
- Evaluation angled beam, depth, height, length, directional reflectivity, echostatic pattern, echodynamic pattern

SECTION 3: INTERACTIVE EXERCISES

- 0-degree, setup, velocity, wedge delay and TCG calibration, scanning and analysis
- Angled beam, setup, beam index point, beam angle, sensitivity, scanning and analysis