

MAINTENANCE AND ENGINEERING | COURSE BROCHURE

Ultrasonic Thickness Measurement and Corrosion Mapping

5 days | Classroom training | English

SMART HORIZON

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Course content

Why attend

Ultrasonic thickness measurement is a key method for monitoring wall loss in piping, vessels and tanks. This course covers ultrasonic principles, thickness gauges, calibration, measurement technique, corrosion mapping methods, data recording, corrosion rate calculation and remaining life estimation.

Accurate thickness data allows timely repairs before leaks occur. You will learn to measure, map and interpret wall thickness reliably.

Professional Problems This Course Is Designed to Solve

• Difficulty translating subject knowledge into practical workplace decisions.
• Inconsistent approaches to the activities covered in the course outline.
• Lack of a structured plan for applying and reviewing new skills.

Course methodology

Practical measurement demonstrations, calculation exercises, data interpretation and case studies.

Course objectives

By the end of this course, participants will be able to:
• Explain ultrasonic testing principles
• Calibrate and use thickness gauges
• Apply correct measurement techniques
• Plan and perform corrosion mapping
• Calculate corrosion rates
• Estimate remaining life and plan actions

Target audience

This course is suitable for:
• Inspectors and NDT technicians
• Integrity engineers
• Maintenance engineers
• Corrosion engineers
• Quality staff



Course content

Target competencies

Participants will develop competencies in:

- Ultrasonic measurement
- Calibration
- Corrosion mapping
- Data analysis
- Remaining life estimation

Course outline

Day 1: Ultrasonic Principles

09:00–10:08	Sound waves
10:08–11:00	Probes and couplants
11:00–11:30	**Coffee break**
11:30–11:45	Probes and couplants (continued)
11:45–12:53	Limitations
12:53–14:00	Exercise

Day 2: Thickness Gauges

09:00–10:08	Calibration
10:08–11:00	Technique
11:00–11:30	**Coffee break**
11:30–11:45	Technique (continued)
11:45–12:53	Coatings
12:53–14:00	Demonstration

Day 3: Corrosion Mapping

09:00–10:08	Grids and condition monitoring locations
10:08–11:00	Automated mapping
11:00–11:30	**Coffee break**



Course content

11:30–11:45	Automated mapping (continued)
11:45–12:53	Data recording
12:53–14:00	Workshop

Day 4: Corrosion Rates

09:00–10:08	Short and long-term rates
10:08–11:00	Statistical approaches
11:00–11:30	**Coffee break**
11:30–11:45	Statistical approaches (continued)
11:45–12:53	Exercise
12:53–14:00	Case study

Day 5: Remaining Life

09:00–10:08	Minimum thickness
10:08–11:00	Remaining life
11:00–11:30	**Coffee break**
11:30–11:45	Remaining life (continued)
11:45–12:53	Inspection intervals
12:53–14:00	Action plan

The timings provided are estimates and may vary depending on the number of participants and the discussions taking place during the sessions. They are indicative only and do not constitute a binding commitment.



Course content

Dates, venues and fees

Current published course plans. Fees are per participant in EUR, excluding unconfirmed taxes.

Venue	Start date	End date	Fee (EUR)
Rome Confirmed dates	9 Nov 2026	13 Nov 2026	**€4,900.-**
Online Confirmed dates	9 Nov 2026	13 Nov 2026	**€1,250.-**
Cape Town Confirmed dates	30 Nov 2026	4 Dec 2026	**€3,780.-**
Online Confirmed dates	30 Nov 2026	4 Dec 2026	**€1,250.-**
Dubai Confirmed dates	4 Jan 2027	8 Jan 2027	**€6,300.-**
Online Confirmed dates	4 Jan 2027	8 Jan 2027	**€1,250.-**
Rome Confirmed dates	25 Jan 2027	29 Jan 2027	**€4,900.-**
Online Confirmed dates	25 Jan 2027	29 Jan 2027	**€1,250.-**
Kuala Lumpur Confirmed dates	15 Feb 2027	19 Feb 2027	**€2,900.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	15 Feb 2027	19 Feb 2027	**€1,250.–**
Cape Town Confirmed dates	1 Mar 2027	5 Mar 2027	**€3,780.–**
Online Confirmed dates	1 Mar 2027	5 Mar 2027	**€1,250.–**
Barcelona Confirmed dates	22 Mar 2027	26 Mar 2027	**€5,680.–**
Online Confirmed dates	22 Mar 2027	26 Mar 2027	**€1,250.–**
Vienna Confirmed dates	12 Apr 2027	16 Apr 2027	**€5,880.–**
Online Confirmed dates	12 Apr 2027	16 Apr 2027	**€1,250.–**
Rome Confirmed dates	3 May 2027	7 May 2027	**€4,900.–**
Online Confirmed dates	3 May 2027	7 May 2027	**€1,250.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Vienna Confirmed dates	24 May 2027	28 May 2027	**€5,880.-**
Online Confirmed dates	24 May 2027	28 May 2027	**€1,250.-**
Dubai Confirmed dates	7 Jun 2027	11 Jun 2027	**€6,300.-**
Online Confirmed dates	7 Jun 2027	11 Jun 2027	**€1,250.-**
London Confirmed dates	28 Jun 2027	2 Jul 2027	**€4,900.-**
Online Confirmed dates	28 Jun 2027	2 Jul 2027	**€1,250.-**
Dubai Confirmed dates	19 Jul 2027	23 Jul 2027	**€6,300.-**
Online Confirmed dates	19 Jul 2027	23 Jul 2027	**€1,250.-**
London Confirmed dates	9 Aug 2027	13 Aug 2027	**€4,900.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	9 Aug 2027	13 Aug 2027	**€1,250.-**
Cape Town Confirmed dates	30 Aug 2027	3 Sept 2027	**€3,780.-**
Online Confirmed dates	30 Aug 2027	3 Sept 2027	**€1,250.-**
Istanbul Confirmed dates	13 Sept 2027	17 Sept 2027	**€5,300.-**
Online Confirmed dates	13 Sept 2027	17 Sept 2027	**€1,250.-**
Frankfurt Confirmed dates	4 Oct 2027	8 Oct 2027	**€5,300.-**
Online Confirmed dates	4 Oct 2027	8 Oct 2027	**€1,250.-**
Amsterdam Confirmed dates	25 Oct 2027	29 Oct 2027	**€5,080.-**
Online Confirmed dates	25 Oct 2027	29 Oct 2027	**€1,250.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Paris Confirmed dates	15 Nov 2027	19 Nov 2027	**€5,720.-**
Online Confirmed dates	15 Nov 2027	19 Nov 2027	**€1,250.-**
Barcelona Confirmed dates	6 Dec 2027	10 Dec 2027	**€5,680.-**
Online Confirmed dates	6 Dec 2027	10 Dec 2027	**€1,250.-**

Plan your next step

Dates, availability, exact venue, taxes, inclusions and payment terms require written confirmation. This brochure is not a quotation, registration, booking confirmation or visa invitation. Participants receive a Smart Horizon certificate of attendance; programmes are not externally accredited and do not award a professional qualification or designation. Confirm arrangements before booking travel.

For group or in-house training, contact our learning team to discuss your objectives and delivery arrangements.

Contact Smart Horizon

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