

MAINTENANCE AND ENGINEERING | COURSE BROCHURE

Risk-Based Inspection

5 days | Classroom training | English

SMART HORIZON

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London W2 6BD, United Kingdom

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Course content

Why attend

Risk-based inspection focuses inspection effort on the equipment with the highest risk of failure and consequence. This course covers RBI principles, damage mechanisms, probability and consequence of failure, risk matrices, inspection planning, data requirements, software tools and integrating RBI with mechanical integrity programmes.

Inspecting everything at fixed intervals wastes resources and may miss real risks. You will learn to plan inspection based on risk.

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

RBI assessment exercises, damage mechanism workshops, case studies and planning tasks.

Course objectives

By the end of this course, participants will be able to:
• Explain risk-based inspection principles
• Identify damage mechanisms
• Assess probability of failure
• Assess consequence of failure
• Develop risk-based inspection plans
• Integrate RBI into integrity management

Target audience

This course is suitable for:
• Inspection and integrity engineers
• Corrosion engineers
• Maintenance engineers
• Plant engineers
• Inspection supervisors



Course content

Target competencies

Participants will develop competencies in:

- Damage mechanism assessment
- Risk analysis
- Inspection planning
- Data management
- Integrity management

Course outline

Day 1: RBI Principles

09:00–10:08	Why RBI
10:08–11:00	Standards
11:00–11:30	**Coffee break**
11:30–11:45	Standards (continued)
11:45–12:53	Methodology
12:53–14:00	Exercise

Day 2: Damage Mechanisms

09:00–10:08	Corrosion mechanisms
10:08–11:00	Cracking
11:00–11:30	**Coffee break**
11:30–11:45	Cracking (continued)
11:45–12:53	Mechanical damage
12:53–14:00	Workshop

Day 3: Probability of Failure

09:00–10:08	Factors
10:08–11:00	Inspection effectiveness
11:00–11:30	**Coffee break**



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11:30–11:45	Inspection effectiveness (continued)
11:45–12:53	Calculations
12:53–14:00	Exercise

Day 4: Consequence of Failure

09:00–10:08	Safety, environment and business
10:08–11:00	Release modelling basics
11:00–11:30	**Coffee break**
11:30–11:45	Release modelling basics (continued)
11:45–12:53	Risk matrices
12:53–14:00	Case study

Day 5: Inspection Plans

09:00–10:08	Plan development
10:08–11:00	Software tools
11:00–11:30	**Coffee break**
11:30–11:45	Software tools (continued)
11:45–12:53	Programme integration
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 GBP, excluding unconfirmed taxes.

Venue	Start date	End date	Fee (GBP)
Vienna Confirmed dates	16 Nov 2026	20 Nov 2026	**£5,880.–**
Online Confirmed dates	16 Nov 2026	20 Nov 2026	**£1,250.–**
Rome Confirmed dates	7 Dec 2026	11 Dec 2026	**£4,900.–**
Online Confirmed dates	7 Dec 2026	11 Dec 2026	**£1,250.–**
Cape Town Confirmed dates	11 Jan 2027	15 Jan 2027	**£3,780.–**
Online Confirmed dates	11 Jan 2027	15 Jan 2027	**£1,250.–**
Paris Confirmed dates	1 Feb 2027	5 Feb 2027	**£5,720.–**
Online Confirmed dates	1 Feb 2027	5 Feb 2027	**£1,250.–**
Istanbul Confirmed dates	15 Feb 2027	19 Feb 2027	**£5,300.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (GBP)
Online Confirmed dates	15 Feb 2027	19 Feb 2027	**£1,250.-**
Frankfurt Confirmed dates	8 Mar 2027	12 Mar 2027	**£5,300.-**
Online Confirmed dates	8 Mar 2027	12 Mar 2027	**£1,250.-**
Kuala Lumpur Confirmed dates	29 Mar 2027	2 Apr 2027	**£2,900.-**
Online Confirmed dates	29 Mar 2027	2 Apr 2027	**£1,250.-**
Barcelona Confirmed dates	19 Apr 2027	23 Apr 2027	**£5,680.-**
Online Confirmed dates	19 Apr 2027	23 Apr 2027	**£1,250.-**
Dubai Confirmed dates	10 May 2027	14 May 2027	**£6,300.-**
Online Confirmed dates	10 May 2027	14 May 2027	**£1,250.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (GBP)
Rome Confirmed dates	24 May 2027	28 May 2027	**£4,900.-**
Online Confirmed dates	24 May 2027	28 May 2027	**£1,250.-**
Vienna Confirmed dates	14 Jun 2027	18 Jun 2027	**£5,880.-**
Online Confirmed dates	14 Jun 2027	18 Jun 2027	**£1,250.-**
Dubai Confirmed dates	5 Jul 2027	9 Jul 2027	**£6,300.-**
Online Confirmed dates	5 Jul 2027	9 Jul 2027	**£1,250.-**
Rome Confirmed dates	26 Jul 2027	30 Jul 2027	**£4,900.-**
Online Confirmed dates	26 Jul 2027	30 Jul 2027	**£1,250.-**
Barcelona Confirmed dates	16 Aug 2027	20 Aug 2027	**£5,680.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (GBP)
Online Confirmed dates	16 Aug 2027	20 Aug 2027	**£1,250.-**
Amsterdam Confirmed dates	30 Aug 2027	3 Sept 2027	**£5,080.-**
Online Confirmed dates	30 Aug 2027	3 Sept 2027	**£1,250.-**
London Confirmed dates	20 Sept 2027	24 Sept 2027	**£4,900.-**
Online Confirmed dates	20 Sept 2027	24 Sept 2027	**£1,250.-**
Cape Town Confirmed dates	11 Oct 2027	15 Oct 2027	**£3,780.-**
Online Confirmed dates	11 Oct 2027	15 Oct 2027	**£1,250.-**
London Confirmed dates	1 Nov 2027	5 Nov 2027	**£4,900.-**
Online Confirmed dates	1 Nov 2027	5 Nov 2027	**£1,250.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (GBP)
Dubai Confirmed dates	22 Nov 2027	26 Nov 2027	**£6,300.-**
Online Confirmed dates	22 Nov 2027	26 Nov 2027	**£1,250.-**
Cape Town Confirmed dates	6 Dec 2027	10 Dec 2027	**£3,780.-**
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 UK 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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View the latest course details online