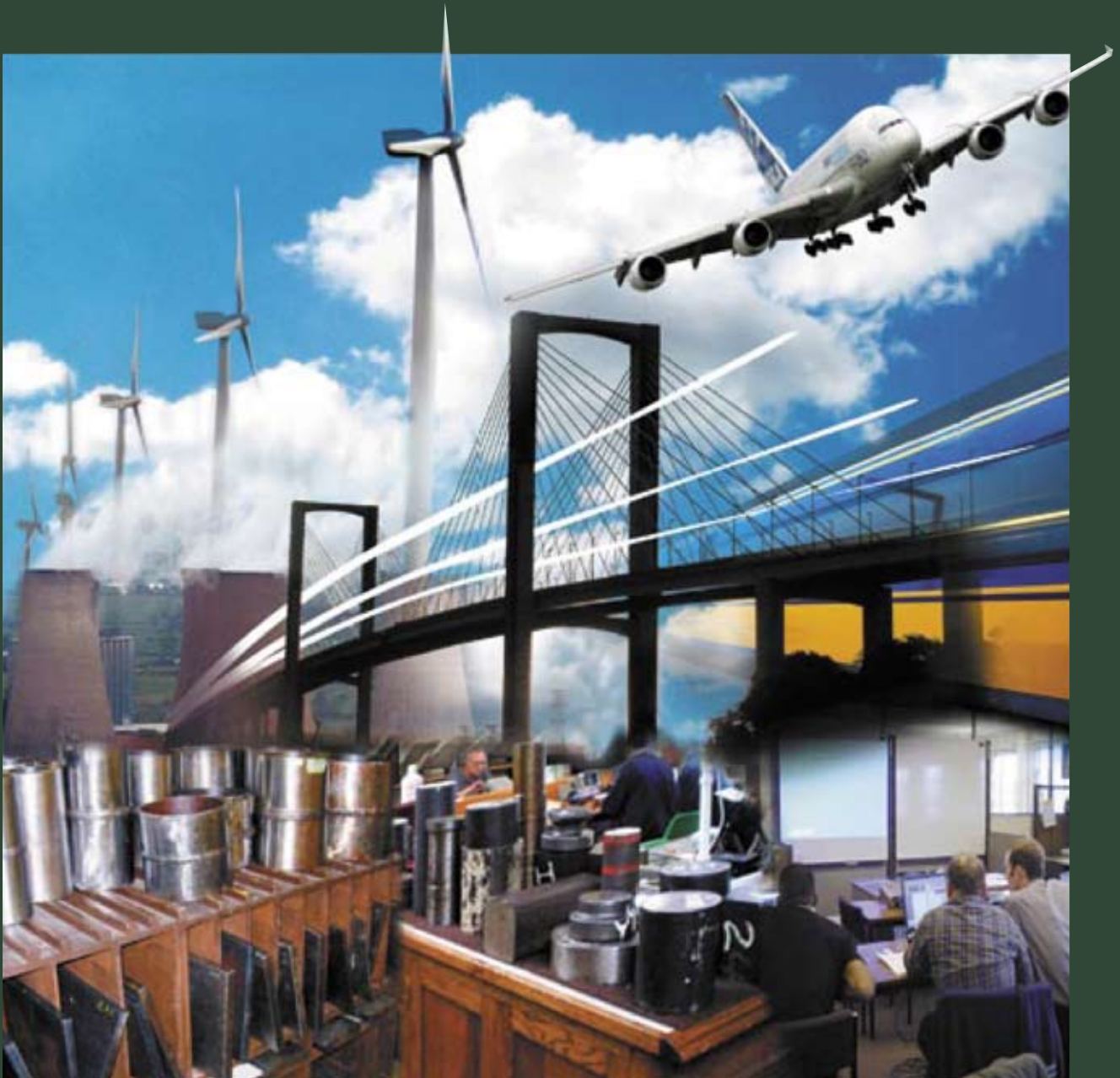


ARGYLL-RUANE LTD

Incorporating

**Ruane & T P O'Neill (Training) • Northern Test Centre (Examinations)
Level III Services (Consultancy)**

Established 1985



PCN • NAS-410 • EN 4179
ICorr • ASNT • BGAS-CSWIP

**TRAINING, EXAMINATIONS & LEVEL III SERVICES IN
INSPECTION & NON-DESTRUCTIVE TESTING**

ABOUT THIS BOOKLET

We are pleased to introduce you to the range of services offered by Ruane & T P O'Neill, Northern Test Centre and Level III Services, as operating divisions of **Argyll-Ruane Ltd**, via our latest information booklet. Many of the courses prepare candidates for a wide variety of examinations and requests for additional information can be made via any of the communication routes listed below. Further information sheets are available to cover course dates, venues, course fees, examination fees and local accommodation. We look forward to being of assistance.

Ruane & T P O'Neill, a division of Argyll-Ruane Ltd, have training centres based in the UK and offer a range of courses at additional venues both in the United Kingdom and overseas. (Certification venues are also available in the UK and overseas).

More than thirty standard courses are available in the subjects of quality assurance, coating inspection, weld inspection, non-destructive testing and associated disciplines; these have been designed to meet your needs, especially relating to the certification routes of **ICorr, ASNT, PCN, BGAS-CSWIP, CSWIP, EN 473, ISO 9712, EN 4179, NAS-410, Metascop** and **API-RP2X**.

Each year in the order of 3,000 people plan their future through Argyll-Ruane Ltd.

For the private student:

Obtaining the correct certification will provide job opportunities all over the world; the possibilities are limited only by motivation and ambition.

For the company:

Many of the courses offered are in standard form, however, most can be tailored in content and duration to suit individual company needs both in-centre and on-site.

Many of the courses can be taken in combination, this can be especially beneficial for overseas clients wishing to make the most of their training programmes.

When training is being considered, the range of courses we offer, our flexibility and quality of service are second to none. A major factor is that our pricing policies remain as competitive as ever and with the existing customer discount scheme relating to course provision, clients are able to obtain quality training at very cost effective levels.

The company is closely linked to industry and is a member of the following organisations:

- > **The British Institute of Non-Destructive Testing**
- > **Institute of Corrosion**
- > **Pipeline Industries Guild**
- > **British Standards Institute**
- > **The American Society of Non-Destructive Testing**
- > **BAC (British Accreditation Council Recognised)**
- > **ELCAS (UK Armed Forces Recognised)**

Courses are recognised by the appropriate examination schemes as part of the approved training routes into the various subjects.

Specific accreditation is held by Argyll-Ruane for PCN and ICorr courses, in addition to a number of employer based certification routes, i.e. Rolls Royce, Agusta Westland, Airbus and BAE.

Whilst the examinations will test for knowledge and understanding, the training will ensure that candidates have the technical competence necessary to do the work and more.

*Remember our reputation is based on success
- the success of our clients*

A PROFESSIONAL SERVICE BY PROFESSIONAL PEOPLE

Argyll-Ruane Ltd

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Training Courses

COATING INSPECTION	Course Code	Page
Painting Inspector Level 1 (ICorr)	RTO/QA22	3
Painting Inspector Level 2 (ICorr)	RTO/QA23	3
Painting Inspector Level 3 (ICorr)	RTO/QA24	3
Painting Inspector Review & Update (ICorr)	RTO/QA31	4
Painting Inspector Grade 3 & 2 (BGAS-CSWIP)	RTO/QA4	4
Senior Painting Inspector - Grade 1 (BGAS-CSWIP)	RTO/QA16	4
Pipeline Coatings Inspector Level 2 (ICorr)	RTO/QA27	5
Pipeline Coatings Inspector (Review & Update)	RTO/QA32	5
Site Coating Inspector (BGAS-CSWIP)	RTO/QA3	5
Cathodic Protection Technician Level 1/2 (ICorr) (Reinforced Concrete Structures)	RTO/QA25 a/b	6
Cathodic Protection Technician Level 1/2 (ICorr) (Buried Applications - Underground Immersed Metallic Structures)	RTO/QA26 a/b	6/7
Hot Dip Galvanizing Inspector (ICorr)	RTO/QA30	7
Insulation Inspector Level 2 (ICorr)	RTO/QA28	8
Fire Proofing Inspector Level 2 (ICorr)	RTO/QA29	8
Painting Inspector Transition BGAS-CSWIP To ICorr	RTO/QA35	9
Painting Inspector Transition NACE To ICorr	RTO/QA36	9
Site/Mill Coating Inspector Transition BGAS-CSWIP To ICorr	RTO/QA37	9
NON-DESTRUCTIVE TESTING		
Eddy Current Level 1	RTO/EC1	2
Eddy Current Level 2	RTO/EC2	2
Non-destructive Testing, An Appreciation	RTO/NDT4	10
Ultrasonic Testing - An Introduction	RTO/UT1	10
Ultrasonic Testing - Practical (Revision/Upgrade)	RTO/UT2	10
Ultrasonic Testing, Pre-Approval	RTO/UT3	11
Ultrasonic Testing Critical Defect Sizing	RTO/UT8	11
Ultrasonic Testing PCN Level 3	RTO/UT11	11
Radiographic Testing Of Welds (Theory/Practical)	RTO/IR7	12
Radiation Safety (Basic)	RTO/IR3A	12
Radiation Safety (Supervisor)	RTO/IR3B	12
Radiographic Interpretation	RTO/IR2	13
Magnetic Particle/Penetrant Testing Exam Revision	RTO/ST2	13
Magnetic Particle Testing, Pre-Approval	RTO/ST5	14
Magnetic Particle Testing PCN Level 3	RTO/ST8	14
Penetrant Testing, Pre-Approval	RTO/ST6	14
Penetrant Testing PCN Level 3	RTO/ST9	15

ASNT Level III Revision courses are available in UT, MT, PT, RT, VT, ET and Thermography.

Training Courses

WELD INSPECTION	Course Code	Page
Weld Inspector Level 1 (PCN)	RTO/QAV1	16
Weld Inspector Level 2 (PCN)	RTO/QA7	16
Weld Inspector Level 3 (PCN)	RTO/QA17	16
Welding Inspection Pipelines (BGAS-CSWIP)	RTO/QA11	17
Welding Inspection (10 Year) Revision	RTO/QA9	17
 INSPECTION, QA & APPRECIATION		
Thermography	RTO/T	2
Visual Testing (PCN)	RTO/QA21	18
Pipeline Agricultural/environmental Inspector (BGAS-CSWIP)	RTO/QA19	18
Metascop, Pre-Approval	RTO/M	19
Product Technology	RTO/NDT5	19
NDT/Inspection Training	RTO/UT6	20

A number of specialist modules exist for training, including aerospace, covering non-destructive testing methods (ultrasonics, magnetic particle, penetrant, radiographic testing and eddy current), plus acid etch, hardness testing, conductivity testing and anodic testing.

Examinations

Examination Services	21
ICorr Examinations	22
PCN Examinations (EN 473 / ISO 9712)	23
ASNT, EN 4179 and NAS 410 Examinations	24
BGAS-CSWIP Examinations	25

*Level III Services - Many companies need level III services, we can provide comprehensive services which can be tailored to suit individual and company requirements.
See Pages 15, 17, 18, 19 & 24.*

NEW COURSES AVAILABLE:

*Eddy Current (Welds) • Ultrasonic TOFD • Thermography • Auto-UT Interpretation
Magnetics Rail • Penetrant Rail • UT "Phasor"*

Contact our Course Director on +44 (0)1709 560459 for more details.

Painting Inspector ICorr Level 1

Course Code: RTO/QA22
Duration: 5 days

Description

This course is approved by the Institute of Corrosion (UK) and is designed to prepare individuals for the ICorr Painting Inspector Level 1 examination.

The course is suitable for candidates with or without experience in industrial painting or inspection and will also be applicable to those who require a knowledge of painting inspection but do not wish to take an examination. Most of the paint systems used in industry are addressed plus an awareness is given of other coating systems used for anti-corrosion reasons.

Course Content

- > QA, QC and inspection (basics)
- > Normative documents
- > Corrosion (iron and steel)
- > Surface preparation (ferrous)
- > Tests to detect surface contamination
- > Coating categories/types
- > Main paint constituents
- > Paint drying and curing
- > Corrosion protection methods (basics)
- > Layers of a paint film
- > Types of paint systems
- > Paint data sheets
- > Paint/paint film testing
- > Weather conditions
- > Paint application methods
- > Coating faults
- > Health and safety
- > Environmental considerations
- > Reporting
- > Standards applicable

Pre-requisites for attending this course
None.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

- (1) A course for anyone who wishes to become a painting inspector.
- (2) The course content is largely theoretical but involves hands on experience with relevant inspection equipment.
- (3) This course covers general information suitable for BGAS-CSWIP certification routes but does not give specific British Gas/National Grid detail.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Painting Inspector ICorr Level 2

Course Code: RTO/QA23
Duration: 5 days

Description

This course is approved by the Institute of Corrosion (UK) and is designed to prepare ICorr Level 1 Painting Inspectors for the Level 2 examination.

Any information in the syllabus below, which is repeated from the Level 1 syllabus, is dealt with in greater depth and in some cases involves practical usage of equipment, e.g. use of density cups, flow cups, contamination testing and using electromagnetic d.f.t. instruments with statistical capabilities.

Course Content

- > Review of Level 1 requirements
- > QA, QC and inspection
- > Document control
- > Equipment control and calibration
- > Production of written instructions
- > Interpretation of normative documents
- > Corrosion
- > Control and testing of blasting abrasives
- > Contamination testing
- > Paint formulation
- > Coating systems
- > Paint manufacture
- > Paint/paint film testing
- > Hygrometers
- > Application of metal coatings
- > Coating faults
- > Paint colours - coding systems
- > Cathodic protection

Pre-requisites for attending this course

ICorr Level 1 Painting Inspector certification or attendance of ICorr Level 1 Painting Inspector course.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

- (1) The course content is largely theoretical but involves hands on experience with relevant inspection equipment.
- (2) This course covers general information suitable for BGAS-CSWIP certification routes but does not give specific British Gas/National Grid detail.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Painting Inspector ICorr Level 3

Course Code: RTO/QA24
Duration: 4 days

Description

This course is approved by the Institute of Corrosion (UK) and is designed to prepare ICorr Level 2 Painting Inspectors for the Level 3 examination.

Quality management of industrial protective treatment projects, procedure writing, awareness of material developments and report writing are the main aspects of the course. Corrosion is dealt with to a greater extent compared to Level 2 and an extended range of topics includes GRP composites, preservation of timbers and painting and waterproofing of concrete structures.

Course Content

- > Quality documentation
- > Standards
- > Basic metallurgy
- > Corrosion mechanisms
- > Geomagnetically induced currents
- > Corrosion under insulation
- > Negative buoyancy coatings
- > Treatment of structural timbers
- > Tanking of concrete fabrications
- > Structural GRP composites
- > Leadership skills
- > Procedure writing
- > Report writing
- > Libel and slander

Pre-requisites for attending this course

ICorr Painting Inspector Level 2 certification.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Course recognition

This course is approved by the Institute of Corrosion (UK).

For prices and availability - see separate information sheets

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Painting Inspector (Review & Update) ICorr

Course Code: RTO/QA31
Duration: 1 day

Description

This one day course is approved by the Institute of Corrosion (UK) and allows ICorr certificated Painting Inspectors to extend their qualification for a further five years without examination providing that an examination (or transition) was successfully completed within the last five years.

The course is designed to review the information applicable to the Painting Inspector syllabus at all levels and gives update information on standards, technical developments and trends.

- > Relevant subject areas within the ICORR REQ DOC
- > The ICorr certification scheme
- > Paint application methods
- > Changes to normative documents (primarily ISO, EN and BSI standards)
- > Equipment for surface preparation, paint application and paint/paint film testing
- > Practices and trends

Pre-requisites for attending this course
Current ICorr certification in Painting Inspection (any level).

Examination booking

Not directly applicable, but attendance of this course does **not** automatically renew existing certification. Each candidate will be required to complete a Recertification Application Form which are available from the ICorr Test Centre.

Special notes

- (1) All course notes and handouts are issued which apply to the 5 day Painting Inspector course at the applicable level.
- (2) This course satisfies the requirements of the ICORR REQ DOC.

Course recognition

This course is approved by the Institute of Corrosion (UK).

DISTANT RECERTIFICATION MAY BE APPLICABLE. PLEASE ENQUIRE.

Painting Inspector BGAS-CSWIP Grade 3 & 2

Course Code: RTO/QA4
Duration: 5 days

Description

This course is suitable for candidates with or without experience in industrial painting. This course addresses numerous paint types and systems used in the construction industry. The course is largely theoretical but involves hands-on experience with relevant inspection equipment.

Most candidates attending this course would go on to attempt the BGAS-CSWIP Painting Inspector Grade 3/2 approval.

Course Content

- > Corrosion theory
- > Surface preparation
- > Paint formulation
- > Paint systems
- > Curing and drying
- > Paint manufacture
- > Application methods
- > Paint/paint film testing
- > Paint identification
- > Inspection methods
- > Specification requirements
- > Health and safety
- > Working practices

Pre-requisites for attending this course
None.

Examination booking

Via Customer Services for Examinations at TWI.

Special notes

- (1) Colour blind candidates are able to attempt BGAS-CSWIP Painting Inspector approvals.
- (2) A course with a bias towards British Gas/National Grid painting practices.

Course recognition

This course is an excellent preparation for BGAS-CSWIP certification routes.

Painting Inspector BGAS-CSWIP Grade 1

Course Code: RTO/QA16
Duration: 3 or 5 days

Description

This course is aimed at experienced painting inspectors who wish to upgrade to BGAS-CSWIP Painting Inspector Grade 1. The course is therefore structured to primarily deal with advanced offshore coating systems and associated working methods.

Revision of onshore painting systems, including information to BGAS-CSWIP Painting Inspector Grade 2 requirements is also included in the first two days.

Course Content

- > Revision of Grade 2 and 3 subject areas
- > Paint technology - advanced
- > Paint testing - advanced
- > Insulation
- > Quality assurance
- > Offshore working practices environment and safety
- > Offshore structures
- > Offshore painting standards and related normative documents
- > Terminology used offshore
- > Fire proofing (basics)

Pre-requisites for attending this course
BGAS-CSWIP Painting Inspector Grade 2 or 3.

Examination booking

Via Customer Services for Examinations at TWI.

Special notes

- (1) Candidates who feel confident about their current knowledge of Grade 3/2 requirements may opt to only take the last three days of the course which deals specifically with offshore Grade 1 requirements.

Course recognition

This course is an excellent preparation for BGAS-CSWIP certification routes.

For prices and availability - see separate information sheets

Pipeline Coatings Inspector ICorr Level 2

Course Code: RTO/QA27
Duration: 3 or 5 days

Description

This course is approved by the Institute of Corrosion (UK) and is designed to prepare individuals for the ICorr Pipeline Coatings Inspector Level 2 examination.

Inspection of coatings (over fifteen types) applied in both the factory and field are addressed. The 5 day course is suitable for all candidates. A 3 day version is available for ICorr Painting Inspectors who do not want to revisit the subject areas common to both Painting Inspection and Pipeline Coating Inspection.

Course Content

- > Quality assurance and document control
- > Equipment control and calibration
- > Inspection and quality control
- > Normative documents
- > Epoxy resin powder coatings
- > Enamel coatings
- > Multi-component liquids
- > Wrapping tapes
- > Elastomeric coatings
- > Polyolefins/plastic coatings
- > Fillers
- > Surface preparation
- > Internal coatings
- > Application methods
- > Advantages/disadvantages of systems
- > Repair methods
- > Inspection methods
- > Ditching and backfill
- > Cathodic protection
- > Standards
- > Health and safety
- > Pearson survey
- > Handling and storage

Pre-requisites for attending this course

None if attending the 5 day course; ICorr Painting Inspector certification (any level) if attending the 3 day course.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

- (1) The 3 day course is suitable for ICorr Painting Inspectors.
- (2) Painting inspectors should revise their ICorr Painting Inspector information, especially the surface preparation detail, if attending the 3 day course.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Pipeline Coatings Inspector (Review & Update) ICorr

Course Code: RTO/QA32
Duration: 1 day

Description

This one day course is approved by the Institute of Corrosion (UK) and allows ICorr certificated Pipeline Coatings Inspectors to extend their qualification for a further five years without examination providing that an examination (or transition) was successfully completed within the last five years.

The course is designed to review the information applicable to the Pipeline Coatings Inspector syllabus at all levels and gives update information on standards, technical developments and trends.

- > Relevant subject areas within the ICORR REQ DOC
- > The ICorr certification scheme
- > Changes to normative documents (primarily ISO, EN and BSI standards)
- > Any new pipeline coating materials introduced
- > Any new pipeline coating application procedures
- > Trends

Pre-requisites for attending this course

Current ICorr certification in Pipeline Coatings Inspection.

Examination booking

Not directly applicable, but attendance of this course does not automatically renew your existing certification. Each candidate will be required to complete a Recertification Application Form which are available from the ICorr Test Centre.

Special notes

- (1) All course notes and handouts are issued which apply to the 3 day Pipeline Coatings course and the 5 day Painting Inspector Level 1 course.
- (2) This course satisfies the requirements of the ICORR REQ DOC.

Course recognition

This course is approved by the Institute of Corrosion (UK).

**DISTANT RECERTIFICATION MAY
BE APPLICABLE.
PLEASE ENQUIRE.**

Site Coatings Inspector BGAS-CSWIP

Course Code: RTO/QA3
Duration: 5 days

Description

This course is suitable for candidates with or without experience in the coatings industry. It is a course which has been developed to meet the requirements of the BGAS-CSWIP scheme and is therefore only applicable to coatings applied to underground pipelines. Fifteen coatings systems are dealt with in total.

This is an ideal course for pipeline inspectors who wish to become more versatile in the inspection field and also helps towards senior inspector approval grades at a later date.

Course Content

- > Epoxy resin powder coatings
- > Multi-component liquids
- > Wrapping tapes
- > Enamel coatings
- > Polyethylene cladding
- > Internal coatings
- > Surface preparation
- > Application methods
- > Advantages and disadvantages of systems
- > Repair methods
- > Inspection methods
- > Ditching and backfill
- > Cathodic protection
- > Relevant specifications
- > Health and safety
- > Pearson survey
- > Concrete coatings (appreciation)
- > Handling and storage

Pre-requisites for attending this course

None.

Examination booking

Via Customer Services for Examinations at TWI.

Special notes

This course does **not** cover painting inspection (see RTO/QA4) although there is some overlap especially on surface preparation.

Course recognition

This course is an excellent preparation for BGAS-CSWIP certification routes.

For prices and availability - see separate information sheets

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**Cathodic Protection Technician
Reinforced Concrete Structures
ICorr Level 1**

Course Code: RTO/QA25a
Duration: 5 days Monday - Friday
(or 1 day over 5 weeks)

Description

This course is approved by the Institute of Corrosion (UK) and is recognised by the Corrosion Prevention Association.

The course and examination are in compliance with BS EN 15257:2006. The course is designed to prepare individuals for the ICorr Cathodic Protection of Reinforced Concrete Structures Level 1 examination and is suitable for candidates with or without experience in cathodic protection, **but note that full certification** to this level requires a minimum duration of approved experience; see separate panel headed '**Certification to BS EN 15257**'.

The course is also suitable for those who merely require an appreciation of the protection of reinforced concrete structures without pursuing certification.

Course Content

The topics of this course are fully set out and described in BS EN 15257 at Annex B1 and B2.

The rules governing training, examination and certification are set out in ICorr REQ DOC (CP) a copy of which can be obtained fee of charge by email from Argyll-Ruane (enquiries@ruanetpo.com)

Pre-requisites for attending this course
None.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

The course is scheduled both as a 5 day course Monday to Friday, and on a *ad hoc* basis as a 1 day per week over 5 weeks, course at various venues.

Course recognition

This course is approved by the Institute of Corrosion (UK) and by the Corrosion Prevention Association.

**Cathodic Protection
Technician
Reinforced Concrete Structures
ICorr Level 2**

Course Code: RTO/QA25b
Duration: 5 days Monday - Friday
(or 1 day over 5 weeks)

Description

This course is approved by the Institute of Corrosion (UK) and is recognised by the Corrosion Prevention Association.

The course and examination are in compliance with BS EN 15257:2006. The course is designed to prepare individuals for the ICorr Cathodic Protection of Reinforced Concrete Structures Level 2 examination and is suitable for candidates with the requisite qualifying experience; see separate panel headed '**Certification to BS EN 15257**'.

The course is also suitable for those who took the Level 1 training course and merely require and appreciation of the protection of reinforced concrete structures at this higher level without pursuing certification.

Course Content

The topics of this course are fully set out and described in BS EN 15257 at Annex B1 and B2. The rules governing training, examination and certification are set out in ICorr REQ DOC (CP) a copy of which can be obtained fee of charge by email from Argyll-Ruane (enquiries@ruanetpo.com)

Pre-requisites for attending this course

Either holding ICorr Level 1 Cathodic Protection Technician; Reinforced Concrete Structures and having at least 1 years approved experience or, where the applicant does not hold ICorr Level 1 Cathodic Protection Technician, Reinforced Concrete Structures certification, has attended the ICorr Level 1 Cathodic Protection, Reinforced Concrete Structures training course and satisfies the educational and experience requirements set out in ICorr REQ DOC (CP) or where the applicant does not satisfy either of the above, by satisfying the additional requirements as to educational and experience requirements as set out in ICorr REQ DOC (CP) at table 2.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

The course is scheduled both as a 5 day course Monday to Friday, and on a *ad hoc* basis as a 1 day per week over 5 weeks, course at various venues.

Course recognition

This course is approved by the Institute of Corrosion (UK) and by the Corrosion Prevention Association.

**Cathodic Protection Technician
Buried Applications (Underground
& Immersed Metallic Structures)
ICorr Level 1**

Course Code: RTO/QA26a
Duration: 5 days

Description

These courses are approved by the Institute of Corrosion (UK).

The course and examination are in compliance with BS EN 15257:2006. The course is designed to prepare individuals for the ICorr Cathodic Protection of Buried Applications (Underground and immersed metallic structures) Level 1 examination and is suitable for candidates with or without experience in cathodic protection but note that full certification to the level requires a minimum duration of approval experience; see separate panel headed '**Certification to BS EN 15257**'.

The course is also suitable for those who merely require an appreciation of the protection Buried Applications (Underground and immersed metallic structures) without pursuing certification.

Course Content

The topics of this course are fully set out and described in BS EN 15257 at Annex B1 and B2.

The rules governing training, examination and certification are set out in ICorr REQ DOC (CP) a copy of which can be obtained fee of charge by email from Argyll-Ruane (enquiries@ruanetpo.com)

Pre-requisites for attending this course
None.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

This course is scheduled as a 5 day course Monday to Friday.

Course recognition

This course is approved by the Institute of Corrosion (UK).

For prices and availability - see separate information sheets

Cathodic Protection Technician Buried Applications (Underground & Immersed Metallic Structures) ICorr Level 2

Course Code: RTO/QA26b
Duration: 5 days

Description

These courses are approved by the Institute of Corrosion (UK).

The course and examination are in compliance with BS EN 15257:2006. The course is designed to prepare individuals for the ICorr Cathodic Protection of Buried Applications (Underground and immersed metallic structures) Level 2 examination and is suitable for candidates with the requisite qualifying experience; see separate panel headed '**Certification to BS EN 15257**'.

The course is also suitable for those who took the Level 1 training course and merely require and appreciation of the protection of Buried Applications (Underground and immersed metallic structures) at this higher level without pursuing certification.

Course Content

The topics of this course are fully set out and described in BS EN 15257 at Annex B1 and B2. The rules governing training, examination and certification are set out in ICorr REQ DOC (CP) a copy of which can be obtained free of charge by email from Argyll-Ruane (enquiries@ruanetpo.com)

Pre-requisites for attending this course

Either holding ICorr Level 1 Cathodic Protection Technician; Buried Applications (Underground and immersed metallic structures) and having at least 1 years approved experience or, where the applicant does not hold ICorr Level 1 Cathodic Protection Technician, Buried Applications (Underground and immersed metallic structures) certification, has attended the ICorr Level 1 Cathodic Protection Technician Buried Applications (Underground and immersed metallic structures) training course and satisfies the educational and experience requirements set out in ICorr REQ DOC (CP) or where the applicant does not satisfy either of the above, by satisfying the additional requirements as to educational and experience requirements as set out in ICorr REQ DOC (CP) at table 2.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

This course is scheduled as a 5 day course Monday to Friday.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Certification to BS EN 15257: Cathodic Protection - Competence levels and certification of cathodic protection personnel.

To qualify for full certification to Level 1 and Level 2, applicants must have:

1. Had the required approved period of training
2. Passed the relevant examination.
3. Have the required period of experience as defined in the standard. The acceptability of the claimed period of experience will be assessed by ICorr.

Candidates who have had the required period of approved training and pass the examination but who are deemed by ICorr to not have had acceptable experience will be issued with a letter from the Scheme Manager attesting that the candidate has passed the examination but that full certification will not be issued until the experience requirements have been fulfilled. Any certification issued will attest that the **examination** has been passed.

Hot Dip Galvanizing Inspector ICorr

Course Code: RTO/QA30
Duration: 1½ days

Description

This course is approved by the Institute of Corrosion (UK) and produced with the assistance of the Galvanizers Association. The course is designed to prepare individuals for the ICorr Hot Dip Galvanizing Inspector examination which may be taken on the second half of the second day of the course or on any other weekday thereafter provided the examination is taken within 90 days of the end of the course.

Course Content

Topics include:

- > HDG overview
- > Corrosion mechanisms
- > Surface preparation
- > Galvanizing chemistry
- > Inspection overview
- > Organic coating on galvanizing
- > Testing of galvanizing
- > Coating Faults
- > Handling and storage
- > Coating repair methods

Pre-requisites for attending this course

None.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Course recognition

This course is approved by the Institute of Corrosion (UK).

For prices and availability - see separate information sheets

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Insulation Inspector ICorr Level 2

Course Code: RTO/QA28
Duration: 2 or 3 days

Description

This course is approved by the Institute of Corrosion (UK) and is designed to prepare individuals for the ICorr Insulation Inspector Level 2 examination.

This course assumes all candidates hold an ICorr Painting Inspector approval (any level) and therefore have some knowledge of inspection philosophy. Some corrosion and coating knowledge is also important for the insulation inspector due to the large amount of corrosion problems which have arisen under insulation.

Inspection of both thermal (hot and cold) insulation and acoustic insulation is covered and is applicable to pipework, vessels and equipment used in the gas, oil and process industries.

Course Content

- > Quality assurance
- > Inspection and quality control
- > Normative documents
- > Insulation systems
- > Insulating materials
- > Protective coverings
- > Fixings
- > Insulation design (basic)
- > Application of insulation
- > Scaffolding
- > Handling and storage of materials
- > Health and safety considerations
- > Common problems encountered
- > Reporting
- > Standards applicable

Pre-requisites for attending this course

ICorr Painting Inspector certification (any level) if ICorr examination is required. None, if course is used for information only.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

A 3 day course route to certification is available without holding a Painting Inspector approval - please enquire.

Fire proofing is not covered in this course; see RTO/QA29.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Fire Proofing Inspector ICorr Level 2

Course Code: RTO/QA29
Duration: 1 or 2 days

Description

This course is approved by the Institute of Corrosion (UK) and is designed to prepare individuals for the ICorr Fire Proofing Inspector Level 2 examination.

This course assumes all candidates hold ICorr Painting Inspector approval (any level) and therefore have knowledge of inspection philosophy, surface preparation, anti-corrosion coatings and how to use common inspection instruments. The course will cover the inspection of common types of Passive Fire Protection as found on hydrocarbon installations for both on and offshore facilities. This will include structural members, decks and bulkheads and storage or process tanks and associated pipework. Mechanically fixed methods are not covered.

Course Content

- > Quality assurance
- > Inspection and quality control
- > Normative documents
- > Design of passive fire protection
- > Fire classifications/fire types
- > Risk analysis
- > Certification
- > Blast cleaning requirements
- > Pinning
- > Priming
- > Reinforcement systems
- > Material types/material application
- > Material removal and repair
- > Scaffolding
- > Handling and storage of materials
- > Health and safety considerations
- > Common problems encountered
- > Reporting
- > Standards applicable

Pre-requisites for attending this course

ICorr Painting Inspector certification (any level) if ICorr examination is required. None, if course is used for information only.

Examination booking

Contact ICorr Test Centre: 01709 550999.

Special notes

A 2 day course route to certification is available without holding a Painting Inspector approval - please enquire.

This course primarily deals with coatings used for fire proofing in the gas, oil, power and process industries.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Degree ?

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For prices and availability - see separate information sheets

Painting Inspector Transition

BGAS-CSWIP Painting Inspector to ICorr Painting Inspector

Course Code: RTO/QA35
Duration: 1 day

Description

This is one of a series of combined 1 day courses and examinations for painting inspectors certificated under other schemes and who wish to gain recognition under the ICorr scheme.

These intensive courses concentrate mainly on those topics and basic approaches in training which are different in the various other schemes compared with the level of ICorr desired by the candidate. The courses finish with short written (and practical, where appropriate) examinations.

The aim of this concept is to ensure similar scope and depth of subject topics has been taught to all ICorr certificate holders irrespective of the scheme from which they may have transitioned. This will help bring parity and harmonisation between schemes, for the ultimate benefit of both professional painting inspectors and their customers.

This course is approved by the Institute of Corrosion (UK) and is designed to accommodate BGAS-CSWIP Grade 3, 2 or 1 inspectors who wish to transition to ICorr. Level 1 or Level 2 ICorr qualification may be gained by this route and depends on the level of competence demonstrated by the candidate in examination at the end of the course.

Course Content

- > Elementary electrochemical theory
- > Interpretation of normative documents
- > Inspection and testing of blasting abrasives
- > Equipment control and calibration
- > Contamination testing
- > Production of written instructions
- > Appreciation of coating types including metal coatings, pipe coatings, fire proofing and anti-foulings
- > Coating faults
- > Colour of paints

Pre-requisites for attending this course

BGAS-CSWIP Painting Inspector certification, any grade.

Examination booking

Combined with the course.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Painting Inspector Transition

NACE Coating Inspector to ICorr Painting Inspector

Course Code: RTO/QA36
Duration: 1 day

Description

This is one of a series of combined 1 day courses and examinations for painting inspectors certificated under other schemes and who wish to gain recognition under the ICorr scheme.

These intensive courses concentrate mainly on those topics and basic approaches in training which are different in the various other schemes compared with the level of ICorr desired by the candidate. The courses finish with short written (and practical, where appropriate) examinations.

The aim of this concept is to ensure similar scope and depth of subject topics has been taught to all ICorr certificate holders irrespective of the scheme from which they may have transitioned. This will help bring parity and harmonisation between schemes, for the ultimate benefit of both professional painting inspectors and their customers.

This course is approved by the Institute of Corrosion (UK) and is designed to accommodate NACE Grade 1, 2 or 3 coating inspectors who wish to transition to ICorr. Level 1 or Level 2 ICorr qualification may be gained by this route and depends on the level of competence demonstrated by the candidate in examination at the end of the course.

Course Content

- > Interpretation of European and international normative documents
- > Significance of abrasive types in achieving required surface parameters
- > Inspection and testing of blasting abrasives
- > Equipment control and calibration to European and international standards
- > Contamination testing
- > Production of written instructions
- > Appreciation of coating types including metal coatings, pipe coatings, fire proofing and anti-foulings
- > Coating application faults

Pre-requisites for attending this course

NACE Coating Inspector certification, any grade.

Examination booking

Combined with the course.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Site/Mill Coating Transition

BGAS-CSWIP Site & Mill Coatings Inspector to ICorr Pipeline Coatings Inspector

Course Code: RTO/QA37
Duration: 1 day

Description

This is one of a series of combined 1 day courses and examinations for site coating/mill coating inspectors certificated under other schemes and who wish to gain recognition under the ICorr scheme.

These intensive courses concentrate mainly on those topics and basic approaches in training which are different in the various other schemes compared with the level of ICorr desired by the candidate. The courses finish with short written (and practical, where appropriate) examinations.

The aim of this concept is to ensure similar scope and depth of subject topics has been taught to all ICorr certificate holders irrespective of the scheme from which they may have transitioned. This will help bring parity and harmonisation between schemes, for the ultimate benefit of both professional painting inspectors and their customers.

This course is approved by the Institute of Corrosion (UK) and is designed to accommodate BGAS-CSWIP Site and Mill Coatings Inspectors who wish to transition to ICorr. ICorr Pipeline Coatings Inspector Level 2 qualification may be gained by this route and depends on the level of competence demonstrated by the candidate in examination at the end of the course.

Course Content

- > Elementary electrochemical theory
- > Interpretation of normative documents
- > Equipment control and calibration
- > Surface preparation
- > Epoxy resin powder coatings
- > Fusion bonded epoxy coatings
- > Multi-component liquids
- > Wrapping tapes
- > Elastomeric coatings
- > Polyolefins/plastic coatings
- > Coating faults
- > Repair methods

Pre-requisites for attending this course

BGAS-CSWIP Site Coating Inspector or Mill Coating Inspector certification.

Examination booking

Combined with the course.

Course recognition

This course is approved by the Institute of Corrosion (UK).

Note : Those candidates unable to attend the courses / examinations may opt to undergo assessment by correspondence.

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Non-Destructive Testing, An Appreciation

Course Code: RTO/NDT4
Duration: 3 days

Description

An introduction to the concepts of non-destructive testing; this course is intended for those wanting to achieve a basic understanding of the methods, techniques and role of non-destructive testing in the engineering, fabrication and construction industries.

Extensive hands on experience is available allowing basic tests to be performed. This course is ideal for beginners and can be orientated towards senior managers, consulting engineers, chief inspectors and surveyors, as well as those directly involved in starting a career in non-destructive testing activities who require an initial general approach.

Course Content

- > The main methods of non-destructive testing with demonstrations (including magnetic particle testing, penetrant testing, ultrasonic flaw detection and radiographic interpretation)
- > The limitations of each method of testing
- > Radiographic testing (theory only)
- > Certification schemes
- > Relevant BS, EN and ISO standards/reference sources
- > Reporting criteria
- > Basic Mathematics

Pre-requisites for attending this course
None.

Examination booking
Not applicable.

Special notes

- (1) This is an ideal course for personnel at all levels wanting an overview of common NDT techniques.
- (2) NDT methods applicable; Radiographic Testing, Radiographic Interpretation, Ultrasonic Testing, Magnetic Particle Testing and Penetrant Testing. (Other methods may be introduced, subject to client request).

This course may be linked to Product Technology RTO/NDTS to provide an introduction to PCN

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Ultrasonic Testing, An Introduction

Course Code: RTO/UT1
Duration: 5 days

Description

This course offers a high practical content and relevant theoretical background to enable students to achieve a basic understanding of ultrasonic inspection. Candidates on completion of the course will be able to calibrate a flaw detector with both compression and shear wave probes, record accurate thickness measurements and locate and size laminations in steel plate. In addition students will be able to select the correct compression/shear wave probes for the examination of welded butt joints, locate and size defects and finally produce acceptable reports.

This course can be used to prepare candidates for the BGAS-CSWIP Ultrasonic Plate approval.

Course Content

- > Basic concepts
- > Nature of sound
- > Relevant formulae
- > Wave propagation
- > Types of display
- > Operation of flaw detectors
- > Probes
- > Couplants
- > Defect location and sizing methods
- > Relevant BS and EN standards
- > Use of plotting systems
- > Reporting methods
- > Welding, casting and forging methods (background knowledge)
- > Defects associated with the above processes.

Pre-requisites for attending this course

None. If attempting a PCN examination the requirements of PCN/GEN must be met. If attempting an ASNT examination the requirements of your company's written practice must be met.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

A 5 day course for those with little or no knowledge or experience of ultrasonic techniques.

Course recognition

Excellent preparation for PCN and ASNT certification routes. Also suitable for BGAS-CSWIP Ultrasonic Plate if the BGAS-CSWIP Welding Inspector approval is held.

Ultrasonic Testing Practical (Revision/Upgrade)

Course Code: RTO/UT2
Duration: As required*

Description

A course for those who already have a basic understanding of the techniques of ultrasonic inspection and are wanting intensive instruction to improve their knowledge and increase their experience. The course is suitable for candidates who are wishing to progress towards any of the ultrasonic examination qualifications. The course has a high practical content; all equipment is provided.

Course Content

- > Revision of basic techniques
- > Probe identification
- > Test sensitivity
- > Equipment checks
- > Geometry/ultrasonic technique selection
- > Defect response
- > Practical exercises on a wide variety of weldments
- > Defect sizing methods

Pre-requisites for attending this course

At least a basic understanding of ultrasonic techniques and a knowledge of the controls on an ultrasonic test unit. If attempting a PCN examination the requirements of PCN/GEN must be met. If attempting an ASNT examination the requirements of your company's written practice must be met.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

An ideal course for candidates wishing to improve their skills in the practical use of ultrasonic test methods on weldments.

Course recognition

Excellent preparation for PCN and ASNT certification routes.

*This course provides the option of single or multiple days and provides a very flexible option for candidates undertaking ultrasonic training covering both welds, cast or wrought products.

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Ultrasonic Testing, Pre-Approval

Course Code: RTO/UT3
Duration: 10 days

Description

A course specifically designed for candidates wishing to become certificated as ultrasonic operators under the PCN or ASNT requirements. This course is also suitable for BGAS-CSWIP Full Ultrasonics if BGAS-CSWIP Welding Inspector and Ultrasonic Plate approvals are held. The course may be related to either welds or wrought products and offers a high theoretical and practical content.

Course Content

- > Ultrasound
- > Principles of ultrasonic testing
- > The flaw detector
- > Defect location and sizing techniques
- > The use of calibration and reference blocks
- > Welding methods and associated defects
- > The use of the centre's plotting system
- > Examination of plate material and associated welds
- > Report writing and discussion of relevant BS and EN standards

Pre-requisites for attending this course

None. If attempting a PCN examination the requirements of PCN/GEN must be met. If attempting an ASNT examination the requirements of your company's written practice must be met.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

Students attending this course who wish to attempt a direct, initial approach to PCN Level 2 in Ultrasonics Welds/Cast/Wrought Products must provide the PCN Test Centre with proof of the minimum additional hours formal structured on-the-job training in line with PCN syllabus requirements. If this requirement cannot be met, course RTO/UT2 is an ideal supplementary package or individual days tuition may be organised as required to meet training hour requirements without additional on-site training.

Course recognition

This course is validated by BINDT and recognised by PCN.

Ultrasonic Testing Critical Defect Sizing

Course Code: RTO/UT8
Duration: 3 days

Description

This course is only available to holders of current PCN Level 2 Ultrasonic Practitioner Welds certification which is applicable to at least two groups and held for at least 6 months. The course was developed to assist the technician/engineer in the sizing of defects to within a tolerance level commensurate with the capabilities of the ultrasonic method. Originally designed to meet the objectives of the CEGB module: *Defect Assessment for Fitness for Purpose Inspections - Ultrasonic Test Weld Samples and now available as a PCN examination.*

Course Content

- > Production of beam plots for relevant probes
- > Practical examination of artificial simulations to assess plotting accuracy
- > Discussion of relevant normative documentation including BS and EN standards
- > The production of DAC and sensitivity levels
- > Discussion relating to echo-dynamic patterns
- > Reporting formats
- > Practical defect sizing on a variety of weldments

Pre-requisites for attending this course

PCN Level 2 Ultrasonic Practitioner Welds certification applicable to at least two groups and held for at least 6 months.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

This course includes an end of course practical assessment prior to the independent PCN examination.

Course recognition

Excellent preparation for PCN certification routes.

TIME-OF-FLIGHT DIFFRACTION

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Ultrasonic Testing PCN Level 3

Course Code: RTO/UT11
Duration: Dependant on existing qualifications

Description

These are guidance courses aimed at the PCN requirements for Ultrasonic Practitioner Level 3. The main objective of the courses are to make candidates fully aware of the scope of the examination and level of knowledge required. They will also enable candidates to identify their weak subject areas. Advice will be given on any further tuition required.

Course Content

- > PCN requirements for Level 3 approval
- > Complimentary NDT methods
- > Welds/welding inspection
- > Quality assurance, quality control and supervision
- > Specifications/procedures and techniques
- > Analysis of UT reports
- > Advanced ultrasonic testing theory and revision
- > Analysis of procedures
- > Procedure writing
- > Mock examinations

Pre-requisites for attending this course

Candidates should ideally hold a PCN Level 2 approval in Ultrasonic Testing as a minimum and have at least 2 years experience in NDT/Inspection before attempting these courses. See also the latest edition of PCN/GEN document for the minimum requirements for examinations.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

- (1) Candidates who already hold PCN Level 3 certification in the Basic Module may opt to take the course which deals specifically with ultrasonic test information.
- (2) Courses for candidates experienced in ultrasonic inspection.

Course recognition

These are ideal pre-approval courses for the PCN Level 3 Ultrasonic Practitioner examination, covering Basic and Main method.

PLEASE ASK ABOUT OUR FULL RANGE OF ASNT LEVEL III COURSES

For prices and availability - see separate information sheets

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Radiographic Testing of Welds (Theory/Practical)

Course Code: RTO/IR7
Duration: 10 days

Description

A course which has been developed for those who have received little or no formal radiographic training. This syllabus has been designed to cover all major aspects of theory and practical radiography for the examination of welds. The syllabus includes hands on experience relating to the use of X and gamma radiographic techniques and darkroom techniques. This course is ideal as a pre-examination training package.

Course Content

- > The properties of X and gamma rays
- > Personnel protection and safety procedures
- > Atomic structures
- > Generation of X-rays
- > Natural and artificial gamma radiation sources
- > Gamma ray equipment
- > Radiographic film
- > Intensifying screens
- > Exposure charts
- > Characteristic curves
- > Diagnostic film lengths
- > Exposure calculations
- > Techniques for weld radiography
- > Darkroom procedures
- > Radiographic quality
- > Introduction to the interpretation of radiographs
- > Specifications and procedures
- > Practical exercises

Pre-requisites for attending this course

Candidates must be at least 18 years old and be medically approved under the requirements of the Ionising Radiations Regulations. Proof of medical may be required unless candidates are using their own TLD or film badge. Note: we are able to arrange medicals and TLD's if candidates are not currently classified.

Examination booking

Contact Northern Test Centre: 01709 550999.

Course recognition

Excellent preparation for PCN, ASNT and BGAS-CSWIP certification routes. This course is validated by BINDT and recognised by PCN.

For radiography refresher training courses contact our Halesowen Centre: +44 (0)121 585 7616

Radiation Safety (Basic)

Course Code: RTO/IR3A
Duration: 2 days

Description

This course is designed for those with very little or no knowledge of radiation safety. The course is suited to those requiring a knowledge of radiation safety including trainees, industrial radiographers, managers and supervisors.

The course is structured to meet national requirements and recommendations and is ideal for all radiography examination routes which may contain a basic radiation safety content such as PCN, ASNT, NAS-410 and BGAS-CSWIP.

The course is ideal for those candidates wishing to be certificated in Basic Radiation Safety under the PCN scheme requirements.

Course Content

- > Basic radiation physics
- > Radiographic equipment
- > Radiation units
- > Biological effects
- > Dose limits
- > Radiation detection and measurement
- > Protection against radiation
- > Calculations for radiation protection
- > Storage of radiation sources
- > Transport of radioactive substances
- > Appointments and responsibilities
- > Local Rules and contingency plans
- > Personal dosimetry
- > Normative documents

Pre-requisites for attending this course

None.

Examination booking

Contact Northern Test Centre: 01709 550999. Candidates wishing to become certificated under the PCN scheme must meet the requirements of the relevant PCN/GEN Appendix.

Course recognition

Excellent preparation for the PCN Basic Radiation Safety examination. This course is validated by BINDT and recognised by PCN.

Radiation Safety (Supervisor)

Course Code: RTO/IR3B
Duration: 3 days

Description

This course is designed for industrial radiographers who already have at least a basic knowledge of radiation safety; see Radiation Safety (Basic) - RTO/IR3A. The course assumes candidates are following a Radiation Protection Supervisor (RPS) qualification route, although it must be appreciated that the RPS designation is the responsibility of the employer. The course is structured to meet national requirements and recommendations.

If candidates have forgotten a significant amount of their basic radiation safety knowledge, it is strongly suggested that they attend the Radiation Safety (Basic) course before attending the Radiation Safety (Supervisor) course.

The course is ideal for those candidates wishing to be certificated in radiation protection to supervisor level under the PCN scheme requirements.

Course Content

- > Review of basic radiation safety
- > Normative documents and legislative structure
- > Biological effects
- > Radioactive Substances Act
- > Dose limitation
- > The regulation of work with radiation
- > The role of the RPA and RPS
- > Principles and practices of radiation protection
- > Radiation monitoring
- > Transport of radioactive substances
- > Personal dosimetry
- > Emergency procedures
- > The Ionising Radiations (Outside Workers) Regulations

Pre-requisites for attending this course

Knowledge of basic radiation safety (see Radiation Safety (Basic) - RTO/IR3A).

Examination booking

Contact Northern Test Centre: 01709 550999. Candidates wishing to become certificated under the PCN scheme must meet the requirements of the relevant PCN/GEN Appendix.

Course recognition

Excellent preparation for the PCN Radiation Protection (Supervisor) examination. This course is validated by BINDT and recognised by PCN.

Can we assist you with Isotope Retrieval Courses. Please contact us for further details.

For prices and availability - see separate information sheets

Radiographic Interpretation

Course Code: RTO/IR2
Duration: 5 days (plus 2 days self study package)

Description

This is a course suitable for all who require an in-depth knowledge of the radiographic interpretation of welds. The course concentrates on the identification of weld defects, assessment of radiographic quality and sentencing to example specifications. All information necessary for candidates attempting PCN or ASNT radiographic interpreters examinations is issued.

Course Content

- > Properties and production of X and gamma rays
 - > The formation of a latent image
 - > Radiographic film
 - > Development/processing
- Practical exercises cover:
- > Identification of weld types
 - > Identification of weld defects
 - > Assessment and measurement of radiographic quality
 - > Sentencing to specifications
 - > Image quality
 - > Radiographic techniques
 - > Weld technology
 - > Interpretation of radiographs
 - > Specifications

Pre-requisites for attending this course

None. If attempting a PCN examination the requirements of PCN/GEN must be met. If attempting an ASNT examination the requirements of your company's written practice must be met.

Examination booking

Contact Northern Test Centre: 01709 550999.

Course recognition

Excellent preparation for PCN and ASNT certification routes. Also suitable for BGAS-CSWIP Full Radiographer if Assistant Radiographer & Welding Inspector approvals are held.

This course is validated by BINDT and recognised by PCN.

SPECIAL NOTE

The ARL Course, covers 40 formal hours of the 56 hours required by the PCN syllabus; however we also provide candidates with a 16 hour away from centre self study text book package to meet the PCN criteria of 56 hours

Some of our many Approvals!



Magnetic Particle/Penetrant Examination Revision

Course Code: RTO/ST2
Duration: 2 days

Description

This is a short term revision course intended to supplement the Magnetic Particle Testing and Penetrant Testing Pre-Approval courses. This course was developed due to a demand from candidates wishing to refresh their knowledge of the subject areas immediately prior to examination. This course is suitable for refresher training towards both the PCN and ASNT recertification examinations.

Course Content

- > Relevant examination criteria
- > Practical exercises on equipment similar to that encountered in examinations
- > A theory package orientated towards examination requirements
- > Instruction writing
- > Mock examination

Pre-requisites for attending this course

Previous attendance of a Magnetic Particle/Penetrant Testing, Pre-Approval course is strongly recommended.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

This course should not be viewed as a substitute to the 4 day pre-approval courses but is an ideal supplementary course.

Course recognition

Excellent preparation for PCN and ASNT certification routes.

DOES YOUR COMPANY REQUIRE
A PURPOSE DESIGNED
TRAINING COURSE?
SEE PAGE 20

For prices and availability - see separate information sheets

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E-mail: enquiries@ruanetpo.com • Internet: http://www.ruanetpo.com

Magnetic Particle Testing, Pre-Approval

Course Code: RTO/ST5
Duration: 4 days

Description

This course provides detailed theoretical and practical information on all the commonly encountered magnetic particle testing techniques. Candidates will have the opportunity to use a large variety of equipment on welds, castings and wrought products.

This course is suitable for beginners and personnel with an existing NDT knowledge.

This course is PCN recognised and provides excellent preparation for Level 1 and 2 examinations. It meets, in full, the training hour requirements as specified by the relevant PCN documentation.

Course Content

- > Properties of magnetic fields
- > Principles of magnetic particle inspection
- > Magnetic particle inspection equipment
- > Equipment calibration
- > Defect detection and evaluation
- > Magnetic particle inspection techniques
- > Relevant standards
- > PCN documentation
- > Extensive hands-on practical element

Pre-requisites for attending this course

None. If attempting a PCN examination the requirements of PCN/GEN must be met. If attempting an ASNT examination the requirements of your company's written practice must be met.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

This course is not suitable for BGASCSWIP examination preparation.

Course recognition

Excellent preparation for PCN and ASNT certification routes. This course is validated by BINDT and recognised by PCN.

PRE-APPROVAL 1 DAY ADDITIONAL RAIL MODULE AVAILABLE.

DETAILS ON REQUEST.

(BINDT VALIDATED COURSE).

Magnetic Particle Testing PCN Level 3

Course Code: RTO/ST8
Duration: *Dependant on existing qualifications*

Description

These are guidance courses aimed at the PCN Level 3 requirements for Magnetic Particle Inspection Practitioners.

The main objective of the courses are to make candidates fully aware of the scope of the examination and level of knowledge required. They will also enable candidates to identify their weak subject areas. Advice will be given on any further tuition required.

Course Content

- > PCN requirements for Level 3 approval
- > Complimentary NDT methods
- > Product technology
- > Quality assurance, quality control and supervision
- > Specifications/procedures and techniques
- > Analysis of MPI reports
- > Advanced MPI theory and revision
- > Analysis of procedures
- > Procedure writing
- > Mock examinations

Pre-requisites for attending this course

Candidates should ideally hold a PCN Level 2 approval in MPI as a minimum and have at least 2 years experience in NDT/Inspection before attempting the courses. See also the latest edition of PCN document no. PCN/GEN for the minimum requirements for examinations.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

- (1) Candidates who already hold PCN Level 3 certification in other Basic module may opt to take the course which deals specifically with magnetic particle test information.
- (2) Courses for candidates experienced in magnetic particle inspection.

Course recognition

Ideal pre-approval courses for the PCN Level 3 MPI Practitioner examinations covering Basic and Main method.

PLEASE ASK ABOUT OUR FULL RANGE OF ASNT LEVEL III COURSES

Penetrant Testing, Pre-Approval

Course Code: RTO/ST6
Duration: 4 days

Description

This course provides detailed theoretical and practical information on all the commonly encountered penetrant testing techniques. Candidates will have the opportunity to use the various techniques on welds, castings and wrought products.

This course is suitable for beginners and personnel with an existing NDT knowledge.

This course is PCN recognised and provides excellent preparation for Level 1 and 2 examinations.

It meets, in full, the training hour requirements as specified by the relevant PCN documentation.

Course Content

- > Introduction to the penetrant method
- > Principles of penetrant inspection
- > Penetrant inspection equipment
- > Performance checking
- > Defect detection and evaluation
- > Penetrant techniques
- > Relevant standards
- > PCN documentation
- > Extensive hands-on practical element

Pre-requisites for attending this course

None. If attempting a PCN examination the requirements of PCN/GEN must be met. If attempting an ASNT examination the requirements of your company's written practice must be met.

Examination booking

Contact Northern Test Centre: 01709 550999.

Course recognition

Excellent preparation for PCN and ASNT certification routes. This course is validated by BINDT and recognised by PCN.

PRE-APPROVAL 1 DAY ADDITIONAL RAIL MODULE AVAILABLE.

DETAILS ON REQUEST.

(BINDT VALIDATED COURSE).

For prices and availability - see separate information sheets

Penetrant Testing

PCN Level 3

Course Code: RTO/ST9
Duration: Dependant on existing qualifications

Description

These are guidance courses aimed at the PCN Level 3 requirements for Penetrant Testing Practitioners. The main objective of the courses are to make candidates fully aware of the scope of the examination and level of knowledge required. They will also enable candidates to identify their weak subject areas. Advice will be given on any further tuition required.

Course Content

- > PCN requirements for Level 3 approval
- > Complimentary NDT methods
- > Product technology
- > Quality assurance, quality control and supervision
- > Specifications/procedures and techniques
- > Analysis of PT reports
- > Advanced penetrant theory and revision
- > Analysis of procedures
- > Procedure writing
- > Mock examinations

Pre-requisites for attending this course

Candidates should ideally hold a PCN Level 2 approval in Penetrant Testing as a minimum and have at least 2 years experience in NDT/Inspection before attempting these courses. See also the latest edition of PCN/GEN for the minimum requirements for examinations.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

- (1) Candidates who already hold PCN Level 3 certification in Basic module may opt to take the course which deals specifically with penetrant test information.
- (2) Courses for candidates experienced in penetrant testing.

Course recognition

Ideal pre-approval courses for the PCN Level 3 Penetrant Testing Practitioner examinations covering Basic and Main method.

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Weld Inspector PCN Level 1

Course Code: RTO/QAV1
Duration: 2 days

Description

A two day course containing in-depth information on the visual inspection of welds. This course assumes candidates may have little or no knowledge of welding inspection. The requirements of applicable standards and general theory are covered.

This course can lead to certification via a Visual weld inspection approval route.

Course Content

- > The role of a visual welding inspector
- > Inspection equipment & the use of gauges
- > Welding related standards and codes
- > Weld terminology
- > Welding processes
- > Pre-weld, pre-heat and post weld visual inspection
- > Welding consumables
- > Basic steel weld metallurgy
- > Weld defects
- > Defect acceptance levels
- > Practical welding inspection
- > Safety issues

Pre-requisites for attending this course
None.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

Candidates wishing to become certificated as a Visual Welding Inspector under a nationally/internationally recognised qualification scheme can consider the ASNT Visual approval, subsequent to attendance on the above course.

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Weld Inspector PCN Level 2

Course Code: RTO/QA7*
Duration: 5 days

Description

This course is intended for personnel with experience in welding inspection, welder training or welding supervision, who are wishing to consider a formal inspection certification route. The course content highlights the key theory areas to be covered and also provides a practical element.

Course Content

- > Welding processes
- > Consumables
- > Procedures
- > Welding defects
- > Specifications
- > Specification analysis
- > Mechanical testing of welds
- > Cutting and joint preparation
- > Basic steel metallurgy
- > Heat affected zone
- > Pre-heat and post-heat
- > Weld repairs
- > Weld symbols
- > Practical exercises
- > Examination syllabuses

Pre-requisites for attending this course

Course candidates require knowledge of welding or welding inspection to make full benefit of the course. Anyone who feels the course content will be of benefit may attend.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

We strongly advise that all candidates taking the 5 day course allow revision time before attempting the available Weld Inspector examination options. Whilst any candidate can attend the course, examination criteria may exist in terms of experience and we strongly recommend that prospective candidates read in full the PCN relevant documentation.

Course recognition

This course has been submitted and gained approved course status for PCN certification pre-approval training. This approval is gained via the BINDT Accreditation/Validation course route.
* This course is also ideal to support the mature candidate route into CSWIP.

Weld Inspector PCN Level 3

Course Code: RTO/QA17
Duration: 5 days

Description

This course is aimed at experienced welding inspectors who hold approved weld inspector status in an appropriate certifying scheme, i.e. PCN or equivalent.

The course is designed to review, reinforce and develop the additional subjects required for the Weld Inspector Level 2 approval.

Course Content

- > Technical and supervisory qualities required
- > Quality assurance
- > Auditing
- > The content of NDT reports (theory and practical)
- > NDT - capabilities and limitations
- > Assessment of fracture samples
- > Review of all welding/senior welding inspector examination syllabuses
- > Steel metallurgy
- > Crack mechanisms
- > Welding symbols
- > Consumables
- > Practical exercises
- > Examination syllabuses

Pre-requisites for attending this course

Candidates must hold a relevant Weld Inspector approval. Candidates need to refer to the relevant certification documentation regarding all eligibility rules.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

We strongly advise that all candidates taking the 5 day course allow revision time before attempting the Weld Inspector Level 3 examination. This course does not have sufficient time to include training relating to Radiographic Interpretation, other than an outline. Candidates who feel they need Radiographic Interpretation should consider attending a pre-approval Radiographic Interpretation course (reference RTO/IR2). Whilst any candidate can attend the course, we recommend that prospective candidates read in full the PCN relevant documentation.

Course recognition

This course has been submitted and gained approved course status for PCN certification pre-approval training. This approval is gained via the BINDT Accreditation/Validation course route.

For prices and availability - see separate information sheets

Welding Inspection (Pipelines) BGAS-CSWIP

Course Code: RTO/QA11
Duration: 5 days

Description

This course is intended for personnel with or without experience in welding inspection. It is preferable, but not essential, for applicants to be experienced in the welding, engineering or pipe/pipeline industry. In addition to general theory, the course analyses the contents of relevant standards including British Gas/National Grid specifications applicable to pipeline welding.

Course Content

- > Welding processes
- > Consumables
- > Procedures
- > Welding defects
- > Specifications
- > Mechanical testing of welds
- > Radiographic interpretation
- > Joint preparation
- > Heat affected zone
- > Pre-heat and post-heat
- > Weld repairs
- > Hot tap welding

Pre-requisites for attending this course
None.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

- (1) There is only one grade of Pipeline Welding Inspector. The Back-end Welding Inspector approval is now obsolete. The current BGAS-CSWIP Pipeline Welding Inspector approval has replaced the Front-end Welding Inspector approval.
- (2) Pipeline NDT personnel should consider this course before attempting Full Radiographer, Ultrasonic Operator (Welds) or MPI examinations.
- (3) This course is not suitable for CSWIP certification routes; see course referenced RTO/QA7.

Course recognition

Excellent preparation for BGAS-CSWIP certification routes.

Welding Inspection (10 year) Revision

Course Code: RTO/QA9
Duration: 2 days

Description

A two day course designed for personnel who have previously attended a weld inspectors course. This course allows the candidate to concentrate on weak areas. This course is suitable for personnel preparing for the PCN Level 2 or Level 3 weld inspector or CSWIP welding inspector/senior welding inspector 10 year renewal examinations.

Course Content

- > Session on queries regarding general theory
- > Weld identification
- > Defect identification
- > Measurement of welds and defects
- > Use of weld gauges
- > Practical welding inspection
- > Radiographic interpretation (self revision) if required
- > Session on queries regarding examinations

Pre-requisites for attending this course
Attendance of a weld inspector/senior weld inspector training course.

Examination booking

For PCN examination bookings contact Northern Test Centre: 01709 550999.

Special notes

This course is not suitable for candidates who have not undertaken a full PCN Weld Inspector Level 2 or Weld Inspector Level 3 course or CSWIP Welding/Senior Welding Inspector approved courses in preparation for a PCN or CSWIP examination. It can be used as formal training for the ten year renewal procedure for PCN Level 2 or Level 3 Weld Inspector or CSWIP Welding/Senior Welding Inspector.

Course recognition

Excellent preparation for PCN and CSWIP recertification routes.

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Course Director
or
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Can we help you?

Level III Services

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Visual Testing

Course Code: RTO/QA21
Duration: 2, 3 or 5 days

Description

These courses have been designed to provide a full appreciation of the methods and practices of visual testing. A high theory and practical content is offered within these courses in preparation for either PCN Level 1 or PCN Level 2 examinations. The courses meet the relevant training hour requirements as specified in the relevant PCN documentation.

Course Content

- > Definitions
- > Vision
- > Lighting
- > Environmental factors, direct and indirect methods of visual assessment
- > Visual inspection equipment
- > Surface conditions
- > Inspection and testing criteria
- > The reporting of results
- > Codes and standards
- > Product technology (welds, castings, wrought), in-service and secondary process defects

Pre-requisites for attending this course

None. If attempting a PCN examination the requirements of PCN/GEN must be met.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

The Level 1 course consists of the first 2 days of the 5 day course programme.

Course recognition

Excellent preparation for PCN certification routes. These courses are validated by BINDT and recognised by PCN.

Note: This course can be used for ASNT certification routes.

NOTE: PCN Level 3 Visual Testing of General Engineering Materials & Components is now available

**Pipeline Agricultural/
Environmental Inspector**

Course Code: RTO/QA19
Duration: 3 days

Description

This course is designed for experienced pipeline inspectors or individuals with a knowledge of pipelines.

The main aim of the course is to provide all the information required for candidates to go on to attempt the Agricultural / Environmental Inspector examination available under the BGAS-CSWIP scheme.

The course content is largely theoretical but all relevant practical subject areas are dealt with such as land management and map reading in relation to pre-entries.

Course Content

- > General understanding of agricultural operations
- > Interpretation of strip maps
- > Reportable diseases
- > Field drainage - principles; types of system, drain types
- > Farm/pipeline fencing
- > Topsoil strip
- > Excavation and drain marking
- > Backfill
- > Civilisation and ripping
- > Reinstatement
- > Key environmental issues
- > Reporting

Pre-requisites for attending this course

Candidates attending this course must have some knowledge of pipeline construction.

Examination booking

Via Customer Services for Examinations at TWI.

Special notes

An ideal course for site coating inspectors who wish to extend their qualification.

Course recognition

Excellent preparation for BGAS-CSWIP certification routes.

**Let us help you with your ASNT or PCN
Level III / 3 Preparation!
Call now on : +44(0)1709 560459
and ask for either the Course Director or
Level III Service Manager**

Metascop, Pre-Approval

Course Code: RTO/M
Duration: 2 or 3 days

Description

These courses are suitable for candidates with or without experience in the use of a Metascop. The Metascop is an ideal instrument for the identification of materials either pre-construction, during construction, or checking the material in completed fabrications on-site. The Metascop is a practical tool, and the courses have a high hands-on content. Wherever possible the courses will be tailored to suit the particular requirements of course participants. The courses contain comprehensive theoretical and practical sessions relating to alloys associated with power generation plant.

Course candidates may wish to undertake an examination which meets with power company on-site requirements. This is conducted by the Northern Test Centre on the last day of the course or at a later mutually agreed date.

Course Content

- > Principles of spectroscopy
- > Metascop construction, servicing and operating methods
- > Steel alloy elements - theory and practical
- > Steels - practical
- > Homologous line pairing - practical
- > Non-ferrous materials - theory and practical
- > End of course assessment

Pre-requisites for attending this course
None.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

Candidates must provide their own Metascop for the course and examination.

Course recognition

Excellent preparation for certification routes recognised by the power industries.

LEVEL III SERVICES

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Product Technology

Course Code: RTO/NDT5
Duration: 2 days

Description

With the ever increasing range of products now requiring inspection, a basic knowledge of processes (welding, casting, forging) and associated metallurgy is an increasing necessity for the inspection technician/engineer. The syllabus for this course has been devised to provide detail of all key subject areas which could be included in PCN or ASNT examinations. Anyone requiring a knowledge of product technology will benefit from this course.

Course Content

- > Definition of metals
- > Explanation of elements and the periodic table
- > Extraction metallurgy - iron making
- > Production metallurgy - steel making
- > Hot working of metals - primary and secondary
- > Forging methods
- > Casting methods
- > Heat treatment
- > Definition of different steel types and associated structures
- > Basic welding techniques
- > Defects associated with welding, casting and forging
- > Mechanical testing

Pre-requisites for attending this course
None.

Examination booking

Not applicable.

Special notes

This course will considerably help personnel wishing to undertake the various PCN and ASNT qualifications where product technology/processes is now a key consideration.

Course recognition

Excellent preparation for PCN and ASNT certification routes.

This course may be linked to Non-Destructive Testing and Appreciation to provide an introduction to PCN

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NDT/Inspection Training

Course Code: RTO/UT6
Duration: 26 weeks

Description

This course is accredited by The British Institute of Non-Destructive Testing and provides the ideal start for a career in NDT/inspection.

This course prepares candidates for the PCN Ultrasonic Practitioner Level 1 and Level 2 examinations, ASNT Level I and II assessments and a number of ICORR and/or BGAS-CSWIP approvals.

Candidates will have the opportunity to attend most courses offered by Ruane & T P O'Neill during the 26 week training period, although candidates may meet restrictions when wishing to attempt certain examinations due to experience pre-requisites.

If a candidate is able to gain six to twelve months of relevant NDT experience, training can be biased towards PCN qualifications.

Course Content

- > Comprehensive coverage of all the theory and practical knowledge required for the PCN Ultrasonic Level 1 and Level 2 examinations
- > Product technology
- > Magnetic particle inspection
- > Penetrant testing
- > Radiographic theory
- > Radiation safety
- > Radiographic interpretation
- > Welding inspection Optional
- > Painting inspection
- > Pipeline coating inspection

Pre-requisites for attending this course

None. If attempting a PCN examination the requirements of PCN/GEN must be met. If attempting an ASNT examination the requirements of a company's Written Practice must be met.

Examination booking

Contact Northern Test Centre: 01709 550999.

Special notes

This course is only one of six long term courses available as standard training/examination programmes which vary between 26 and 52 weeks. Please enquire about this comprehensive range of training options.

Course recognition

Excellent preparation for PCN, ASNT, ICORR and BGAS-CSWIP certification routes. This course is validated by BINDT and recognised by PCN.

PURPOSE DESIGNED TRAINING COURSES

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PCN & ICORR APPROVED COURSES AT A GLANCE

10 day	Ultrasonic Testing (Welds/Wrought) <i>(PCN) Pre-Approval</i>	RTO/UT3
10 day	Radiographic Testing of Welds (Theory/Practical) <i>(PCN)</i>	RTO/IR7
2 day	Radiation Safety (Basic) <i>(PCN)</i>	RTO/IR3A
3 day	Radiation Safety (Supervisor) <i>(PCN)</i>	RTO/IR3B
5 day	Radiographic Interpretation (Welds) <i>(PCN)</i>	RTO/IR2
4 day	Magnetic Particle Testing (Welds, Cast & Wrought) <i>Pre-Approval (PCN)</i>	RTO/ST5
4 day	Penetrant Testing (Welds, Cast & Wrought) <i>Pre-Approval (PCN)</i>	RTO/ST6
2/5 day	Visual Testing Level 1/2 <i>(PCN)</i>	RTO/QA21
5 day	Weld Inspector Level 2 <i>(PCN)</i>	RTO/QA7
5 day	Weld Inspector Level 3 <i>(PCN)</i>	RTO/QA17
5 day	Painting Inspector Level 1 <i>(ICorr)</i>	RTO/QA22
5 day	Painting Inspector Level 2 <i>(ICorr)</i>	RTO/QA23
4 day	Painting Inspector Level 3 <i>(ICorr)</i>	RTO/QA24
3/5 day	Pipeline Coatings Inspector Level 2 <i>(ICorr)</i>	RTO/QA27
5 day	Cathodic Protection Technician Level 1/2 <i>Reinforced Concrete Structures (ICorr)</i>	RTO/QA25a/b
5 day	Cathodic Protection Technician Level 1/2 <i>Buried Applications Underground & immersed metallic structures (ICorr)</i>	RTO/QA26a/b
2/3 day	Insulation Inspector Level 2 <i>(ICorr)</i>	RTO/QA28
1/2 day	Fire Proofing Inspector Level 2 <i>(ICorr)</i>	RTO/QA29
1 day	Review & Update all levels <i>(ICorr)</i>	RTO/QA31 RTO/QA32
1½ day	Hot Dip Galvanizing Inspector <i>(ICorr)</i>	RTO/QA30

**** PLEASE NOTE THE NEW COURSES AVAILABLE ON PAGE 2 ****

Northern Test Centre

Examinations Available

Northern Test Centre offers the following examinations on a continuous basis:

PCN

- > Ultrasonic Testing (Welds, Wrought and Castings)
- > Magnetic Particle Testing (General)
- > Penetrant Testing (General)
- > Radiographic Safety (BRS/RPS)
- > Radiographic Interpretation
- > Full Radiography (Welds and Castings)
- > Visual Testing
- > Electromagnetic Testing (Welds)
- > Weld Inspector

(Aerospace available - please enquire)

SNT-TC-1A (ASNT), EN 4179 & NAS-410 (MIL-STD-410)

- > Ultrasonic Testing
- > Radiography (Testing and Interpretation)
- > Eddy Current Testing
- > Penetrant Testing
- > Magnetic Particle Testing
- > Visual Testing
- > Thermography

(Covers Rolls Royce, Agusta Westland and BAE needs)

ICorr

- > Painting Inspector
- > Pipeline Coatings Inspector
- > Cathodic Protection Technician
- > Hot Dip Galvanizing Inspector
- > Insulation Inspector
- > Fire Proofing Inspector

Examinations may also be arranged for **Metascop**, **API-RP2X** and other qualifications. Please enquire at Northern Test Centre for more details.

Abbreviations

PCN - Personnel Certification in Non-Destructive Testing

ASNT - American Society for Non-Destructive Testing

ICorr - Institute of Corrosion
API - American Petroleum Institute

Metascop - A power industry approval scheme

Fees

See separate documentation for **examination fees**.

Please note that fees for examinations conducted at centres other than Rotherham, may carry a regional supplement to cover the expenditure involved in conducting examinations away from the main locations. Examinations in South East Asia, the Middle East and other overseas locations are separately priced. Please enquire at Northern Test Centre for details.

IMPORTANT INFORMATION

As a general rule it is advised candidates should allow the following revision periods before attempting any examinations:

- 5 day course - at least 5 days revision**
- 4 day course - at least 4 days revision**
- 3 day course - at least 3 days revision**
- 2 day course - at least 2 days revision**
- 1 day course - at least 1 day revision**

THE NTC (UK) NETWORK OF TEST CENTRES

When dealing with examinations, quality of service is important. For complete confidence that you will receive the right examination, at the right price, when and where you want it - contact one of the NTC Network centres.

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Telefax: 01709 740813
e-mail: enquiries@ruanetpo.com

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Telephone: 0121 585 7616
Telefax: 0121 550 5535
e-mail: enquiries@ruanetpo.com

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ICorr

Examination booking

To arrange ICorr examinations contact ICorr Test Centre staff, telephone: **(01709) 550999**.

Examinations available

- > Painting Inspector
Levels 1, 2 & 3
- > Cathodic Protection Technician
Levels 1 & 2 (U&IMS / RCS)
- > Pipeline Coatings Inspector
Level 2
- > Hot Dip Galvanizing Inspector
- > Insulation Inspector
Level 2
- > Fire Proofing Inspector
Level 2

Levels of qualification

Level 1

Level 1 personnel are qualified to carry out operations according to written instructions.

ICorr Level 1 certificated personnel have demonstrated competence to set up specific equipment; carry out tests and perform inspections against written criteria; record and classify the results of tests and inspections against written criteria; report the results.

Level 1 personnel have not demonstrated competence in selecting the extent of inspection or testing required, appropriate inspection or test methods to be used, nor for the interpretation of specific requirements.

Level 2

Level 2 personnel are qualified to perform and direct inspection or testing operations according to established or recognised procedures and they have demonstrated competence to choose the extent of inspection or testing to be used (where agreed procedures allow); choose the inspection and test methods to be used (where agreed procedures allow); set up and calibrate inspection or test equipment; perform and supervise inspection or testing tasks; interpret and evaluate results according to applicable normative documents; define the limitations of application for common test methods; understand and transform normative document requirements into practical instructions adapted to the actual working conditions; prepare written test instructions; organise and report the results of inspections or tests.

ICorr Examinations

Level 3

Level 3 personnel are qualified to direct any inspection or test operation for which they are certificated; assume full responsibility for an inspection or test facility and staff; establish and/or validate work instructions or procedures; interpret normative documents; designate the extent of inspection and the particular test methods and procedures to be used.

Rules and syllabuses

The requirements for experience, training, examinations etc. are documented in ICORR REQ DOC - Requirements for the Certification of Personnel Engaged in Painting and Coating Inspection, Cathodic Protection and Related Fields.

The appendices to this document are available separately and contain the syllabuses for both training and examinations.

Examinations

All examinations consist of a general, specific and practical examination. The general and specific examinations consist of both multi-choice and essay type questions. Examination duration is normally less than 1 day.

Certification is valid for 5 years, although attendance of a 1 day Review & Update course prior to certification expiry will extend the certification for a further 5 years - maximum examination interval is 10 years.

Certain concessions are available for individuals currently approved or certificated under existing schemes (this does not affect their existing approval).

ICorr

IMPORTANT

It should be pointed out that candidates will find great difficulty in coping with the Level 2 and Level 3 Painting Inspector course and the Level 2 Cathodic Protection Technician courses unless they possess a good knowledge of Level 1 information - please refer to ICORR REQ DOC Appendices.

Applicable courses

The following courses offer ideal preparation for ICorr certification routes and are described in detail in the front section of this booklet.

- > Painting Inspector Level 1
RTO/QA22 - Page 3
- > Painting Inspector Level 2
RTO/QA23 - Page 3
- > Painting Inspector Level 3
RTO/QA24 - Page 3
- > Painting Inspector
(Review/Update)
RTO/QA31 - Page 4
- > Pipeline Coatings Inspector
Level 2
RTO/QA27 - Page 5
- > Pipeline Coatings
(Review/Update)
RTO/QA32 - Page 5
- > CP Technician Level 1/2
RTO/QA25a/b - Page 6
- > CP Technician Level 1/2
RTO/QA26a/b - Page 6/7
- > Hot Dip Galvanizing Inspector
RTO/QA30 - Page 7
- > Insulation Inspector Level 2
RTO/QA28 - Page 8
- > Fire Proofing Inspector
Level 2 *RTO/QA29 - Page 8*
- > ICorr Transition Options
RTO/QA35, 36 & 37 - Page 9

Northern Test Centre

PCN

Examination booking

To arrange PCN examinations contact Northern Test Centre staff, telephone: **(01709) 550999**.

Examinations available

- > Ultrasonics (Welds, Wrought & Castings)
- > Magnetic Particle Testing (General)
- > Penetrant Testing (General)
- > Radiographic Interpretation (Welds)
- > Radiation Safety (Basic & Supervisor)
- > Full Radiography (Welds & Castings)
- > Electromagnetic Testing (Welds)
- > Visual Testing (General)
- > Weld Inspector Level 1, 2 & 3
- > Aerospace - please enquire

General

The PCN (Personnel Certification in Non-Destructive Testing) is an international scheme for the certification of NDT technicians and supervisors and meets EN 473 and ISO 9712 requirements.

Levels of qualification

See EN 473 for a full description for levels of competence.

Level 1

This level qualifies personnel to carry out NDT operations according to written instructions under the supervision of a Level 2 or Level 3 person. A Level 1 person has demonstrated competence to:

- > set up equipment and carry out tests;
- > record and classify the results in terms of written criteria

Level 2

This level qualifies personnel to perform and direct NDT according to established or recognised procedures and has demonstrated competence to:

- > choose the technique for the test method used;
- > perform and supervise the test;
- > interpret, evaluate and report results according to applicable standards, codes or specifications;
- > define the limitations of the testing method for which the qualification covers;
- > understand and transform NDT standards and specifications into practical testing instructions adapted to the actual working conditions;

PCN Examinations

Level 3

This level qualifies personnel to direct any NDT operation for which they are certificated and:

- > assume full responsibility for a test facility and staff;
- > establish and/or validate NDT instructions or procedures;
- > interpret codes, standards, specifications and procedures;
- > designate the particular test methods, techniques and procedures to be used

Pre-examination requirements

Level 1 and Level 2: There are mandatory minimum pre-approval training requirements which are given in the PCN requirements documents.

Pre-examination training courses must be validated by The British Institute of Non-Destructive Testing and need to cover the syllabus over a designated minimum number of hours.

Documented in-house training may account for up to one third of the required training hours. The candidate also has to demonstrate practical experience in line with the requirements of PCN.

Level 3: The candidates have two access routes available which are shown in the PCN requirements documents. Both training and experience requirements depend upon academic background. Note: A mature candidate route is available.

Examinations

The examinations consist of general theory, specific theory and practical parts dependant on level and type of examination.

PCN

By holding other PCN qualifications candidates may be eligible for exemptions.

Following an examination, a results notice will be issued by the Test Centre. The certificate will follow the results notice direct from PCN, subject to all experience criteria being met.

Applicable courses

The following courses offer ideal preparation for PCN certification routes and are described in detail in the front section of this booklet.

- > Ultrasonic Testing An Introduction
RTO/UT1 - Page 10
- > Ultrasonic Testing - Practical
RTO/UT2 - Page 10
- > Ultrasonic Testing, Pre-Approval
RTO/UT3 - Page 11
- > Ultrasonic Critical Defect Sizing
RTO/UT8 - Page 11
- > Ultrasonic Testing PCN Level 3
RTO/UT11 - Page 11
- > Radiographic Testing of Welds
RTO/IR7 - Page 12
- > Radiation Safety (Basic)
RTO/IR3A - Page 12
- > Radiation Safety (Supervisor)
RTO/IR3B - Page 12
- > Radiographic Interpretation
RTO/IR2 - Page 13
- > MPI/PT Examination Revision
RTO/ST2 - Page 13
- > MPI, Pre-Approval
RTO/ST5 - Page 14
- > Magnetic Particle Testing Level 3
RTO/ST8 - Page 14
- > Penetrant Testing, Pre-Approval
RTO/ST6 - Page 14
- > Penetrant Testing PCN Level 3
RTO/ST9 - Page 15
- > Weld Inspector Level 1, 2 & 3
RTO/QA(V1, 7 & 17) - Page 16
- > Visual Testing
RTO/QA21 - Page 18
- > Product Technology
RTO/NDT5 - Page 19
- > Eddy Current
RTO/EC1 & EC2 - Page 2

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ASNT

Examination booking

To arrange ASNT (SNT-TC-1A) examinations, both in-centre or on-site, contact Northern Test Centre staff, telephone: **(01709) 550999**.

Examinations available

- > Ultrasonic Testing
- > Magnetic Particle Testing
- > Penetrant Testing
- > Radiographic Interpretation
- > Radiographic Testing
- > Eddy Current Testing
- > Visual Testing
- > Thermography

General

ASNT (American Society for Non-Destructive Testing) Level I & II examinations are held at the Rotherham training centre and on-site. Examination content is determined by an employer's written practice, i.e. employees who do not have a written practice cannot have their NDT personnel certificated under the ASNT scheme.

All companies who wish their NDT operators to be qualified to ASNT requirements must hold a written practice in accordance with the ASNT document SNT-TC-1A - Recommended Practice; this document is intended as a guideline for employers to establish their own written practice for the qualification and certification of their non-destructive testing personnel.

Written practices are available via our Level III Services Manager. A self-employed individual may hold his own written practice, but it should be appreciated that he may be re-examined in accordance with a different written practice when employed by another organisation.

Written practice

A written practice is **not** a set of NDT procedures.

A written practice is for the control and administration of NDT personnel and is written specifically for a company's needs, e.g. related to welds, for welds and castings, for forgings only, etc ...

ASNT Examinations (SNT-TC-1A)

The document may also relate to specific British Standards, American Standards, in-house procedures etc., and may cover one NDT method or say four or five.

A written practice typically consists of 10-25 pages and includes the following:

- > Minimum training and experience requirements for personnel wishing to be certificated.
- > The methods which may be relevant, e.g. UT, MT, PT, RT, ET, VIS, T.
- > The syllabus for the training related to each method.
- > The number of examination questions and number of practical test points. Theoretical questions are usually of the multi-choice type.
- > Minimum examination pass marks.

Although it is common practice for ASNT examined Level III personnel to produce written practices, it should be noted that it is the employer who is responsible for the document, i.e. it is the employer who is responsible for his own qualification system for NDT personnel under the ASNT scheme.

Examinations

Examination duration is typically less than a day and is divided into 3 parts:

- (1) *General*
Typically 30-40 multi-choice questions related to the relevant NDT method.
- (2) *Specific*
Typically 15-20 questions related to the test equipment used, product/process and specifications/procedures used by the employer.
- (3) *Practical*
Typically 10 check points which may relate to one or more test sample.

All candidates would also have to undertake physical tests applicable to the test method, e.g. eyesight and, in some cases, colour differentiation.

ASNT

Examination results

Examination results are normally available within 2 working days of the examination; the employer receives details of the examination results and certificates of achievement for successful candidates, normally within 7 working days.

ASNT certificates are normally valid for 3 years.

Aerospace/Military examinations

Examinations conducted under EN 4179 and NAS-410 (formerly MIL-STD-410) follow a similar format to ASNT.

Contact the Northern Test Centre for further details.

NB. Training/examinations are available to meet Rolls Royce, Agusta Westland, Airbus and BAE requirements.

Applicable courses

The following courses offer ideal preparation for ASNT certification routes and are described in detail in the front section of this booklet.

- > Ultrasonic Testing
An Introduction
RTO/UT1 - Page 10
- > Ultrasonic Testing - Practical
RTO/UT2 - Page 10
- > Ultrasonic Testing, Pre-Approval
RTO/UT3 - Page 11
- > Radiographic Testing of Welds
RTO/IR7 - Page 12
- > Radiographic Interpretation
RTO/IR2 - Page 13
- > MPI/PT Examination Revision
RTO/ST2 - Page 13
- > MPI, Pre-Approval
RTO/ST5 - Page 14
- > Penetrant Testing, Pre-Approval
RTO/ST6 - Page 14
- > Visual Testing
RTO/QA21 - Page 18
- > Product Technology
RTO/NDT5 - Page 19
- > Eddy Current
RTO/EC1 & EC2 - Page 2

ALL MAJOR EMPLOYER BASED CERTIFICATION SCHEMES ARE AVAILABLE, CONTACT US NOW FOR DETAILS.

Northern Test Centre

BGAS-CSWIP

Examination booking

To arrange BGAS-CSWIP examinations contact Customer Services for Training & Examinations at TWI.

Examinations available

- > Senior Pipeline Inspector
- > Senior Inspector (Welding)
- > Welding Inspector
- > Senior Inspector (NDT)
- > Full Radiographer
- > Radiographic Assistant
- > Ultrasonic Operator (Welds)
- > Ultrasonic Operator (Plate)
- > Magnetic Particle Inspector
- > Site Coating Inspector
- > Painting Inspector
- > Agricultural Environmental Inspector
- > Mill Coating Inspector

General

Examination requirements are in BGAS core document.

The BGAS-CSWIP approval scheme for inspectors and NDT technicians (formerly known as ERS) is primarily aimed at pipe and pipeline applications.

BGAS - British Gas Approval Scheme.

CSWIP - Certification Scheme for Welding and Inspection Personnel.

ERS - Engineering Research Station (no longer exists).

The examinations deal with the theory and practice related to the NDT or inspection method plus a knowledge of relevant British Gas/National Grid specifications.

A good knowledge of pipeline operations is also required.

British Gas examinations are held at:

TWI Qualifications

Granta Park

Great Abington

Cambridge

CB1 6AL

Contact TWI for details regarding the availability of examinations, costs, accommodation detail etc..

BGAS-CSWIP Examinations

Examinations

The duration for most examinations is approximately half a day, usually commencing at 9.00 am, unless otherwise arranged.

Each examination consists of three specific parts:

- (1) *Question papers*
Question papers usually consist of 20 to 40 questions (not multi-choice) - time limit approximately 2 hours.
- (2) *Practical*
Typically 20 minutes to 3 hours.
- (3) *Interview*
Up to 30 minutes.

The following questions are typical of the style found in BGAS-CSWIP examinations:

Welding inspection: *Sketch a weld preparation for MMA stovepipe welding and label with typical dimensions.*

Painting inspection: *How is algae removed in accordance with the requirements of PA10*

Magnetic particle inspection: *What type of magnet should be used on the roots of welds in accordance with the requirements of BGES/P2*

Ultrasonic inspection: *State the formula for calculating the near zone of an ultrasonic beam.*

With the exception of radiographic interpretation and ultrasonic testing of welds, the practical content of the examination is conducted on a one to one basis with the examiner; this usually consists of equipment identification; demonstrating the correct use of inspection gauges likely to be used on site; identification of any applicable consumables and assessment of both acceptable and non-acceptable samples.

The candidate may be requested to explain actions/decisions plus answer additional questions given verbally by the examiner.

The final part of the examination is an interview and is conducted on a one to one basis in an interview room. Any queries relating to the theory paper or practical examination will be discussed at this time. Additional questions may also be asked.

BGAS-CSWIP

Examination results

There is no pass mark in percentage terms for the examination; it could be regarded as a technical interview in which an overall assessment of the candidate is made. The results of your examination will be available within a few days; contact TWI.

If successful, the candidate will also receive an approval ticket which is valid for 5 years.

Applicable courses

The following courses offer ideal preparation for BGAS-CSWIP certification routes and are described in detail in the front section of this booklet.

- > Painting Inspector (Grades 3 & 2)
RTO/QA4 - Page 4
- > Senior Painting Inspector (Grade 1)
RTO/QA16 - Page 4
- > Site Coating Inspector
RTO/QA3 - Page 5
- > Ultrasonic Testing
RTO/UT1 & UT3 - Pages 10 & 11
- > Radiographic Testing
RTO/IR7 & IR2 - Pages 12 & 13
- > Welding Inspection (Pipelines)
RTO/QA11 - Page 17
- > Pipeline Agricultural/Environmental Inspector
RTO/QA19 - Page 18

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Argyll Ruane Ltd is recognised as one of the leading providers of training, certification and consultancy in Inspection and Non-Destructive Testing. The company provides multiple UK and Overseas provisions for candidates involved in developing their training and certification needs and works with many like minded organisations around the world, to deliver it's services.

*On average each year **Argyll Ruane Ltd** is involved with over 3000 course and / or examination events for clients world-wide.*

***Argyll Ruane Ltd** welcomes enquiries from individuals, companies and governments looking to meet their needs relating to inspection / NDT training, certification and consultancy from sub-sea through to aerospace, we are :-*

' A Professional Service for Professional People '



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