Course Overview

Coating Inspection
BGAS

Welding Inspection
CSWIP

NDT - Inspection

QA/QC - Oil & Gas

TRAINING | CERTIFICATION | INSPECTION

TWI Training Representative

PAINTS AND COATINGS SKILL COUNCIL

API American Petroleum Institute

ASNT Corporate Partner

AMPP™

BLASTLINE INSTITUTE

About Us

Blastline India (P) Ltd. consists of a group of business entities catering to every need of the anti-corrosion industry in India. We operate overseas in Saudi Arabia, Kuwait, Qatar, Bahrain, UAE, UK and USA through factories and offices that are associated as our sister concerns.

Led by a dynamic management team, Blastline India (P) Ltd. has been able to adapt to the changing needs of the industry, and has forayed into all related niche areas like production and export of machines, accessories, abrasives, and other specialized equipment and instruments used in the anti-corrosion industry. It is also involved in major contract works in India and abroad as well as imports, exports and distribution of high quality coating equipments, systems, and instruments.

BLASTLINE INSTITUTE

The Institute

The Blastline Institute was originally established in 2006 to mould professionals in industrial-grade anti-corrosion applications. However, its gamut of training programs was later expanded to include international certifications in Welding and Coating Inspection as well as Non-Destructive Testing (NDT) and other courses in the oil and gas sector.

We have corporate partnerships, training affiliations or grading compatibility with renowned International organizations such as:

AMPP
(Association for Materials Protection and Performance, USA)

ASNT
(American Society for Non-Destructive Testing, USA)

TWI
(The Welding Institute, Cambridge, UK)

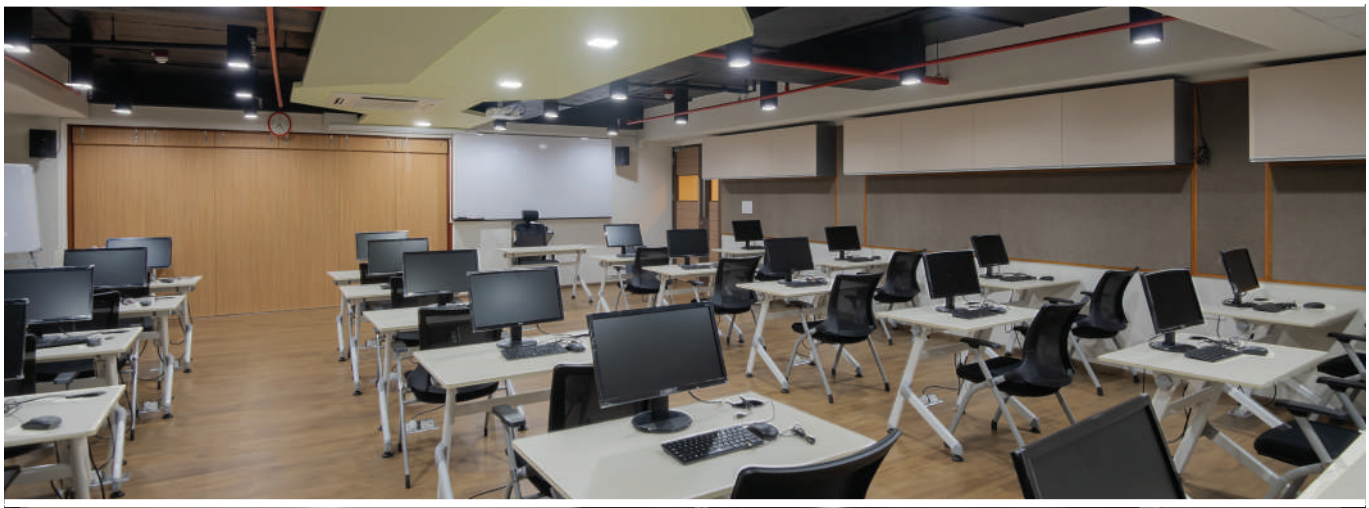
Our Institute is also an authorized Training and Examination Center in the “Painting and Coating” skill sector affiliated to Paints and Coatings Skill Council (PCSC) - a body constituted by the Government of India under the Ministry of Skill Development and Entrepreneurship.

Our Infrastructure

Our institute is located inside Blastline India's corporate headquarters - A five-story, 27,000 sq. ft. facility located in the heart of the city of Cochin.

Our facilities include:

- 4 classrooms equipped with wifi, projector screens, and smartboards
- Two online examination halls with the capacity for 75 simultaneous test takers
- Two state-of-the-art laboratories to provide thorough NDT inspection training and certifications
- A library consisting of a vast collection of reference books pertaining to the Coatings and Welding Industry – including publications from SSPC, NACE, FROSIO, OSHA, ASME etc.
- A cafeteria, equipped with live-cooking facilities, with the capacity to seat up to 100 pax.



Pearson Vue Test Center

We are also an Authorized Pearson VUE Test Center. Our test center includes 15 desktop computers, fully equipped with high-speed internet and large display monitors.

We can deliver over 500 types of exams for various organizations like:

• NACE/AMPP • PMI – Project Management Institute
• Amazon Web Services • Microsoft
• Oracle Certification Program • Dell Technologies
• Royal College of Emergency Medicine
• Chartered Institute of Management Accounting, Etc., Etc.


BLASTLINE
INSTITUTE
India loses 4-5% of GDP annually on account of corrosion losses
Our vision for a developed India would be when every industry segment conducts a mandatory torsional audit to reduce the loss of resources, energy and life.

Practical Orientation

We also offer hands-on training for blasting, painting and welding in our Blast Room and Paint Spray Booth facility located in Edayar, Kochi.

Our practical training courses cover basics about surface preparation, equipment design and equipment set-up. We provide the necessary PPE, machinery and accessories to effectively learn the ins and outs of blasting and painting.

Trade tests can be conducted in our facility for blasters, painters, welders and QC inspectors.

- Blast Rooms
- Paint Booths
- Welding Booths
- Refinery Scale Model
- Productions Shop Floors
- On-Site Training

Refinery Model

On Site Training

The Potential of Our Training Programs

Most of our training programs are related to Quality Assurance and Quality Control (QA/QC) in heavy industries such as oil & gas, pipelines, power plants, ship building, refineries or any major infrastructure projects where steel or any other metal is a critical construction material.

It is estimated that approximately 20 million tons of industrial paint is produced annually worldwide. Such a large output of paint requires a proportionately large number of personnel for its application, supervision and quality control.

Structural work, metal fabrication and piping is also a multi-billion dollar industry in which there is a huge demand for personnel with Quality Control certifications related to welding.

Non-Destructive Testing (NDT) is another field which offers great career opportunities. It covers a wide group of analysis techniques used in science and industry to evaluate properties of a material, component or system without causing damage to the object getting tested. As NDT does not permanently alter the article being inspected, it is a highly valuable technique that can save both money and time during product evaluation, troubleshooting, and research.

There is a tremendous shortage of qualified people in the above mentioned areas. To fill the gap between demand and supply of such personnel, BISP offers internationally recognized certificate courses right at your doorstep in Cochin. The demand is ever-increasing, especially in the Middle East, Europe, Far East and within India itself.

Mechanical QA/QC Training Programs

for the Oil and Gas Industry

QA/QC, in general terms, means Quality Assurance (QA) and Quality Control (QC)

Quality Assurance

Quality Assurance focuses on preventing defects. Quality Assurance ensures that all approaches, techniques, methods, specifications, and processes are designed for the safe and successful completion of a project. It ensures that all standard parameters are met so that the entire project can be implemented to the client's satisfaction.

Quality Control

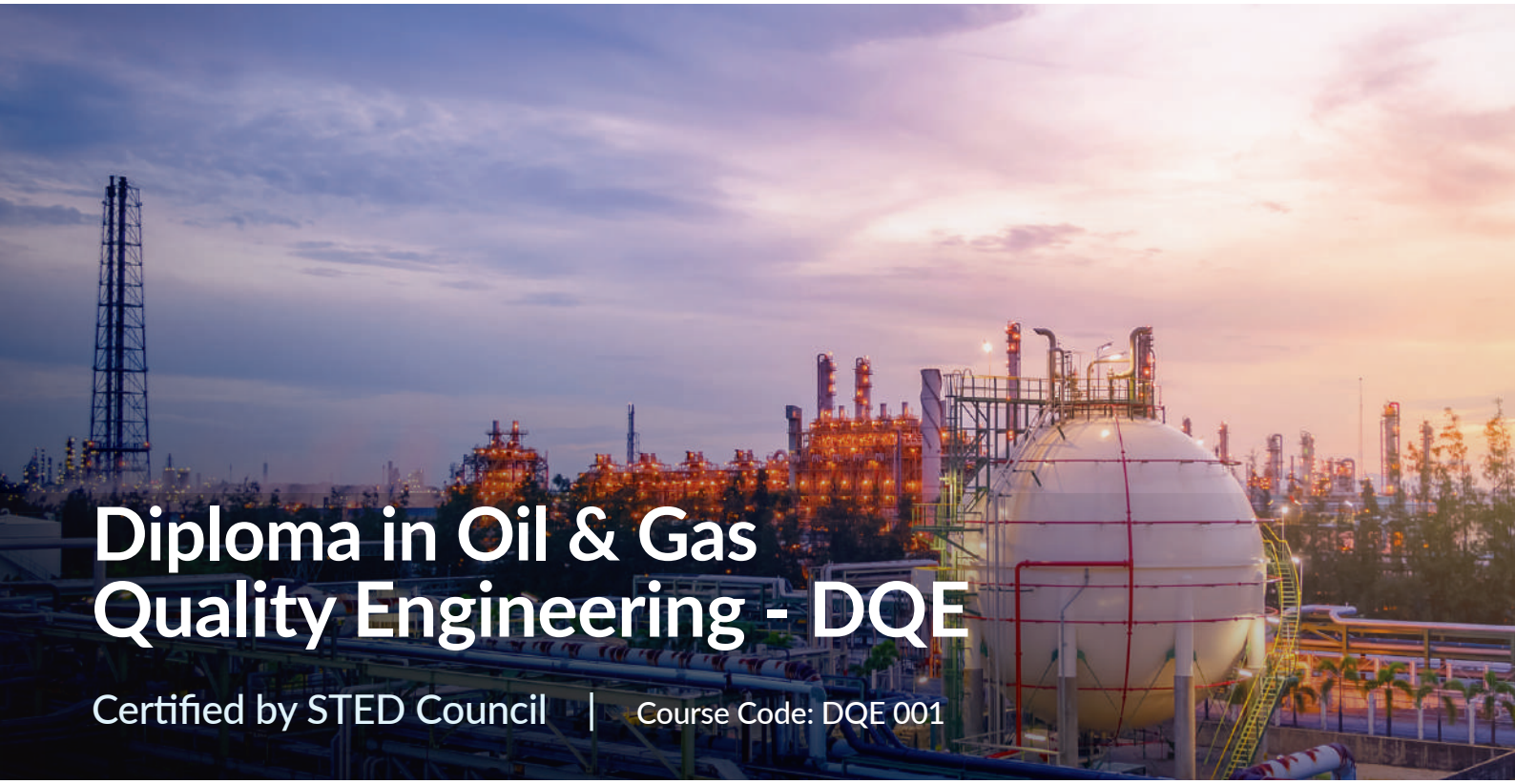
Quality Control is to test or verify actual results by comparing it with the defined standards, and it mainly focuses on identifying defects. QC ensures that the approaches, techniques, methods, and processes designed for the project are followed correctly. QC activities monitor and verify that the project deliverables meet the defined quality standards.

QA/QC training for the oil and gas industry generally includes piping engineering, design analysis, fabrication, and inspection of piping systems. We provide a thorough understanding of the QA/QC Documentation process to fresh graduates as well as experienced QC personnel who wish to orient their careers towards becoming a QA/QC Engineer in oil and gas, petrochemicals/ refineries/energy, and power sectors.

Difference between QA & QC

Many people think QA and QC are the same and interchangeable but this is not true. Both are tightly linked and sometimes it is very difficult to identify the differences. Fact is both are related to each other but they are different in origins. QA and QC both are part of Quality Management. However QA is focusing on preventing defect while QC is focusing on identifying the defect

QA/QC Programs at Blastline Institute



Diploma in Oil & Gas Quality Engineering - DQE

Certified by STED Council | Course Code: DQE 001

World-wide studies show that in spite of all the talks on renewable and non-conventional energy sources, fossil fuels and Oil & Gas are here to remain as one of the largest industries in India and the world at least for the next 50 years. As a result, this sector is still going to be one of the leading economy drivers and job providers in the world.

Diploma in Oil & Gas Quality Engineernig course is primarily designed to support and fast-track the skill development of those candidates aspiring to become professionals in the Oil & Gas industry.

Its highly relevant and practical oriented contents are intended to prepare and qualify those who are planning to become Technicians, Supervisors, Inspectors, Designers, Fabricators, Engineers or Managers in Quality Assurance and Quality Control for design, construction and maintenance of Oil & Gas infrastructure.

However, the universal know-how that this course provides to a candidate can also be applied across a range of other industries in such diverse fields as Ship building, Railways, Automotive, Aviation, Aerospace, Power-plants, Public infrastructure construction, Manufacturing, Nuclear plants and Fabrication shops - just to name a few.

Even though there are many career paths available in these industries, becoming a QA / QC professional is one of the cheapest, quickest and most chosen options available to fresh as well as experienced candidates.

What does this course achieve for you?

Even if you are a fresh candidate, this course will give you in-depth knowledge and hands-on skillset such that when you face an interview you can perform with so much confidence that, to the board members, you may appear as knowledgeable as any person who could have been working in the field for many years.

What makes this course unique?

- Qualified and certified Faculty members
- In-depth knowledge imparted with many hands-on practical classes.
- On-site work and practical sessions at our own factories.
- State of the art climate controlled classrooms and labs.
- Vast collection of equipments, gauges, instruments and specimens in our labs.
- Internship with stipend or on the job training.
- Multiple certifications including that for NDT techniques.
- Placement assistance.

This course is designed in a modular format with credit points granted at completion of each stage and the candidate will be expected to gain a total of 70* credits out of 100 before he could be certified as a full-fledged QA/QC Professional Diploma holder. (* with a separate minimum of 50% marks in each module).

Course Overview

Module No	Module Description*	Training Days***	Credit Points
1	**QA/QC General Subjects**** • Introduction to Refineries and Power Plants • Introduction to Piping Structures, Pressure Vessels, Storage Tanks • Basics of Static and Rotary Equipments • Metallurgy • Welding and Cutting Process • Heat Treatments • Pressure Testing Equipments • Corrosion and Painting • Site Safety and Site Auditing • Destructive Testing • Reference Codes and Standards • Interview Facing Skills	30	30
2	Welding and Piping Inspection and Documentation	13 -15	15
3	Painting Inspection and Documentation	5 - 6	10
4	WPS / WPQR	5 - 6	10
5	General Piping Drawings	3- 4	7
6	**Non Destructive Testing (NDT)**		
	6A. Visual Testing (VT)	2	2
	6B. Dye Penetrant Testing (PT)	3	3
	6C. Magnetic Particle Testing (MT)	4	4
	6D. Ultrasonic Testing (UT)	5	5
	6E. Radiographic Testing (RT)	5	5
7	Radiographic Test Film Interpretation (RTFI)	5	9
	Total Approx:	85	100

* Each module is also available as a seperate certified course (Terms and Conditions apply).

** Practical will include visits to our own factory shop floors and works at site. | *** 90% attendance mandatory

Program Outcomes

- An overall program certificate including details of all modules in the course
  It is approved for registration in employment exchanges
  It is also approved for attestation by embassies of various countries
- 5 additional certificates as per ASNT(USA) norms for each technique in Non Destructive Testing (NDT) methods
- 3 months of invaluable on-site experience with its written documentary proof
- Enormous amount of practical knowledge
- Great build-up of confidence to face an interview board in the Oil & Gas industry

Accomodation: Institute can assist you in finding suitable accomodation near the campus.

Course Duration

6 Months: 3 Calender months of institutional study followed by 3 months of On-Site Internship

Eligibility Criteria

Higher Secondary(+2) or ITI and Higher qualifications in any branch from a recognized state or central board of education

This course is approved by STED Council of India.

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Module 1 Credits : 30

QA/QC General Course

Course Code : QGC 002

Course Contents:

- Introduction to Refineries and Power Plants
- Introduction to Piping Structures, Pressure Vessels, Storage Tanks
- Basics of Static and Rotary Equipments
- Welding and Cutting Process
- Metallurgy
- Heat Treatments
- Duties of Welding Inspector
- Pressure Testing Equipments
- Corrosion and Painting
- Site Safety and Site Auditing
- Destructive Testing
- Reference Codes and Standards
- Interview Facing Skills

Duration: 30 Days

Module 2 Credits : 15

Welding and Piping Inspection Documentation

Course Code : WPI 003

Course Contents:

- Preparation of Test Package
- How to Read P & ID and Isometric Drawings
- Review of Test Package
- Preparation of QC Documents
- Preparation of Piping Punch List After Line Check
- Preparation of Reinstatement Reports
- Preparation of ITP (Inspection Test Plan)
- Review of Specification (Reference Code: ASME B31.3)
- Review of WPS (ASME Section IX)
- Piping Material Classification
- Fabrication Procedure
- Flange Tightening Procedure
- PWHT Procedure
- Pressure Test Procedure
- How to Check Welding Parameters (Current, Voltage, Travel Speed, Heat Input)

Duration: 13 - 15 Days

Module 3 Credits : 10

Painting Inspection Documentation

Course Code : PID 004

Course Contents:

- Course Contents:
- Review of Standards
- Specification Review, Product Data Sheet & Safety Data Sheet
- Practical (DFT Measurement -
- Electromagnetic, Banana Gauge, Eddy Current, PIG, UT; Surface Profile
- Measurement - Replica Tape, Surface Profile Gauge, Electronic Profile Gauge)
- Salt Analysis - Bresle Test, Sleeve Test, CSN Test
- pH Test - pH Paper, Electronic pH Meter

Duration: 5 - 6 Days

Module 4 Credits : 10

WPS / WPQR

Course Code : WPR 005

Welding Procedure Specification (WPS) is a written document that provides direction to the welder or welding operator for making production welds in accordance with certain code requirements.

The purpose of qualification of a WPS is to determine that the weldments proposed for a given construction project is capable of providing the required properties for its intended application.

Welding procedure qualification establishes the properties of the weldments, not the skill of the welder or welding operator.The Welding Procedure Qualification Record (WPQR) documents whatoccurred while welding the test sample, and test results of the same which was made as per the WPS explained above.

In performance qualification, the basic criterion established for welder qualification is to determine

the welder's ability to deposit sound weld. The purpose of the performance qualification test for the welding operator is to determine the welding operator's ability to operate the welding equipment.

This course trains a student on how to draw up a WPS document for a given project as well as methods of evaluation and documentation (WPQR) for approval of a weld sample (coupon) created based on the given WPS.

Duration: 5 - 6 Days

Module 5 Credits : 7

General Piping Drawings

Course Code : GPD 006

Piping drawings are basically the schematic representations that define functional relationships in a piping or pipeline system. For designing process or power piping, mostly four types of piping drawings are develeoped:

1. General Arrangement Drawing(GAD)

General Arrangement drawings are produced for specific mechanical equipment and it presents all major dimensions in two-dimensional views that show a plan(top) with elevations(side) and sectional drawings with piping dimensions and details including line numbers, size, specification, the direction of flow, etc.

2. Process Flow Diagrams (PFD)

A PFD is an un-scaled drawing or schematic which describes the process of transferring fluids inside the piping.

3. Piping and Instrumentation Diagram (P & ID)

It is a single line schematic drawing that includes all equipment instruments and controls, major valves and line sizes with pipe specifications. It is the first important document that controls the activity of all other related engineering groups.

4. Plot plan Layout

A plot plan layout is produced by the piping designer which shows schematic of the whole site with boundaries, road,s buildings, plant areas, equipment layouts, utility runs and other constructions of the existing project etc. at a properly defined scale. So it gives an overview of the entire plant.

Duration: 3 - 4 Days

NDT Courses

NDT consists of a number of non-invasive techniques to determine the integrity of amaterial, component or a structure or quantitatively measure some characteristic of an object.

Simply put, it is "testing without doing harm to the object being tested". To name a few typical applications of NDT: Flaw detection; leak detection; location determination; dimensional measurements; structural and micro-structure characterization; estimation of mechanical & physical properties; stress and dynamic response measurements; material sorting, etc.

ASNT Corporate Partner

The American Society for Nondestructive Testing (ASNT)

ASNT was the pioneer in the field of training and certification for NDT personnel, right from the early days of the industry. Blastline Institute is a corporate partner of ASNT with the Membership No: 187973.

Among various certification levels of ASNT, the most sought-after one is ASNT Level 2 which enables a person to set up and calibrate the testing equipment, conduct the inspection according to codes and standards, and compile work instructions for a team of technicians. They are also authorized to report, interpret, evaluate and document testing results. They can also supervise and train Level 1 technicians. In addition to testing methods, they will be familiar with applicable codes and standards and will have some knowledge of the manufacture and service of tested products.

Blastline Institute follows the NDT Level-2 Training in accordance with SNT-TC-1A standards and practices published by ASNT.

Some of the most popular testing methods are:

- **Visual Testing**
- **Dye Penetrant Testing**
- **Magnetic Particle Testing**
- **Ultrasonic Testing**
- **Radiographic Testing**

Successful and consistent application of NDT techniques depends heavily on appropriate training, experience and integrity. Personnel involved in the application of industrial NDT methods and interpretation of results should be certified, and in some industrial sectors, certification is enforced by law or by applied codes and standards.

All NDT modules consist of theory & practical.

These courses can also be certified seperately or as a package of 5 NDT Modules.

Module 6A — Credits : 2

Visual Testing (VT)

Course Code : NVT 007

Visual Testing (or Inspection) course is ideal for inspection engineers, technicians, NDT operators or surveyors who require knowledge of scientific visual inspection techniques, an understanding of likely problem areas, and an appreciation of this inspection methodology. This course outlines the factors influencing visual inspection, explains the importance of visual inspection in NDT among NDT methods, and enables candidates to utilize a range of visual inspection equipment.

Duration: 2 Days

Module 6B — Credits : 3

Dye Penetrant Testing (PT)

Course Code : DPT 008

A discontinuity or flaw is defined as an interruption in the normal configuration of a component. If a discontinuity or flaw will interfere with a component's usefulness, it is then called a defect.

Dye (or Liquid) Penetrant Testing is used to reveal those discontinuities, cracks or flaws which are open to the surface. Discontinuities which are sub-surface will require an alternate NDT method for detection like Radiography or Ultrasonic Testing. Liquid Penetrant and Magnetic Particle Testing are most commonly used to detect surface discontinuities.

Duration: 3 Days

Module 6C — Credits : 4

Magnetic Particle Testing (MT)

Course Code : NMT 009

The Magnetic Particle Examination method is used for locating surface or near-surface discontinuities in materials that have strong magnetic properties, such as iron or steel. Iron particles (referred to as a medium) are applied to the surface of the test object after or during the application of a magnetizing force to the test object. The particles accumulate at any discontinuity opening in the magnetic field to form a visual indication, thereby detecting certain discontinuities that are present in the material. Since Magnetic Particle Testing is capable of revealing discontinuities economically, it is one of the most widely used non-destructive test methods.

Duration: 4 Days

Module 6D Credits : 5

Ultrasonic Testing (UT)

Course Code : NUT 010

Ultrasonic Testing is a versatile non-destructive evaluation method that uses high frequency sound beams to help detect internal discontinuities in a wide range of materials, including metals, plastics and composites. It is widely used for testing welds, forgings, bars/billets, tubing, and tanks for corrosion.

Duration: 5 Days

Module 6E Credits : 5

Radiographic Testing (RT)

Course Code : NRT 011

Also called industrial radiography, RT is a NDT method of inspecting materials for hidden flaws by using short wavelength electromagnetic radiation to penetrate various materials.

Since the amount of radiation emerging from the opposite side of the material can be detected and measured, variations in the amount (or intensity) of radiation is used to determine the thickness, composition, and defects of various materials.

Duration: 5 Days

Module 7 Credits : 9

Radiographic Test Film Interpretation (RTFI)

Course Code : NRT 012

In addition to producing high quality radiographs, QC personnel should also be skilled in Radiographic Film Interpretation. This course is suitable for all those who require extra knowledge in Radiographic Film Interpretation of welds. The course concentrates on the identification of weld defects and artifacts, assessment of radiographic quality, evaluation of radiographic sensitivity and interpretation of radiographics.

Course Contents:

- Properties and Production of X- rays and Gamma Rays
- Radiographic Film
- Assessment and Measurement of Radiographic Quality
- Weld Defects and Artifacts
- Radiographic Techniques
- To Evaluation of Radiographic Sensitivity
- Interpretation of Radiographs
- Specifications

Duration: 5 Days

Inspector Level Certifications

The Welding Institute, Cambridge, UK, offers the following quality inspection certifications through Blastline Institute

Training with TWI leads to internationally recognised qualifications which deliver real benefits to industry through the acquisition of new competences. If you are an individual, training with us can improve your skills therefore career progression and the certification provides verification of your competence to a recognised standard.

TWI's portfolio of courses and certification schemes is regularly updated to maintain TWI's position as the world leader in its field, so you can be sure that your training is internationally recognised by certification award bodies including CSWIP, BGAS-CSWIP etc.

TWI Training Representative

CSWIP

Certification Scheme for Welding and Inspection Personnel

The Certification Scheme for Welding and Inspection Personnel (CSWIP) is a comprehensive scheme that provides for the examination and certification of individuals seeking to demonstrate their knowledge and/or competence in their field of operation. The scope of CSWIP includes all levels of Welding Inspectors, Welding Supervisors, Plant Inspectors, Welding Instructors, Underwater Inspectors, and NDT personnel.

CSWIP is managed by Certification Management Board of TWI, which acts as the Governing Board of Certification, in keeping with the requirements of the industries served by the scheme. The certification management board, in turn, appoints specialist management committies to over see specific parts of the scheme. All CSWIP Boards and committies comprise member representatives of relevant industrial and other interests. UKAS accredits TWI Certification Ltd to BS EN ISO/IEC 17024 for certification for personnel.

BGAS - CSWIP

BGAS-CSWIP certificates are applicable in a number of industrial sectors, and of particular relevance to transmission pipeline personnel. BGAS-CSWIP certification also acts as a progression pathway for those seeking a career change and for established inspectors who require extension to the scope of their certification for new job roles.

Addressing the competence requirements of the whole range of pipeline integrity job roles, from Agricultural/ Environmental Inspector, through Welding Inspector and NDT Inspectors, to Painting, Coating and Pipeline Inspectors, the BGAS-CSWIP certificates ensure that employees have the appropriate level of knowledge and skills for their allocated tasks.

CSWIP 3.1
Welding Inspector

Suitable for:

Inspection engineers and supervisory staff.
The course is ideal for inspectors requiring preparation for the CSWIP examinations.

Course content:

The duties and responsibilities of a welding inspector; fusion welding processes; typical weld defects; types of steel; carbon-manganese,
low alloy and stainless steels; hardening of steels; weldability; heat treatment; parent metal defects; visual inspection; testing parent metals and welds; destructive tests; NDT techniques; welder and procedure approval; codes and standards; outline of safe working practices; practice in examination questions; continuous and end-of-course assessment.

In addition, candidates meeting the CSWIP requirements for eligibility complete the relevant CSWIP examination on day 5.

CSWIP 3.2
Senior Welding Inspector

Suitable for:

Experienced welding inspectors and quality control staff, especially those who are proceeding to the CSWIP Senior Welding Inspector examination. It is essential that course members have a knowledge of the subjects covered in Course Welding Inspection before joining this course.

It is the responsibility of the examination candidates to either hold CSWIP Welding Inspector or consider attending the Welding Inspector course and examination (WIS5E) prior to this course/ examination. The CSWIP Senior Welding Inspector course covers a wide range of subjects; therefore, it is advisable for the students to do some preparation before attending the course.

Course content:

QA and QC; destructive testing; heat treatments; welding procedures; welding dissimilar; residual stress and distortion; weldability; weld fractures; welding symbols; non-destructive testing; welding consumables; weld repairs; specifications; joint design; HSLA, and quenched and tempered steels; arc energy and heat input.

BGAS Grade 1 Offshore Painting Inspector

Suitable for:

Candidates with or without experience in the Painting Inspection Industry. Candidates will be assessed during the course and advised on either grade 3 or 2 exam route dependent on their progress during training.

Entry requirements:

Experience may be acquired prior to or following success in the examination. In the event that the experience is sought following a successful examination, the results of the examination shall remain valid for two years.

The minimum duration for industrial experience prior to or following success in the qualification examination is 6 months, showing knowledge of dry abrasive blast cleaning or industrial paint application techniques.

Course content:

• Corrosion theory • surface preparation • surface contaminants and tests • paint constituents and technology; solutions and dispersions • drying and curing properties and performance; specified painting conditions • cathodic protection • holiday/pinhole detection • paint-application methods • paint/paint film testing • paint identification; metal coatings • paint faults • colour • inspection methods • specification requirements • health, safety and working practices.

BGAS Grade 2 Painting Inspector

Suitable for:

Candidates who already hold BGAS Grade 2 with a good knowledge of offshore working, safety, and painting inspection. This advanced qualification deals specifically with offshore projects.

Entry requirements:

Experience may be acquired prior to or following success in the examination. In the event that the experience is sought following successful examination, the results of the examination shall remain valid for two years.

The minimum duration for industrial experience prior to or following success in the qualification examination is 6 months, showing knowledge of dry abrasive blast cleaning or industrial paint application techniques.

Course content:

Zones of offshore structures • offshore working • emergency procedures • escape routes • permit-to-work systems • vessel entry and enclosed space working • fire protection • BS 5378 safety signs and colours • BS 1710 identification of pipelines • finish colour schedules BS381C and BS4800

Applicator Level Certifications by TWI

Following pages prescribes procedures by which personnel may be examined, and if successful, certified as as Blasting and Painting Operator, Blasting and Painting Senior Operator or Blasting and Painting Supervisor.

Examination procedure is designed to test the candiates's knowledge of the methods and techniques relevant to the discipline in which they are being examined, and their understanding of the operations they perform. The examination procedure involves both theoretical and practical elements.

Courses offered

- Blasting and Painting Operator
- Blasting and Painting Senior Operator
- Blasting and Painting Supervisor

CSWIP Blasting & Painting Operator

Suitable for:

Any personnel that would like to gain a better practical understanding of equipment set-up, surface preparation, paint application and safety. This involves candidates that require new challenges or redirection within their career path, such as, general workers, welders, NDT technicians, supervisors and anyone interested in gaining the knowledge of the subject matter.

Entry Requirements

Although there is no specific experience required, it is recommended that candidates possess a minimum of six months industrial experience and have an understanding of basic safety requirements involved in blasting and painting operations.

Course Contents

- Introduction to CSWIP
- Surface Preparation
  - Methods of Surface Preparation
  - Abrasives
  - Equipment
  - Surface defects & surface preparation standards
- Paint and Coatings Systems
  - Paint coats
- Liquid Coatings Application
  - Brush application
  - Roller aApplication
  - Spray application
- Inspection and Tests
  - Visual assessment and rust grades
  - Adhesion and profile
  - Assessment of the degree of Cleanliness
  - Test for visible containments
  - Wet film thickness assessment
- Coatings Faults
- Health and Safety
  - Control of substance hazardous to health
  - Hazard warninig symbols
  - Responsibilities
- List of Specifications
  - Specifications with no equivalent EN or ISP Standard

Duration: 15 Days

CSWIP Blasting & Painting Senior Operator

Suitable for:

Candidates who already hold a CSWIP Blasting and Painting Operator certification or applicants with industrial experience in the field of blasting and painting operations who are yet to be certified or contenders that hold a Blasting and Painting certificate but are looking for international recognition.

Entry Requirements

Certified Blasting and Painting Operator for a minimum of six months with the job responsibilities listed in clause 1.2.1 and 1.2.2 within the scheme document CSWIP-BP-25-16.

OR

A minimum of one-year industrial experience as a blasting and painting operator, the duties and responsibilities shall relate to clause 1.2.1 and 1.2.2 listed within the scheme document CSWIP-BP-25-16, under qualified supervision and independently verified.

OR

Candidates who hold a recognised Blasting and Painting certification [e.g. SSPC-CAS-level 1, IMM-PCT-T-level 1, OPITO-Blaster/ Painter-level 1, NACE-NII-CCA or equivalent] with at least three (3) months, recent continuous industrial experience with the responsibilities as indicated in clause 1.2.1 and 1.2.2 of the scheme document CSWIP-BP-25-16, under qualified supervision and independently verified.

Course Contents

- Introduction to CSWIP
- Corrosion
- Specified Coating Conditions
- Surface Preparation
  - Methods of Surface Preparation
  - Abrasives
  - Equipment
  - Surface defects & surface preparation standards
- Coating Technology
- Paint and Coating Systems
- Liquid Coatings Application
  - Brush application
  - Roller application
  - Spray application
- Inspection and Tests
- Coatings Faults
- Health and Safety
- List of Specifications

Duration: 5 Days

CSWIP Blasting & Painting Supervisor

Who Should Attend?

Any personnel that would like to gain a better practical understanding of equipment set-up, surface preparation, paint application and safety. This involves candidates that require new challenges or redirection within their career path, such as, general workers, welders, NDT technicians, supervisors and anyone interested in gaining the knowledge of the subject matter.

Entry Requirements

Certified Blasting and Painting Senior Operator for a minimum of six months with the job responsibilities listed in 1.2.1, 1.2.2 and 1.2.3 within the scheme document CSWIP-BP-25-16.

Or

A minimum of one-year industrial experience as a Blasting and Painting supervisor, the duties and responsibilities shall relate to clause 1.2.1, 1.2.2 and 1.2.3 listed within the scheme document CSWIP-BP-25-16, under qualified supervision and independently verified.

Course Contents

- Introduction to CSWIP
- Corrosion
- Specified Coating (Ambient) Conditions
- Surface Preparation
  - Methods of Surface Preparation
  - Abrasives
  - Equipment
  - Surface defects & surface preparation standards
- Coating Technology
  - Types of Coatings and paints - Classification
  - Types of Coatings and paints - descriptions
- Paint and Coating Systems
- Liquid Coatings Application
- Inspection and Tests
  - Visual assessment and rust grades
  - Adhesion and profile
  - Assessment of the degree of cleanliness
  - Assessment of the degree of roughness
  - Detection of invisible containments
- Coatings Faults
- Health and Safety
- List of Specifications

Duration: 5 Days

Blastline Institute Certified Courses

Training programs conducted by BISP are executed by highly experienced Engineers and Instructors with the help of latest machineries and tools.

Our trainings and certifications are so comprehensive and up-to-date that those who graduate from Blastline Institute, and enter the industry, shall not be found waiting in their skills, capabilities or qualifications to take on relevant job roles in the industry.

Blastline Institute Certified **Painting Inspector**

Duration: 11 Days

Class time: 9.30 am to 4.30 pm

Course Description:

This program is designed to present the basic technology of coating application and inspection. It provides both technical and practical fundamentals for coating inspection works on various structures. The services of a supervisor or Inspector having this knowledge is vital in preventing incorrect coating applications leading to coating failures.

Course Content:

- Role of the Inspector
- Mechanism of corrosion and its effects on metals.
- The different grades of surface preparation
- Abrasive used in blast cleaning and the surface profiles obtained
- The various equipments and test instruments and their uses.
- Different types of paints in use and their ingredients
- Selection of paint
- Quantity survey
- Climatic conditions to be checked.
- Calculation and measurement of paint film thickness
- Adhesion to the substrate
- Paint life and storage etc.
- Coating specifications
- Occupational safety and health hazards
- Inspection procedures
- Coating failures
- MSDS and product data sheet review

Who should attend?

• Experienced coating industry personnel who are aspiring for higher levels of Inspection Grading examinations.
• Diploma holders or graduates preparing for Inspector Grade exams.
• Engineers or graduates preparing for Inspector Grade exams.

Pre-requisite:

• ITI Diploma Holder • University Science graduates • Engineer • Experienced Personnel in Anti-Corrosion Industry or +2 Passed Student

Code : CPI 011

Blastline Institute Certified **Protective and Marine Coating Supervisor**

Duration: 7 days

Class time: 9.30am to Spm

Course Description:

This program is designed to present the basic technology of coating application and inspection. It provides both technical and practical fundamentals for coating inspection works on various structures. The services of a supervisor or Inspector having this knowledge is vital in preventing incorrect coating applications leading to coating failures.

Course Content:

- Role of the Inspector
- Mechanism of corrosion and its effects on metals.
- The different grades of surface preparation
- Abrasive used in blast cleaning and the surface profiles obtained
- The various equipments and test instruments and their uses.
- Different types of paints in use and their ingredients
- Selection of paint
- Quantity survey
- Climatic conditions to be checked.
- Calculation and measurement of paint film thickness
- Adhesion to the substrate
- Paint life and storage etc.
- Coating specifications
- Occupational safety and health hazards
- Inspection procedures
- Coating failures
- MSDS and product data sheet review

Course format

The course progresses through classroom lectures interspersed with hands-on practical on various equipments and instruments associated with quality control of surface preparation and coating applications.

Who should attend?

Quality Assurance and Control inspectors, contractors, inspection company employees, coating manufactures and distributor sales personnel, paint company employees, surface prepares and coating applicators.

Pre-requisite:

• ITI diploma holders • Engineers
• Science Graduates or +2 Passed Student

Code : CPI 012

Blastline Institute Certified **Welding Inspector**

Duration: 12 Days
Class time: 9.30 am to 5.00 pm

This course prepares the candidate for higher levels of Welding Inspector certifications that are recognized around the world. It covers all subjects required to passwelding inspector examinations at global standards.

Who should attend?

Experienced welding industry personnel who are aspiring for higher levels of Inspection Grading examinations. Diploma holders or graduates preparing for Inspector Grade exams. Engineers or graduates preparing for Inspector Grade exams.

Course Content:

The duties and responsibilities of a welding inspector; fusion welding processes; typical weld defects; types of steel; carbon-manganese, low alloy and stainless steels; hardening of steels; weldability; heat treatment; parent metal defects; visual inspection; testing parent metals and welds; destructive tests; NDT techniques; welder and procedure approval; codes and standards; outline of safe working practices; practice in examination questions; continuous and end-of-course assessment. In addition, candidates meeting the CSWIP requirements for eligibility complete the relevant CSWIP examination on day 5.

Course Objectives:

- To understand factors which influence the quality of fusion welds in steels
- To recognise characteristics of commonly used welding processes in relation to quality control
- To interpret drawing instructions and symbols to ensure that specifications are met
- To set up and report on inspection of welds, macrosections and other mechanical tests
- To assess and report on welds to acceptance levels
- To confirm that incoming material meets stipulated requirements and recognise the effects on weld quality of departure from specification
- To be in a position to pass the Welding Inspector - Level 2 examinations

Pre-requisite:

ITI Diploma Holders / University Science graduates / Engineers Experienced Personnel in welding industry or +2 Passed Student

Code : CWI 010

API Training Programs

American Petroleum Institute

We also provide preparatory classes for American Petroleum Institute (API) Certification Examinations

API's Individual Certification Programs (ICP) have provided the petroleum and petrochemical industries with an independent and unbiased way to evaluate the knowledge of technical and inspection personnel. These certification programs are based on industry-developed standards that are recognised and used with confidence worldwide.

- *API 570 (Piping Inspection) - 8 Days*
- *API 510 (Pressure Vessel Inspection) - 8 Days*
- *API 653 (Storage Tank Inspection) - 8 Days*
- *API 580 (Risk-based Inspection) - 4 Days*
- *API 571 (Corrosion & Materials) - 4 Days*
- *API 936 (Refractory Personnel) - 3 Days*

Note: A minimum of 1 year of industry-relevant experience is necessary to appear for the certification exams above.

API 570 (Piping Inspection) - 8 Days

Certified API 570 Piping inspectors must have a broad knowledge base relating to maintenance, inspection, alteration and repair of in-service metallic piping systems.

API 510 (Pressure Vessel Inspection) - 8 Days

Certified API 510 Pressure Vessel inspectors must have a broad knowledge base relating to maintenance, inspection, repair, and alteration of pressure vessels.

API 653 (Storage Tank Inspector) - 8 Days

The API 653 Aboveground Storage Tank Inspector must have a broad knowledge base relating to tank inspection and repair of aboveground storage tanks, and will satisfy the minimum qualifications specified in API Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction

API 580 (Risk-based Inspection) - 4 Days

The objective of this certification program is to provide documented evidence of advanced knowledge and and expertise in the area of Risk-Based Inspection (RBI) based on the information contained in API RP 580.

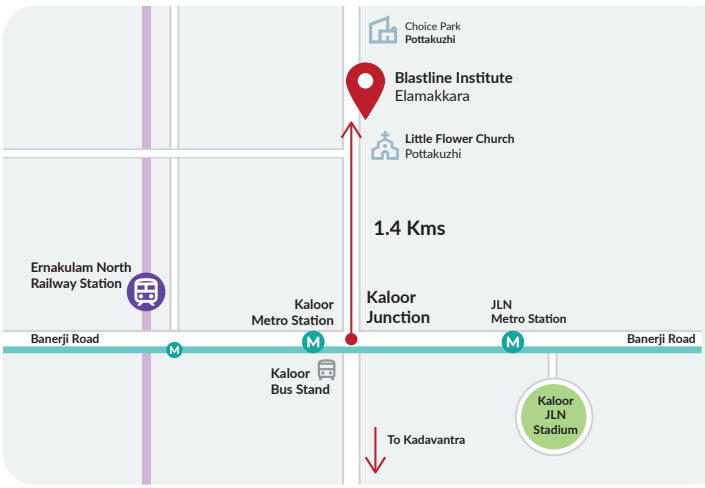
API 571 (Corrosion and Materials) - 4 Days

API welcomes highly specialized inspectors, corrosion engineers, chemical engineers and other professionals across the entire petrochemical industry to obtain the API 571 Corrosion and Materials certification as a validation of their profound knowledge of corrosion processes.

API 936 - Refractory Personnel - 3 Days

API 936 certification raises the bar of competence for qualified personnel, who must have knowledge of installation, inspection, testing and repair of refractory linings.

BLASTLINE INSTITUTE



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TWI Training Representative

PAINTS AND COATINGS SKILL COUNCIL

API American Petroleum Institute

ASNT Corporate Partner

AMPP™

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