



INDTT's QC, Piping & Welding inspector course

Who should attend?

Fresh as well as experienced, Mechanical, Production, Metallurgical & chemical engineers, Science graduates seeking complete understanding and knowledge of process piping, welding & metallurgy fundamentals & NDT. It is valuable especially for fresh engineers seeking immediate positions as Q/C & Piping Engineer in Petrochemical, Engineering, Oil & Gas industries with knowledge of international codes.

INDTT's QC, Piping & Welding inspector course is a blend of essentials of Piping knowledge, welding fundamentals & Quality control inspection activities in Petrochemical and other engineering industries. Our course has been essentially prepared to give good deal of information to young and fresh engineers on international codes including those from American Petroleum Institute, The process piping and piping circuits design and inspection activities. The course provides very valuable information on new welding procedure qualifications,

performance qualification, selection of mechanical tests and welding variables. The common welding processes, electrode & filler metal classification in compliance of ASME sec II & Section IX.

Complete information required for engineers in Oil & Gas sector including piping joints, Flange ratings, flanged fittings covering the scope of ASME B 16.5 Code.

Design considerations for internal pressure pipes has also been included and understanding the important Process piping code in Petroleum industries, ASME B 31.3.

The scope of NDT includes introduction to ASME Sec V and covers the most applicable NDT methods such as Ultrasonics, Radiography, Magnetic, Penetrant, Visual & Eddy current Testing with practical demonstration on various samples.

This course also prepares those engineers looking forward to acquire American Welding Society (AWS-CWI) Qualification or CSWIP Welding Inspector qualification. An effort has been made to provide maximum information about the common national & international Piping Construction Codes, Piping Inspection codes, piping design, Piping repairs & alterations.

The important aspect of this foundation course is to provide good deal of understanding on Heat treatments, Metallurgical evaluation, Damage mechanisms and proper selection of alloys to mitigate the problems.

On Quality control front emphasis has been made on Statistical Quality control, Quality of design, Quality of conformance & control charts used to diagnose out of control process.

Upon the completion of this course the participants will gain following knowledge

- Thorough understanding of process piping code related to design & fabrication.
- Different types of piping assembly, AS Raised neck flange, socket weld, threaded & seal welds including required weld sizes.
- Selection of proper class Flanged fitting for different service conditions as corrosive, erosive, high temperature service & Hydro as well as Pneumatic test requirements.
- Knowledge of control valves including globe, slide, swing check, butterfly the maintenance and inspection requirements,
- Thorough understanding of filler metals, welding electrodes and welding variables, essential & nonessential variables,
- Post Weld Heat Treatment, Preheating & various heat treatments on ferrous materials.
- WPS, PQR, WPQ Qualifications, P Nos, F Nos, A Nos, positions & welding & piping symbols.

- NDT introduction to Ultrasonic, Magnetic, Penetrant , Eddy Current, Thermography & Radiography with practicals.
- Familiarity with Piping codes as API 570, API 574, ASME B 31.3, ASME B 16.5
- Familiarity with Welding codes ASME Sec IX, ASME Sec II & API 577

Course has been prepared by our Principal Level III & Principal API Inspector,

Prashant V. Wagh, B.Tech(Mech)

➤ ASNT NDT Level III

(VT, UT, RT, MT, LPT, ECT, LT, TIR, AE, ML & NRT)

➤ API Certified Inspector

(API 510, API 570, API 653, API 577, API 571, API 580 & API 936)