



COURSE TITLE : **BASIC WELDING FOR PLANT INSPECTOR**

SPONSORING DEPARTMENT : **NON DESTRUCTIVE TESTING (NDT) TRAINING CENTER**

COURSE DESCRIPTION:

This course concerns various welding processes, welded joints, welding symbols, welding metallurgy, Non Destructive Testing of Weldments, qualification of welders and welding operators, Welding Metallurgy, Weldments imperfections and Discontinuities, classification of Weldments discontinuities, Weldability, Welding specific materials, Arc welding of stainless steels, Weldability problems.

LEARNING OBJECTIVES:

Upon completion of this course the trainees will be able to:

- Select power sources, filler and metals electrodes as per AWS classification; and read correctly welding symbols.
- Identify the principals of major welding & Cutting processes, and heat treatment of welds.
- Define the duties of welding inspector (Before, during, and after welding).
- Get familiarize with how to establish WPS, steps in qualifying a welding procedure, welders, and welding operators.
- Describe the metallurgy of welding, weld defects, and some NDT techniques.
- Inspect Groove weld specimen, Fillet weld specimen, Porosity specimen, Bend specimen, and Tensile specimen using inspection Kit and Book of specification.
- Compare between Destructive and Non-Destructive test practically.

COURSE OUTLINE:

- Lectures and Practical exercises.
- Review, Discussions, and class activities.
- Quizzes after each chapter, Mock Up Tests, Home Works, and Examination.
- Test will be conducted in 2 methods:
1. Theoretical 2. Practical
- The candidate successfully completes the course if he gets a minimum score of 70% in each test (Theoretical & Practical) and a minimum of 75% for the average of the 2 tests.

WHO SHOULD ATTEND THIS COURSE:

- Should be High School graduate of science or industrial branch/associate degree in mechanical/engineers.
- Should have at least 1 year of work experience.
- Read and write in English language.

METHODOLOGY (THEORY/LAB. OR BOTH):

Theory and Lab.

MEDIUM OF INSTRUCTION:

English (course materials and visual aid packages are in English).

COURSE DURATION: 2 weeks

HOURS PER DAY: 8 hours TOTAL HOURS: 80 (50 hours Theory, and 30 hours practical).