



*You see a welder. We see a nation builder.*

## **SMARTWELD STRUCTURAL WELDING PROGRAM BY SEMI AUTOMATIC GMAW & FCAW WELDING PROCESS IN ALL POSITION**

**Course Code:** SW-2

**No. of Seats:** 8 per batch

**Duration:** 6 weeks

**Dates & Fees:** See Course Schedule

### **COURSE OBJECTIVE:**

Smart, conversant & skilled structural welder means learning to communicate effectively, retrieve information, visualize issues from multiple perspectives and resolve difficulty of production due to the re-work or rejection. This course will enable semi-automatic welders to step up the ladder in production welding hierarchy i.e. supervisor & first line inspector by qualifying themselves, as needed by the ANSI/AWS D1.3 & D1.1 Structural Welding Code or equivalent, for wider acceptance by the structural-fabricators.

### **COURSE CONTENT**

#### **THEORY: 60 hrs**

- Role played by semi-automatic fabrication welders in industry
- Introduction & applications of commonly used metals in Cutting/Gouging/Welding/Brazing processes
- Safety precaution in welding specific to GMAW/FCAW
- Basic principle of semi-automatic GMAW & FCAW welding processes
- Knowledge of GMAW Welding Apparatus, Accessories, Care in handling & routine maintenance
- Welding consumable's specification, class, size & type (Solid/Tubular)
- Type & attributes of shielding-gases in arc welding
- Characteristics & Preferences of elective metal transfer modes in GMAW welding
- Different types of welding positions & parameters
- Weld joint preparation, type, size, & profile for sheet-steel and plates
- Basics of reading blueprint drawings & symbols
- WPS & Welder's Performance Qualification
- Distortion and discontinuities in GMAW welding – causes & remedies
- Introduction to Destructive & Non-Destructive test techniques
- Module on Employability Skills

#### **PRACTICAL: 120 hrs**

Practical session with various electrode types, joint types, techniques, weld positions.

### **ELIGIBILITY:**

SSC+, ITI/AdorWAC Baseweld Qualified welder by AdorWAC with 2/3 years of work experience.

### **COURSE EVALUATION:**

Progress of SMARTWELD welders will regularly be reviewed at EVERY weekend for theory & practice by AdorWAC faculty. Based on grades & skill level, they will be directed for further training or repeat tests. They will also have to pass the Theory & Skill tests by Visual, Fillet-weld Break, UT or RT & Bend Tests for all positions at the end of their training curriculum as per ANSI/AWS Structural Welding Code D 1.1/XX/Steel.

### **OUTCOMES:**

SSC & ITI passed student welder upon completion of this course will be eligible to perform as qualified Semi-automatic structural welder for production & maintenance welding in fabrication shop/site by using all type of solid & flux cored wire electrodes in all positions.

### **Note:**

The above course can be delivered in English, Hindi or Marathi.