



# **INDUSCAN<sup>®</sup>** **PETROLEUM INSTITUTE**



An ISO 9001-2015 Certified Institution

Established in 2002

ENGINEERING CONSULTANCY ♦ SKILLED PROFESSIONAL RESOURCES ♦ ENGINEERING SKILL DEVELOPMENT PROGRAMMES

## **SKILLED MECHANICAL ENGINEER** **QUALITY ASSURANCE and QUALITY CONTROL (QAQC)**





## ABOUT INDUSCAN

Induscan Petroleum Institute is an ISO 9001: 2008 certified, Trade Mark Registered academy established in February 2002. This institute pioneers in Engineering consultancy, Engineering skill development programs, Human Resources, and Skilled Professional Management for all kinds of mechanical construction industries especially in Oil and Gas Sector, Thermal Power sector, Petro-Chemical sector, and other related Industries. Induscan's skill development programs are available from matriculation level (skilled Technician) throughout Post-graduation level (Skilled Design Engineer). The course elevates employability of youth and ensures employment all around the world. Induscan's skill development programs enhance sufficient clarity in the area of employability and nature of the responsibilities of skilled professionals in the industry. Thousands of skilled professionals have benefited this program since 2002.



### VISION

The Global Engineering community shall recognize their skill range in accordance with international standards and specifications. Industry shall recognize the potential of skilled engineering professionals and source of dynamic candidates from Induscan Petroleum Institute.



### MISSION

Construct a strong bridge of engineering skills between engineering professionals and the International Mechanical Construction Industry so that need from either side is successfully fulfilled.



### RECORDS

Since February 2002, Induscan Petroleum Institute has proven records of successful services in accordance with the vision and the mission of its nature. The system of skill development and industrial customization is introduced as a miniature of the core mechanical engineering industry (Mechanical Construction, Mechanical Production/Manufacturing, and Mechanical Maintenance).





# SKILLED MECHANICAL ENGINEER

## QUALITY ASSURANCE and QUALITY CONTROL (QAQC)

### SCOPE

Comparing other engineering disciplines, syllabus and subjects covered in Mechanical Engineering is very vast. After completing the studies, it is very difficult for Mechanical Engineers to take direct responsibilities in any organization due to skill gap and poor employability index. Large number of opportunities exists in mechanical construction projects, especially in Oil and Gas, Thermal Power, Petrochemical and heavy steel industries for skill Certified Mechanical Engineering Professionals.

### THE COURSE

Skilled Mechanical Engineer (Quality Assurance and Quality Control) is a skill development program for Mechanical Engineering Graduates towards Oil and Gas, Thermal Power, Petrochemical and heavy steel industries. After successful completion of the course engineers are capable of handling various responsibilities in factories and sites just like an engineer with minimum three years of relevant experience. The course syllabus is so designed that engineers can take responsibilities in any position as listed below with best pay scale and plenty of opportunities.

- **PLANNING ENGINEER**
- **PURCHASE ENGINEER**
- **MATERIALS ENGINEER**
- **PIPING ENGINEER**
- **FABRICATION ENGINEER**
- **WELDING ENGINEER**
- **INSPECTION ENGINEER**
- **QAQC ENGINEER**



### SYLLABUS IN BRIEF

There are six modules as listed below to cover the total course content.

#### Module 1

Construction Diagrams and Drawings

#### Module 2

Construction Materials and Material standards

#### Module 3

Welding Engineering and Welding Procedures

#### Module 4

Production and Construction Process

#### Module 5

Non destructive tests and Interpretations

#### Module 6

Project Management, Quality Assurance, Quality Control and Documentation

Note: Detailed syllabus will be available during course counseling

### DURATION OF TRAINING

Duration of the course of Skilled Mechanical Engineer (QAQC) is 321 hours. Duration inclusive of examination and certification is approximately 3 months.

### TRAINING FACILITIES

Induscan Petroleum Institute is well equipped with advanced class room, laboratory and work shop facilities to explain the course content with factory and site experience.

### PIPING LAB

Piping Lab is constructed with the following specification.

Total area is 110 Square Meter

750 inch meter erected piping of heavy wall thickness carbon steel pipe ranging from 1/2 NS to 12 NS using butt and fillet welding. Piping lab is facilitated to explain P&ID, GAD, Isometric, Structural



supports, co ordinates, elevation etc. 3 types of Static equipment, (Heat exchanger, Horizontal vessels and Column) is installed in piping lab to explain equipment drawing, Equipment construction, Nozzle orientation

### **MATERIALS LAB**

Materials lab is arranged at 75 Square Meters in area. Sufficient quantity of almost all kind of mechanical construction materials such as seamless pipes, ERW pipes, flanges, Gasket, fasteners, elbows, steels, reducers, O lets reducers, end cap, valves etc ranging from 1/2NS to 12NS in size.

### **WELDING LAB AND WORKSHOP**

Welding lab/ Workshop is arranged with the following specifications

Lab/Workshop Area is 100 Square Meter  
Facility to explain different types of welding process, Welding Procedure Qualification (WPS/ PQR), Welders Qualification Test, Weld visual Examination, Welding Positions, Weld defects, Welding Electrodes etc.



### **NDT LAB**

NDT Lab is provided with the following specifications

Lab area is 100 Square Meter.

Facility for Practical Training in the following 4 methods

#### **PENETRANT TEST**

Solvent Removable Visible Method  
Solvent removable Fluorescent Method

#### **MAGNETIC PARTICLE TEST**

Electro Magnetic Yoke Method  
Permanent yoke Method  
Prod Method

#### **RADIOGRAPHY TEST**

Weld joints to explain all types of Radiographic techniques and Weld defects.  
Film samples of various radiographic Techniques

#### **ULTRASONIC TEST**

Digital type UT Machines  
Calibration Blocks  
Various types of Transducers  
Various types of Weld Samples and Test specimen



### **ELIGIBILITY CRITERIA FOR ADMISSION**

Course completed certificate in BE or B Tech in Mechanical Engineering is the basic qualification preferably required for admission. BE or B Tech in Production/Industrial Engineering is also eligible for admission.

### **COURSE REGISTRATION**

Properly filled application form along with a copy of qualification certificate shall be submitted either in person or through website [www.induscan.net](http://www.induscan.net). Up on receipt of application and registration fee, registration detail will be forwarded to the applicants. Applicant shall submit original of their qualification /course completion certificate at the time of admission.

### **EXAMINATION**

#### **1. MODULAR EXAMINATIONS**

Total syllabus is divided into six modules. Modular examination is conducted in three sections (theory, practical and viva voice) up on completion of each module. (Percentage of mark to be scored in each module is specified in course conditions of the batch)

#### **2. ASNT EXAMINATIONS**

Additional examination for the fourth module will be conducted in four methods of Nondestructive Testing (PT, MT, RT and UT) by competent authority.

#### **3.FINAL EXAMINATIONS**

Examination for Module Six will be considered as final examination.







### CERTIFICATION

Course certificate of SKILLED MECHANICAL ENGINEER (QAQC) is issued to successful candidates upon completion of final examination. (ASNT Level II certificates are also a part of final certifications).

### COURSE FEE

(Course fee list will be available during course counselling)

### PLACEMENT

Placement is not guaranteed for the course of SKILLED MECHANICAL ENGINEER (QUALITY ASSURANCE and QUALITY CONTROL). Course fee indicated in the Fee list is only for training and certification. Certified SKILLED MECHANICAL ENGINEER (QAQC) is permitted to register through Induscan's campus selection portal for employment. Almost all of our previous batch students are well placed in India as well as abroad through this placement portal.



SKILL DEVELOPMENT COURSES	BASIC EDUCATIONAL QUALIFICATION
X RAY QUALITY WELDER	MATRICULATION (SSC) OR EQUIVALENT
STEEL FABRICATOR	PLUS TWO OR EQUIVALENT
NDT TECHNICIAN	PLUS TWO OR EQUIVALENT
WELDING SUPERVISOR	ENG. DIPLOMA OR NON ENG. GRADUATION
FABRICATION SUPERVISOR	ENG. DIPLOMA OR NON ENG. GRADUATION
SKILLED MECHANICAL INSPECTOR - QAQC	ENG. DIPLOMA (MECHANICAL)
SKILLED MECHANICAL ENGINEER - QAQC	BE/B.TECH (MECHANICAL)
DESIGN ENGINEER (PRESSURE VESSELS & PROCESS PIPING)	M.TECH (MECHANICAL)



Induscan House, Court Road Junction Area, **NILAMBUR**  
 Malappuram (District), Kerala-679329, India.  
 Ph: 9207535195, 8078170793  
 E-mail: [info@induscan.net](mailto:info@induscan.net) Web: [www.induscan.net](http://www.induscan.net)