

**Module No. : INTCV – 127**  
**Module Name : Power Transformers & Reactors**

**Duration : 3 Day**  
**Time Duration : 09.30 hrs to 17.30 hrs**  
**Delivery : Instructor-Led Training**  
**Venue : Power Technologies Training Centre, ABB Limited, Maneja, Vadodara - 390013**

### **Objectives:**

Upon completion of this course, the participant shall be able to:

- Understand Power Transformers, reactors and its application
- Appreciate the design principles and critical elements of Power Transformers & reactors
- Understand the critical elements of operation & maintenance of Power Transformers & reactors

### **Content:**

- Introduction
- Basics of Transformer & Reactors– Design Aspects, Insulation,
- HVDC transformer- Design aspects
- Selection & Application - Vector Symbols, Losses, Parallel operation etc
- Transformer Accessories – Breather, Bushings, PRV, Buchholz, MOLG, taps changers, cooling system, relay etc.
- OLTC – Design, types, selection, testing, operating principle and maintenance
- Manufacturing & Testing,
- Storage, Transport, Installation, operation – key issues & precautions, Do's & Don't, commissioning, essential periodic checks
- Maintenance and Diagnostics checks– condition monitoring of transformers, Oil processing
- Life extension and refurbishment of transformers
- Economic aspects of replacement of transformers – key factor
- Demonstration Of - Core Assembly, Active Part Assembly – winding, drying, Final Assembly, Testing.
- Testing of power transformer/reactors at factory and site – interpretation of results
- Case Studies

### **Methods:**

Class room presentation, hands – on practice & demonstrations at demo room, switchyard and during factory visit

### **Participants:**

Personnel from Power Utilities, Power Generation, transmission companies & industries and Consultants responsible for engineering, commissioning, operation and Maintenance of substations

### **Pre-requisites:**

Degree or diploma in engineering, basic knowledge of power system

**Test:**

Final written Test

**Certificate for each participant:**

Yes



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