

TRANSFORMER PROCUREMENT ENGINEERING BEST PRACTICES

This interactive 4-day masterclass covers new transformer specifications, how to prequalify new and existing transformer manufacturers, factory inspections during manufacturing process and factory acceptance testing. Large power transformers represent a significant capital investment for any utility, industry company or other end-user. Ensuring that a good quality product is manufactured and delivered successfully should begin early in the procurement process.

According to the Institute of Asset Management, while only 5-15% of an asset's life cycle costs are incurred at the procurement phase, more than 80% of those life-cycle costs have been committed, so good procurement processes are critical to having an effective asset management strategy.

COURSE OBJECTIVES

Upon completion of this course, you will be able to:

- Prepare a transformer specification, which scrutinizes the most critical aspects of the transformer design and construction for a customer's specified application
- Perform factory qualification audits, which are essential to confirm a manufacturer's ability to meet a purchaser's requirements and expectations
- Understand importance of factory witness inspections to provide independent verification to manufacturer's design and manufacturing processes
- Acquire knowledge essential for witnessing factory tests, preparation of test specification and reviewing certified test reports

WHO SHOULD ATTEND

Electrical engineers working in operations, maintenance, engineering, or other service field in which knowledge of asset design, insulating fluid analysis or electrical testing methods and evaluation are required.

COURSE TOPICS

DAY ONE

TRANSFORMER DESIGN & CONSTRUCTION

- Basic electric circuits and design
- Transformer theory and applications
- Transformer design
- Materials
- Major components
- Transformer manufacturing and construction

DAY TWO & DAY THREE

TRANSFORMER FUNCTIONAL REQUIREMENTS

- Transformer Specifications Review
 - Current revisions of IEEE/IEC Standards
 - Core/winding arrangement
 - Type of winding & conductors
 - Transformer losses; short circuit forces & stresses
 - Thermal design
- Transformer Vendor Prequalification
 - Manufacturer engineering capabilities
 - Engineering tool; factory logistics
 - Testing capability & facilities
 - Quality management
- Factory Witness Inspections

DAY FOUR (AM)

FACTORY ACCEPTANCE TESTING

- Various electrical production tests according to IEEE and IEC standards
- Principles and physics behind the measurement, setup, test methodology and acceptance criteria

DAY FOUR (PM)

TRANSPORT, INSTALLATION AND PRE-COMMISSIONING



21-24 Jan 2019
8:30am-5:30pm



SP Group
2 Kallang Sector



Pending PDU by
PE Board



S\$4,400 (Full Fee)
S\$2,200 (SC/PRs only)

*fees before GST



SPgroup



ABOUT THE TRAINER



SIMON RYDER

Senior Principal
Transformer Consulting Engineer

Mr Simon Ryder graduated from Oxford University in 1996 with a M.Eng in Engineering Science. From 1997 to 2003, he worked for GEC Alstom T&D at Stafford, England, and as Design & Development Engineers & Research Programme Manager in St Ouen, France. In 2003, he joined Doble PowerTest Ltd, and has worked on condition assessment & failure analysis of transformer, including independent expert work and more recently on various procurement aspects, including factory capability assessment, tender evaluations, design reviews and progress inspections.

Simon is currently Chairman of Cigre SC A2 on Transformers, which focuses on transformer design & manufacture, application of material, repair & refurbishment, disposal, safety & environmental aspects, quality assurance and testing.

REGISTRATION FORM

Name in NRIC: _____ NRIC Number / FIN: _____

FIN Expiry Date: _____ Nationality: _____ Date of Birth: _____

Company Name: _____ Designation: _____

Company Address: _____ Company UEN: _____

Contact Number: _____ Email: _____

Highest Qualification: _____ PE number (if applicable): _____

Name of Contact Person: _____ Designation: _____

Contact Number: _____ Email: _____

Dietary Restriction (if any): Vegetarian Indian Vegetarian Halal Others: _____

Payment mode: Cheque (Payable to: SINGAPORE INSTITUTE OF POWER AND GAS PTE LTD)
Mail to: 2 Kallang Sector Level 2, Singapore 349277 (Attention: Singapore Institute of Power and Gas)

E-invoice - Business Unit Code: _____

Company GIRO (Please contact us for more information.)

Personal Data Protection Act

- I/We acknowledge and agree that SIPG may collect, use and disclose to any third party any and all particulars relating to my/our personal information for the purposes of (i) providing the requested services in respect of the course(s); (ii) billing and account management (including debt collection and recovery); (iii) conducting surveys or obtaining feedback; (iv) informing me/us of services of and offers by SIPG, its related entities and business affiliates (unless I/we duly inform you otherwise); and (v) complying with all applicable laws and regulations, and business requirements.

Declaration:

By submitting and signing this registration form,
I hereby declare that all information given in this
form is true and accurate and agree to the terms
and conditions stated below.

Name: _____

Signature: _____

Date: _____

Company Stamp

TERMS AND CONDITIONS

1) The company and individual applicant has read and understood the terms of the course information and registration form. 2) The information collected on this form is used for course registration, account servicing of course-related activities and/or for application of course-related funding to appropriate funding agencies. 3) This registration form must be submitted to SIPG at least 2 weeks before course commencement. 4) Payment must be made to SIPG before course commencement. 5) SIPG reserves the right to amend any details relating to the course without any prior notice. 6) Request for withdrawal must be made in writing and are subject to approval by SIPG. Written requests that reach SIPG at least 5 working days before course commencement: 100% refund; 3-5 working days before course commencement: 50% refund of fee paid; less than 3 working days before course commencement: no refund. 7) Request for transfer/replacement must be made in writing at least 5 working days before course commencement and are subject to approval by SIPG. SIPG reserves the right to impose an administration fee for such requests. 8) Trainee shall be bound by the terms and conditions of any applicable funding scheme as approved by SIPG. 9) In the event that the trainee fails to meet any of the requirements set under the funding scheme or has been granted funding for the same course before, thereby resulting that his/her funding application is rejected, the trainee is liable to pay the balance of the full course fee to SIPG. 10) Photographs of trainees will be taken at the event for SIPG's marketing materials and other publications.