GLOBAL INDUSTRIES INTELLIGENCE

SAFE OPERATIONS & MAINTENANCE OF CIRCUIT BREAKERS & SWITCHGEARS

IMPORTANCE OF EFFICIENT OPERATIONS OF THE VARIOUS TYPES OF CIRCUIT BREAKERS AND SWITCHGEARS INCORPORATING MODERN TESTING INSTRUMENTS

6TH - 10TH MAY, 2024

NOVOTEL HOTEL, DUBAI, UAE

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WHY CHOOSE THIS TRAINING COURSE?

This highly informative training course emphasises on the new technologies of medium and high voltage circuit breakers. One of the salient innovations is the elimination of sulphur hexafluoride gas to the new green gas for grid, in line with the world's effort to reduce the carbon footprint. It will also provide delegates a solid understanding on the safe use of circuit breakers, switchgears and associated equipment that requires correct initial selection, operation and maintenance. New vacuum circuit breaker technologies will be discussed to enhance the safety and secured operation of the electrical installation.

On completion, delegates will be equipped or will have enhanced skills to ensure that circuit breakers and switchgear are installed, operated safely and maintained in a fashion that ensures safe and stable and continuous operation. Delegates will be exposed to recognize faults and ensure the underlying causes are identified toreduce possible further failures. State of the art testing instruments are discussed focusing on circuit breakers and motors.

- Understanding the types and functions of circuit breakers
- Operation principle of medium and high voltage circuit breakers
- Identification of testing equipment and instruments
- Interpretation of single line drawings
- Troubleshooting and maintenance of switchgears

WHAT ARE THE GOALS?

By the end of this training course, participants will be able to:

- Understand the various types and operations of circuit breakers
- Determine the components and operations switchgears
- Explain the different types of testing instruments
- Analyse the common faults in an electrical installation
- Inculcate greater confidence, work ing safely on circuit breakers and switchgears

WHO IS THIS TRAINING COURSE FOR?

This training course will benefit all levels of professional in an in an electrical installation. It will enable them to understand the importance of safe operations of circuit breakers and switchgears.

This training course is suitable to a wide range of technical professionals but will greatly benefit:

- Electricians
- Electrical supervisors
- Plant electricians
- Operations & maintenance engineers, supervisors & technicians
- Maintenance technicians

HOW WILL THIS TRAINING COURSE BE PRESENTED?

This training course will utilise a variety of proven adult training techniques to ensure maximum understanding, comprehension and retention of the information presented. This includes presentation and discussion of latest videos and circuit breaker

Questions are encouraged throughout, particularly at the daily wrap up sessions. This provides opportunities for participants to discuss with the Presenter specific issues and, if possible, find appropriate solutions. Specific goals of each participant will be discussed to

THE COURSE CONTENT

Day One: The Technology of Circuit Breakers and Switchgear

- Typical substation arrangements with circuit breaker arrangements
- Low and medium voltage motors operations and characteristics
- Motor starting methods and motor control centres
- Nameplate ratings and interpretation
- Motor and generator fault contributions
- Low, medium and high voltage equipment in an electrical installation

Day Two: Operation of Various Types of Interrupting Equipment

- CT's and VT's operation, construction and classifications
- Basic protection requirements and LSIG
- Molded Case circuit breakers
- Air and load break switches, reclosers operation and construction
- Vacuum contactors applications
- Vacuum circuit breakers operations and characteristics

Day Three: Maintenance of Gas Filled Circuit Breakers

- Conventional Sulphur hexafluoride (SF6) gas circuit breaker construction and operation
- New green grid gas for electrical switchgears
- SF6 gas leak detection methods
- Dew point and purity tests
- IAC and partition classes
- Vacuum interrupter and SF6 circuit breakers

Day Four: The Use of Test Equipment for Operations and Maintenance

- Digital voltmeter (DVM), oscilloscope, insulation tester applications
- State of the art circuit breaker tester
- Motor diagnostics instrument
- Circuit breaker routine tests
- NEC check lists to ensure the correct installation
- Troubleshooting methodology for electrical equipment

Day Five: The Identification and Repair of Problems/Failures

- Common electrical installation faults
- Harmonics and its effects
- Phase imbalance and phase sequence effects
- Procedures for fault finding
- Discussion on common faults and incidents
- Wrap up session

Safe Operations & Maintenance of Circuit Breakers & Switchgears

ABOUT INTERNATIONAL EXPERT

NABRAS AL YAHYAAI

- 23+ years of experience in the Electrical field (Transmission, Distribution system and protection studies of the network) and auditor
- Completed 12+ years as a Trainer & successfully designed and implemented an Electrical Safety Rules (ESR) for various companies in Oman.
- It is my honor to be as a focal point person working together with protection team for Protection testing ENG (Omani) which is delivered for the first time in the market for 19 engineering job seekers. It will support PDO operations immensely as there has been a shortage of qualified Protection and Testing Relay Engineers in the market. PDO
- Certified Professional Trainer, Training of Trainers, Oxford Academy for Training & Consulting
- Certified Trainer on Electrical Safety Rules (ESR)and Basic / advanced Protection and control course for PDO, BP, Daleel, OMIFCO, Nama Group and OQ)
- Certified Trainer on HV LV switchgear course for PDO, BP, OMIFCO, Nama Group and OQ)

- Certified Trainer on Power Transformer and Circuit Breaker course for PDO, BP, OMIFCO, Nama Group and OQ)
- Certified Trainer on Reading Electrical Schematic course for PDO, BP, OMIFCO and OQ)
- Certified Trainer on Electrical Safety Rules (ESR) & approved from Distribution Code Review Panel (DCRP), PDO and other institutes in Oman such RED DOT, TATI, NTI, GLOBAL ARSUAL and STANDARD
- Approved ESR Trainer in the followings' Public Sectors: Royal court, Ministry of Defense engineering services, Muscat municipality, Ministry of regional municipalities and water resources, Ministry of health & DCRP
- Certified ESR Trainer (Electrical Safety Rules) for Mazoon Distribution Company, Majan Distribution Co. & Dhofar Power Company with practical.
- Successfully conduct an assessment for students to achieve ESR license to be as competence electrical person to work on electrical equipment's.
- Successfully conduct practical assessment for PDO employee to achieve ESR license to be as competence electrical person and authorized electrical person to work on electrical equipment's in PDO.
- Expert in analysing the full scope of staff competence progress and provide the solutions to close the gaps.

AREAS OF EXPERTISE Certified Electrical Safety Rules (ESR) Trainer | Training of Trainers | Competency & Practical Assessment | Facilitator | Training programs | Special coaching programs | Guiding clients in growing through change | Managing Career Transitions | Business Productivity | Electrical Transmission | Electrical Distribution system | Electrical protection studies of the network | Auditing | Electrical equipment | On Job Training | In-house technical Training | Troubleshooting and Maintenance | Protection for transmission lines | Electrical Engineering | HSE Management | Incident Investigation and Reporting | Electrical Distribution | Electrical Standard wiring buildings | Electrical for non electrical | Overhead Transmission Lines Inspection | Design of Distribution Network | Power Transmission Technician | High voltage equipment's (132kv, 66kv, 33kv and 11kv) | Commission stage (OHLT 132kv and Power Transformer and Circuit break) | Retrieve setting of relays (ABB, SIMENS and AREVA) | Gas Turbine. responsible for managing, designing, testing and commissioning of electrical protection systems and equipment at voltages (132kv, 66kv, 33kv and 11kv), design, setting calculations, setting, review, troubleshooting, annual Maintenance, fault Investigation, and Report generation. carrying out Testing of Electrical Protection relays and quality inspections. EXPERIENCE (continued)

- Ensure Power system is highly flexible during normal operation and highly secured during fault condition that minimizes dis-location.
- Perform preventive maintenance for Generators, Power & Auxiliary Transformers, Low Voltage Switchgears, Motor Control Centre, Batteries & Battery Chargers 110 V, 48 V, Low Voltage Power and Control Cables, Local Motor Starters, Lighting & Small Power and Earth System.
- Conducting preventive maintenance High voltage equipment's (132kv, 66kv, 33kv, 11kv and 6.6 kV)
- Commission new equipment's for example: Overhead line transmission lines OHLT 132kv, Power Transformer and Circuit break.
- Carrying out testing relay for 132 kV, 33kv and 11kV systems and networks including relays from ABB, SIMENS and AREVA

- Manage and execute new protection studies and review the existing protection studies that enhance system reliability and availability.
- Provide technical, protection supports for PDO Projects and operations teams (Analysis of trip incidents, equipment/system failures and fast resolving).
- Carry out interviews and assessment for new engineers to be authorized to work as protection engineers at Petroleum Development of Oman TRAINER - ELECTRICAL SAFETY RULES (ESR) (11+ years) 2011-CURRENT SULTANATE OF OMAN Summary: During the last 11+ years, I have successfully managed to design and conduct an electrical safety rule training for technicians in different companies (Public & Private) in Oman from Oil & gas sector, power generation and transmission companies based on the company's requirement, standards, and the best practice in the industry

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Novotel Hotel, Dubai, UAE

FOR REGISTRATION PLEASE COMPLETE THIS FORM AND EMAIL BACK TO
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REGISTRATION DETAILS

NAME .....

JOB TITLE .....

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EMAIL .....

NAME .....

JOB TITLE .....

MOBILE NUMBER .....

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ADDRESS .....

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COUNTRY ..... **POSTAL CODE** .....

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NATURE OF BUSINESS .....

REGISTRATION FEE:

Book and Pay Before 4 April 2024 @GBP 3995 per person
Book and Pay After 4 April 2024 @GBP 4595 per person

AUTHORIZATION:

Signature _____ Date _____

Name _____ Position _____

THIS BOOKING IS INVALID WITHOUT A SIGNATURE.
AUTHORIZATION SIGNATORY MUST BE AUTHORIZED TO SIGN ON BEHALF OF CONTRACTING ORGANISATION