

SEE
INSIDE FOR
DISCOUNT
PROGRAM PRICING

HIGH VOLTAGE ELECTRICAL MAINTENANCE & SAFETY

www.electricityforum.com/electrical-training/high-voltage-electrical-maintenance-training



Oct 29-30, 2018 - Saskatoon, SK
Oct 31- Nov 1, 2018 - Winnipeg, MB
Nov 5-6, 2018 - Edmonton, AB
Nov 8-9, 2018 - Richmond, BC
Nov 14-15, 2018 - Mississauga, ON



BONUS FEATURES

- FREE 100-Page Digital Electrical Maintenance Handbook (Value \$20)
- \$100 Coupon Toward any Future Electricity Forum Event (Restrictions Apply)
- 1.4 Continuing Education Unit (CEU) Credits
- FREE Magazine Subscription (Value \$25.00)
- Course Materials in Paper Format

BUNDLE PACKAGE:

3-DAY COURSE

\$999

Take this HV Electrical Maintenance Course with our 1-Day MV/HV Cable Splicing Skills Training Course

Nov 2, 2018 - Winnipeg, MB

Nov 7, 2018 - Edmonton, AB

Nov 16, 2018 - Mississauga, ON

Details: www.electricityforum.com/electrical-training/3-day-mtce-cable-splicing-training

2-DAY COURSE

\$799

RECOGNIZED BY



EARN CONTINUING
EDUCATION UNITS (CEUS)

SPONSORED BY



WHY YOU SHOULD TAKE THIS COURSE

This intensive 2-day high voltage electrical maintenance training course provides invaluable information to anyone who wishes to know and understand the role of electrical maintenance standards, programs and procedures for the optimal maintenance of electric power systems. High Voltage Electrical Maintenance and Testing of electric power systems is essential to the safe operation of any electrical system, regardless of its size, type or industry. Electrical worker inexperience and poor electrical maintenance planning will inevitably result in costly equipment failure, downtime and productivity losses, not to speak of the risk of electrical safety accidents, injury and death.

The importance of planning, programming and implementing electrical maintenance practices will be emphasized. This course also deals with safety considerations involved in electrical

maintenance procedures for all the components of any electrical system.

WHO SHOULD ATTEND

This course is a must for electrical engineers, electrical maintenance personnel, plant electricians, electrical contractors, power specialists, maintenance managers, consultants and technologists responsible for the design, construction, installation, inspection, operation, or maintenance of electrical systems in a commercial, industrial, institutional or utility setting.

COURSE INSTRUCTOR

JOHN ROBIN

Electricity Forum Electrical Maintenance Consultant

AGENDA - DAY 1

DAY ONE

SESSION 1: INSULATION MATERIALS AND TESTING METHODS

- Review Of Insulation Materials And The Methods To Quickly And Accurately Diagnose Insulation Quality.
- Qualities Of Good Insulation And Factors Affecting Deterioration
- Methods Of Testing Insulation And Interpretation Of Test Results

SESSION 2: POWER CABLE TESTING

- Cable Construction And The Methods To Splice Or Terminate The Various Types Of Cable.
- Electrical Code And Splicing
- Difference Between Hot Shrink Stress Cones And Cold Shrink
- Examples Of Stress Cones And Failure Caused By Poor Installation
- Videos On Stripping High Voltage Cable For Termination
- Example Of Stripping High Voltage Cable
- Construction Of Shielded And Non-Shielded Cable
- Cable Installation Methods
- Methods Of Testing Cables And Interpretation Of Test Results

SESSION 3: POWER TRANSFORMER TESTING

- Review: Function And Operation Of Electrical Transformers.
- Interpret Nameplate Data
- Air Cooled Versus Oil Cooled; Benefits And Drawbacks
- Transformer Protection Systems
- Design And Construction Of Power Transformers
- Proper Oil Sampling Methods
- Testing And Scheduling Maintenance Procedures
- Recommendations For Testing From CSA Z463 , Canadian

- Maintenance Standards
- Electrical Safety Procedures For Power Transformers

SESSION 4: INSTRUMENT TRANSFORMER TESTING

- Instrument Transformer Operation And Application
- Current Transformer Operation And Application
- Purpose Of Instrument Transformers In Metering
- Safety Procedures Critical To Instrument Transformers
- Testing Of Instrument Transformers

SESSION 5: BREAKERS AND SWITCHGEAR

- Various Types Of Power Switchgear
- Difference Between Switches And Breakers
- Operation Of Switchgear
- HV Switchgear Tests
- Switchgear Maintenance And Schedule
- Switchgear Safety Procedures

SESSION 6: CIRCUIT BREAKER MAINTENANCE

- Various Types Of Circuit Breakers
- Safety Procedures Critical To Circuit Breakers
- Correct Steps For Removal And Restoration Of A Circuit Breaker
- Operation Of Electrically Operated Circuit Breaker Controls
- Operation Of Circuit Breaker Mechanisms
- Maintenance On Oil Circuit Breakers, SF6 And Vacuum Circuit Breakers

SESSION 7: POWER FUSE TESTING

- Function Of Power Fuses.
- Various Types Of Fuses
- Testing Fuse Integrity And Reliability
- Safety Procedures When Working With Power Fuses
- Correct Steps For Removal And Restoration Of Power Fuse-

DAY TWO

SESSION 8: ELECTRICAL SAFETY AND ARC FLASH AWARENESS

- Define The Flash Protection Boundary
- Define The Two CSA Z462 Shock Protection Boundaries And Describe Their Use
- Identify The Key Objectives Of Job Safety Planning
- List The Personal Protective Equipment Required For Shock Protection
- List The Steps To Install And Remove Temporary Protective Grounding Equipment
- Explain What An Arc Flash Is And The Injuries That Can Result
- Identify When An Arc Flash Hazard Exists
- Difference Between "Arc-Rated" And "Flame-Resistant" Clothing
- Select Appropriate Personal Protective Equipment For Arc Flash Hazards Using Table
-

SESSION 9: PROTECTIVE RELAYS

- Principles And Operation Of Protective Devices.
- Power System Disturbances
- Protective Functions Of Various Relays
- Relay Settings And Understanding Probable Problems

SESSION 10: POWER SYSTEM CO-ORDINATION

- Principles Of Co-Ordination Of Protective Devices.
- Process Of Power System Co-Ordination
- Interpreting Time/Current Curves
- Videos On Coordination Studies

SESSION 11: POWER SYSTEM STARTERS

- Operation Of High Voltage Starters
- Various Types Of Starters
- Types Of Motor Protection
- Test Procedures For Starters

- Safety Procedures Critical To Starters

SESSION 12: ELECTRIC MOTOR TESTING

- Operation Of Large Horsepower Motors.
- Various Types Of Electric Motors
- Test Procedures For Motors
- Motor Maintenance And Schedule
- Safety Procedures Critical To Motor Starters

SESSION 13: CAPACITOR TESTING

- Operation Of High Voltage Capacitors.
- Various Types Of Capacitor Installations
- Test Procedures For Capacitors
- Safety Procedures Critical To Capacitors

SESSION 14: GENERATOR MAINTENANCE

- Operation Of High Voltage Generators.
- Operation Of Various Types Of Generators
- Test Procedures For Generators
- Generator Maintenance And Schedule
- Safety Procedures Critical To Generators

SESSION 15: EMERGENCY POWER SYSTEM TESTING

- Operation Of Various High Voltage Emergency Power Systems.
- Various Types Of Emergency Systems: Batteries, Transfers, Ties, Temporary Etc.
- Test Procedures For Operation Of These Systems
- Maintenance And Schedule For Emergency Systems
- Critical Safety Procedures

4:00 pm -- Day 2 Wrap Up

- Review Quiz
- Questions and Discussions

COURSE TIMETABLE

BOTH DAYS

Start: 8:00 a.m.

Coffee Break: 10:00 a.m.

Lunch: 12:00 noon

Finish: 4:30 p.m.

INTERESTED IN ONSITE ELECTRICAL TRAINING?

Cost Effective Onsite Electrical Training

Save the cost of travel and hotels AND save on our regular public enrollment registration fees.

For more information, contact our office at 905-686-1040/1-855-824-6131 or you can go to our onsite electrical training quotation page for a FREE quotation:

www.electricityforum.com/onsite-request-quote

Download Our FREE 60-Page 2018 Onsite Electrical Training Catalog Today!



ONSITE TRAINING BENEFITS:

- Affordable and Cost Effective
- Course Customization
- Flexibility of Schedule
- Convenience for Employees
- CEUs/PDHs

THE
ELECTRICITY
FORUM
TRAINING
INSTITUTE

www.electricityforum.com/catalog

"Our motivation is your education."



(905) 686-1040



(905) 686-1078

**ON-LINE:**

www.electricityforum.com/electrical-training/high-voltage-electrical-maintenance-training

**MAIL:**

The Electricity Forum
1885 Clements Rd., Unit 218
Pickering, ON L1W 3V4



**REGISTER 3 DELEGATES
AT FULL PRICE
AND GET THE 4th REGISTRATION FREE!**

SAVE \$50

REGISTER AND PREPAY 14 Days prior to course date and receive an early bird discount of \$50 off the full price.

WHEN & WHERE

(Please check the date/location where you want to attend the course)

HV ELECTRICAL MAINTENANCE COURSE LOCATIONS:

- **Saskatoon, SK - October 29-30, 2018**
Sandman Airport Hotel
310 Circle Dr
Tel: 306-477-4844
- **Winnipeg, MB - October 31- November 1, 2018**
Sandman Hotel & Suites Winnipeg Airport
1750 Sargent Ave.
Tel: 204-775-7263
- **Edmonton, AB - November 5-6, 2018**
Sawridge Inn Edmonton South
4235 Gateway Blvd NW
Tel: 780-438-1222
- **Richmond, BC - November 8-9, 2018**
Sandman Signature Vancouver Hotel & Resort
10251 ST. Edwards Drive
Tel: 604-278-9611
- **Mississauga, ON - November 14-15, 2018**
Hampton Inn and Suites Toronto Airport
3279 Caroga Drive
Tel: 905-671-4730

ATTENDEE INFORMATION

To receive registration fee discounts, you must **REGISTER AND PREPAY** prior to the course date.

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY _____

PROVINCE _____

POSTAL CODE _____

E-MAIL _____

TEL () _____

FAX () _____

METHOD OF PAYMENT
 Bill My Credit Card MasterCard
 AMEX VISA

Card # _____

Exp. Date _____

Signature _____

Card Holders Name _____

REGISTRATION FEES

The registration fee to attend this course is \$799.00 + Tax. The fee includes course material, a FREE magazine subscription, a \$100 coupon towards any future 2018/2019 Electricity Forum event (restrictions apply), refreshments.

BUNDLE PACKAGE:

Take this HV Electrical Maintenance Course with our 1-Day MV/HV Cable Splicing Skills Training Course

Nov 2, 2018 - Winnipeg, MB

Nov 7, 2018 - Edmonton, AB

Nov 16, 2018 - Mississauga, ON

3-DAY COURSE
\$999

Details: www.electricityforum.com/electrical-training/3-day-mtce-cable-splicing-training