



Factory Certified Technician School

Day 1 (October 14, 2017)

Introduction and Purpose of the Factory Trained Program

Overview of the optional test and benefits of the certification.

Covered Topics:

- **Basics of Electrical Generators**
 - What is a generator and how does it work.
 - Common types of generators.
 - Basic troubleshooting of generators.

- **Voltage Regulators**
 - Basic principles of voltage regulators (How do they work?)
 - History of voltage regulators
 - Types of voltage regulators.
 - Voltage regulator troubleshooting.

- **Installing and sizing Power-Tronics Products**
 - Nameplate pitfalls
 - Information needed for correct sizing
 - Sizing formulas
 - Sizing charts
 - Special sizing considerations
 - Choosing the correct hookup connection on the generator

- **Voltage regulators**
 - VP4
 - XR8
 - Legacy products (XR500 series and UVR series)

- **Static Exciter Modules**
 - SEM250A Series
 - SEM250B Series

- **Static Exciters (Single phase rectified)**
 - SE300 Series
 - SE500 Series
 - SE1500 Series
 - SE2000 Series
 - SE3000BX
 - SE6000BX



- **Static Exciters (Three phase rectified)**
 - SE2000B-3P
 - SE3000B-3P
 - SE6000B-3P

- **Accessories**
 - AFM500X
 - ABF40
 - CFM12
 - HVD1
 - EIC1020
 - EIC10V
 - MOP1224HD

- **Specialty Products**
 - XR500B-400
 - SPXR500-28VDC
 - PC500X
 - PC1500BF
 - PC1500B-3P
 - PC2000BF
 - PC2000B-3P

- **Troubleshooting A New Installation**
 - No voltage buildup
 - Poor regulation control
 - Voltage varies with frequency
 - Voltage Instability
 - Blowing fuses
 - High and uncontrollable voltage
 - Voltage collapsing under load

Question and Answer Session

Day 2 (October 15, 2017)

Review and Question and Answer Session

- **Class Exercises**
 - Identifying a generator's configuration
 - Calculating excitation requirements
 - Sizing a new regulator system
 - Troubleshooting the generator
 - Case studies

- **Group Exercises**
 - Identifying a generator's configuration



- Sizing a new regulator system
- Troubleshooting the generator

Optional Certification Test