TAMCO High Voltage Switchgears Training Course

Professional Development Training Course Outline

Category	Development	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today’s fast-evolving power distribution landscape, the importance of reliable and robust High Voltage Switchgears cannot be overstated. TAMCO High Voltage Switchgears Training Course is designed to provide in-depth knowledge of TAMCO High Voltage Switchgears, focusing on their structure, operations, testing procedures, maintenance strategies, and safety protocols. Tailored for engineers, technicians, and industry professionals, the course ensures participants gain a competitive edge in managing and operating high-performance electrical systems in line with modern energy standards.

The training is enriched with real-world case studies, hands-on simulations, and interactive modules to help learners master the technicalities of switchgear systems, including arc-flash protection, substation design, smart grid integration, and predictive maintenance. By leveraging industry best practices and IEC/IEEE standards, this course empowers participants with the skills needed to optimize reliability, enhance operational efficiency, and ensure electrical safety in complex environments.

Programme Curriculum

TAMCO High Voltage Switchgears Training Course

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Course Objectives

1. Understand the architecture and functionality of TAMCO high voltage switchgears.
2. Learn the key differences between AIS, GIS, and hybrid switchgear systems.
3. Interpret high voltage schematics and switchgear design layouts.
4. Apply safety regulations in high voltage environments (NFPA 70E, OSHA).
5. Perform insulation resistance and high potential (Hi-Pot) tests.
6. Analyze arc flash hazards and mitigation strategies.
7. Conduct partial discharge testing and condition monitoring.
8. Integrate switchgears into SCADA and IoT-based smart grids.
9. Execute preventive and predictive maintenance procedures.
10. Understand breaker mechanism and protection relay coordination.
11. Troubleshoot switchgear faults using diagnostic tools.
12. Review current industry trends in energy automation and substation digitization.
13. Comply with IEC, IEEE, and ANSI international standards.

Target Audience

1. Electrical Engineers
2. Substation Operators
3. Power System Technicians
4. Maintenance Supervisors
5. SCADA Engineers
6. Utility and Power Plant Staff
7. Renewable Energy Project Managers
8. Industrial Automation Professionals

Course Duration: 5 days

Course Modules

Module 1: Introduction to High Voltage Switchgears

- Overview of switchgear classifications
- Introduction to TAMCO technologies
- AIS vs GIS comparison

- Voltage levels and insulation types
- Overview of electrical distribution networks

Module 2: Switchgear Components & Construction

- Circuit breakers and disconnectors
- Busbars, insulators, and enclosures
- Instrument transformers
- Interlocking systems
- Gas-insulated compartments

Module 3: Safety Standards & Regulations

- Personal Protective Equipment (PPE)
- Arc flash boundaries
- OSHA and NFPA compliance
- Lockout/Tagout procedures
- Safe racking and maintenance practices

Module 4: Testing & Diagnostics

- Hi-Pot and insulation resistance tests
- Circuit breaker timing analysis
- Contact resistance measurements
- Infrared thermography
- Partial discharge testing

Module 5: Operation & Control Systems

- Manual vs remote switching
- Relay protection systems
- Integration with SCADA
- Control wiring and schematics
- Load shedding and fault clearing

Module 6: Predictive Maintenance Techniques

- Thermal imaging and condition monitoring
- Vibration analysis
- Oil analysis (for oil-insulated systems)
- Maintenance planning strategies
- Digital twin technology applications

Module 7: Fault Analysis & Troubleshooting

- Common failure modes
- Diagnostic tools and methods
- Trip circuit analysis
- Real-world fault case studies

- Restoration procedures

Module 8: Future Trends in Switchgear Technology

- Smart switchgear evolution
- Digital substation design
- Cybersecurity in grid systems
- Integration of renewable energy sources
- Role of AI and IoT in fault detection

Training Methodology

- A mix of live instructor-led sessions
- Interactive case studies
- Virtual labs
- Group discussions
- Practical assignments designed for maximum knowledge retention and real-world application.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

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