

72 to 800kV Dead Tank Breaker General Operation and Maintenance Training

Level 2 DTB First Responder/Minor Maintenance

DTB TRAINING CENTER GREENSBURG, PA– COURSE DESCRIPTION

Hitachi Energy is pleased to offer the following two (2) day training course consisting of classroom and hands-on instruction in Hitachi's Greensburg, PA facility. The course is aimed to provide a general understanding of operations and maintenance of 72 to 800kV power circuit breakers. During the classroom portion, experienced instructors will share their knowledge and expertise through interactive, engaging classroom instruction. To add further understanding, each main category of instruction will be followed by hands-on activity where students can interact with the breaker first-hand.

PREPARED BY	STATUS	SECURITY LEVEL		
Randy Opsitnick	Approved	Internal		
APPROVED BY	APPROVAL DATE			
Marcio Schmitt	2023-02-21			
OWNER	DOCUMENT KIND			
Head of Training Function	Agenda			
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Who would benefit:

- ❖ Direct maintenance personnel
- ❖ Substation maintenance engineers
- ❖ Engineering managers
- ❖ Substation supervisors
- ❖ Asset Managers
- ❖ Training Coordinators or Managers

Included:

- ❖ 72 to 800kV Circuit Breaker Information manuals
- ❖ 2 continental breakfasts
- ❖ 2 lunches
- ❖ 1 group dinner
- ❖ certificate of completion

Certification:

Certification will be issued after successful participation in this course and completion of examination.

Duration:

2 days

Enrolments:

Send your request to

us-dtb_training@hitachienergy.com

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Introduction to Breaker Fundamentals

- ❖ Breaker safety
- ❖ Switching
- ❖ Grounding
- ❖ Pole assembly
- ❖ Removal of bushings
- ❖ Bushing lifting points
- ❖ Through-rod connection
- ❖ Maintenance procedures /schedules
- ❖ 72 to 800 kV Interrupter Theory and maintenance/Interrupter Removal
- ❖ Interrupter overview
- ❖ Contact inspection
- ❖ Interrupter installation

Installation and Commissioning

- ❖ Lifting the Breaker
- ❖ Mounting to foundation
- ❖ Electrical controls & alarms /lockouts
- ❖ Breaker timing
- ❖ Leak detection
- ❖ Moisture analysis
- ❖ CT ratio and polarity
- ❖ Contact resistance

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Operating Mechanism (FSA, HMB, BLK & MSD)

- ❖ Principles of operation
- ❖ Spring Mechanism
- ❖ Hydraulic mechanism
- ❖ Maintenance procedures / schedules
- ❖ Charging system
- ❖ Trip / close coils
- ❖ Trip / close latches
- ❖ Auxiliary switches
- ❖ Duty cycle
- ❖ Troubleshooting
- ❖ Spare parts

SF6 Handling Procedures

- ❖ Gas filling and vacuum procedures
- ❖ SF6 by-products