

GCB HVR/HVS Maintenance Training Level 4

COURSE DESCRIPTION



Course goal:

The participants acquire knowledge to perform component exchange and troubleshooting on Generator Circuit Breakers types HVS. The goal is to understand the process and execution of a complete overhaul, including all the parts and components. Additionally, the trainee will learn how to use the special tools and how to prepare himself for the field intervention. He will also obtain important insights for effective on-site work management.

Main learning objectives:

- Understand the functions of all components inside a HVS breaker system
- Handling of the components with the crane
- Perform a complete overhaul on the HVS breaker system
- Exchange HVS central assembly unit
- CT/VT/Capacitor exchange
- Work with the local control cubicle
- Commissioning of DSM slow drives
- Exch. HMB and DSM drive

Participant profile

Field service engineer for Hitachi Energy, preferably on high voltage products or high current systems. Willingness to travel and work for the global service network.

Prerequisites:

- Electrical or mechanical degree
- Ability to read technical drawings is required!
- Must have passed GCB certification level 3 (Overhaul)
- Fluent in English

Topics

- Removing the SF6 gas from the arcing chambers
- Disassembling and assembling the arcing chamber
- Disassembling and assembling the HMB
- Disassembling and assembling the compressor unit
- Adjustment and measurement of limit switches
- preparation of assembly drawings

This is a practical and theoretical training course.

Certification:

A confirmation will be issued after successful participation in this course, as part of the certification process.

Within 24 months, an on-site assessment must be carried out along with a final review to complete certification.

Duration:

10 days

Enrolments:

Send your request to

GIS-GCB_Training@hitachienergy.com

PREPARED		STATUS		SECURITY LEVEL	
2024-07-26	Manuel Engler	Approved		Public	
APPROVED		DOCUMENT KIND			
2024-07-26	Zsofia Fodor	Agenda			
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GCB HVR/HVS Maintenance Training Level 4					
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Course agenda:

	Day 1	Day 2	Day 3	Day 4	Day 5
Subject	Theory HVS	Comp. Exch.	Theory Slow Drives and Commissioning	Comp. Exch. Slow Drives	Switchgear Assembly
Topics	<ul style="list-style-type: none"> ❖ Safety Instructions ❖ Theory: ❖ Get familiar with components ❖ Particularities of the breaker type HVS (especially in commissioning) ❖ Get familiar with the components of the Central Assembly Unit (CAU) 	<ul style="list-style-type: none"> ❖ Exchange of Central Assembly Unit ❖ VT exchange ❖ CT exchange ❖ Capacitor exchange 	<ul style="list-style-type: none"> ❖ DSM Slow Drives-theory ❖ Work with HVS Local Control Cubicle ❖ Commissioning of DSM Slow Drives 	<ul style="list-style-type: none"> ❖ Component exchange of HMB ❖ Component exchange of DSM Slow Drives 	<ul style="list-style-type: none"> ❖ Switchgear Assembly in factory
Time	9:00 – 16:00	9:00 – 16:00	9:00 – 16:00	9:00 – 16:00	9:00 – 16:00

	Day 6	Day 7	Day 8	Day 9	Day 10
Subject	Preparation for overhaul	Arcing chamber overhaul	Disconnecter overhaul	Earthing switches	Installation and functional check
Topics	<ul style="list-style-type: none"> ❖ Health & Safety induction ❖ Removing SF6 gas ❖ Lifting out the arcing chambers from the breaker system 	<ul style="list-style-type: none"> ❖ Overhaul arcing chamber and reinstallation back to the breaker system 	<ul style="list-style-type: none"> ❖ Overhaul disconnecter, re-install and align with GCB ❖ Filling SF6 Gas 	<ul style="list-style-type: none"> ❖ Overhaul earthing switches 	<ul style="list-style-type: none"> ❖ Final testing of the equipment
Time	9:00 – 16:00	9:00 – 16:00	9:00 – 16:00	9:00 – 16:00	9:00 – 16:00