

# Operating Mechanisms HMB-4 /-8 Maintenance Training Level 4 COURSE DESCRIPTION



**Course goal:**

The course is an in-depth training and conveys profound knowledge on the overhaul of HMB-4 /-8, operating mechanisms.

**Participant profile:**

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

**Prerequisites:**

- Good English skills (written and spoken)
- Ability to read diagrams is required
- Electrical skills
- Mechanical skills
- Attended the local required health & safety
- Training
- First aid course with certificate
- Own PSE
- Computer with admin rights

**Main learning objectives:**

- Working principle and troubleshooting
- Exchanging modules
- Repair and overhaul of the complete mechanism
- Adjustment of spring travel switch and auxiliary switch

**This is a theoretical and practical training course.****Certification:**

A certificate, valid for 1 year will be issued after successful participation in this course, as part of the certification process.

Within 12 months, an on-site assessment must be carried out along with a final review to receive a certificate, valid for another 3 years.

**Duration:**

5 days

**Enrolments:**

Send your request to

[GIS-GCB\\_Training@hitachienergy.com](mailto:GIS-GCB_Training@hitachienergy.com)

PREPARED		STATUS		SECURITY LEVEL	
2024-07-26	Manuel Engler	Approved		Public	
APPROVED		DOCUMENT KIND			
2024-07-26	Zsafia Fodor	Agenda			
TITLE					
Operating Mechanisms HMB-4 /-8 Maintenance Training Level 4					
OWNING ORGANIZATION		DOCUMENT ID		REV.	LANG.
CH-Zurich-2657-Field Service		2GHE004265		B	en
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Day	Subject	Location
<b>Welcome / Introduction to Hitachi Energy Switzerland</b>		
	<ul style="list-style-type: none"> <li>❖ Training Introduction / Presentation</li> <li>❖ Safety Induction</li> <li>❖ Certification Process</li> <li>❖ Preparation of workspace</li> </ul>	
<b>Operating mechanism safety instruction</b>		
<b>Basic training</b>		
<b>1</b>	<ul style="list-style-type: none"> <li>❖ Working principle of the system</li> <li>❖ Detail view of the system parts: <ul style="list-style-type: none"> <li>○ Functions of spring limit switch</li> <li>○ Functions of auxiliary switch</li> <li>○ Checklist for failure investigation</li> <li>○ Pilot valves</li> <li>○ Overflow valve</li> <li>○ Interlocking pin</li> <li>○ Working module / piston rod and P plug</li> <li>○ Springs</li> <li>○ Pump module and motor / Pump element</li> <li>○ Control module and pilot valves</li> <li>○ Storage module</li> <li>○ Oil filling and evacuation</li> </ul> </li> </ul>	Classroom
<b>Hands-on training</b>		
<b>2</b>	<ul style="list-style-type: none"> <li>❖ Disassembly of entire HMB-4 drive</li> <li>❖ Focus on individual system parts</li> </ul>	Training area
<b>Hands-on training</b>		
<b>3</b>	<ul style="list-style-type: none"> <li>❖ Reassembly of entire HMB-4 drive</li> <li>❖ Focus on individual system parts</li> </ul>	Training area
<b>Hands-on training</b>		
<b>4</b>	<ul style="list-style-type: none"> <li>❖ Disassembly of entire HMB-4 drive</li> <li>❖ Overhaul Training <ul style="list-style-type: none"> <li>○ Exchange of sealings</li> <li>○ Special tool handling</li> <li>○ Oil exchange</li> </ul> </li> </ul>	Training area

Day	Subject	Location
5	<b>Hands-on training</b>	Classroom Training area
	❖ Re-assembly of entire HMB-4 drive <ul style="list-style-type: none"><li>○ Spring travel switch installation and adjustment</li><li>○ Auxiliary switch adjustment</li></ul>	
	❖ Re-commissioning of HMB-4 drive: Tests and Measurements	
	<b>Troubleshooting tips</b>	
	<b>Exam</b>	
	<b>Final Discussion</b>	
	<b>Farewell</b>	