

Field Service Engineer Training (Level 4) ELK-1,2,3 and ELK-3/550

TRAINING CENTER SWITZERLAND – COURSE DESCRIPTION

PREPARED BY Jenisija Karunakaran	STATUS Draft	SECURITY LEVEL Internal		
APPROVED BY	APPROVAL DATE			
OWNER Head of Training Center	DOCUMENT KIND Agenda			
TITLE GIS-L4-ELK1,2,3&ELK3_550-Training Center				
OWNING ORGANIZATION CH-Zurich-2657-Field Service Hitachi Energy	DOCUMENT ID	REV. A	LANG. en	PAGE 1/4
© 2022 Hitachi Energy. All rights reserved				

© 2022 Hitachi Energy. All rights reserved.

This is an in- depth training about the product series ELK-1,2,3 and 3/550 and its component. The main topics are focused on the ELK-3/550 and its products.

Course goal:

To acquire:

- Advanced knowledge about SP 3-2 arcing chamber and its features
- Advanced knowledge about the HMB 8 drive 1st generation
- If required retrofit circuit breaker old to new generation incl. function checks
- Advanced knowledge about disconnecter, earthing and FAES. DSK and parts replacement
- Functional checks and Troubleshooting cases
- Re-commissioning abilities

Prerequisites:

- Good English skill
- On-site experience
- Crane operating license
- SF6 Gas-handling course with certificate (Only for Europe)

IT infrastructure

- **Please ensure you have “Admin rights” on your notebook.**
- **Participants must bring their own notebook and PSE (Safety shoes)**

Main learning objectives:

- Safety introduction
 - Training center risk
 - Safety requirements when Working on electrical system > 1KV
- Removal and re-installation of HMB operating Mechanism
- Overhaul the arcing chamber SP3-2
- Resistance measurement of arcing chamber
- DSK exchange and parts replacement for the disconnectors, EM and EB Earthing switch
- Alignment gear link system
- Re-commissioning of the circuit breaker-> time and speed according to protocols
- Trouble shooting cases
- Writing an overhaul report

This is a theoretical and practical training course.

Certification:

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

Within a 24 months period, 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

STATUS	SECURITY LEVEL	DOCUMENT ID	REV.	LANG.	PAGE
Approved	Internal	2GHE009981	A	en	2/4

Day	Subject	Location
Welcome / Introduction to Hitachi Energy Switzerland		
1	<ul style="list-style-type: none"> ❖ Training Introduction / Presentation ❖ Health and Safety Induction ❖ Hitachi Energy GIS-Product Portfolio ❖ Introduction to GIS main components 	Classroom
Practical training		
2	<ul style="list-style-type: none"> ❖ Removing of HMB 8 operating mechanism from the circuit breaker ❖ Explanation and execution trouble shooting cases of the HMB 8 ❖ * Alternative Program: Retrofit SL arcing chamber with HKA power pack to HMB drive and its adaptation* 	Training center
Practical training		
3	<ul style="list-style-type: none"> ❖ Preparation for arcing chamber SP 3-2 removal ❖ Remove and prepare the arcing chamber for dismantling ❖ Dismounting and overhaul the arcing chamber ❖ * Continuing Alternative Program * 	Training center
Practical training		
4	<ul style="list-style-type: none"> ❖ Continuation overhauling the chamber ❖ Re-assembling of the SP circuit breaker ❖ Resistance check of the arcing chamber ❖ * Continuing Alternative Program* ❖ Preparation for commissioning with Megger TM 1760 	Training center
Practical training		
5	<ul style="list-style-type: none"> ❖ Re-commissioning (time and speed) of the circuit breaker according to protocols ❖ Explanation and execution trouble shooting cases ❖ * Function check of the retrofitted circuit breaker* ❖ Week review 	Training center/ Classroom

Day	Subject	Location
6	Practical training	Training center
	❖ Removal of the EB fast earthing switch operating mechanism	
	❖ Overhaul the mechanism and execute trouble shooting cases	
	❖ Replacement of the migration modules	
7	Practical Training	Training center
	❖ DSK of the EB, EM earthing switches	
	❖ Re-installation of the mechanism. Manual operation of all switches	
8	Practical Training	Training center
	❖ Removal of the DH3 disconnector operating mechanism	
	❖ Overhaul the mechanism incl. replacement of the migration module	
	❖ Functional check of the retrofitted drive	
9	Practical Training	Training center Classroom
	❖ Removal and replacement of the disconnector TE, TW, TV / earthing switch EM3 active parts	
	❖ DSK exchange for disconnector switches	
10	Field service documentation / Exam	Classroom
	Q and A session / Certification Process	
	End of training	

The content and duration of each segment are variable