

GIS ELK-4/800 After-Sales Service

Level 4 Field Service Engineer Training

TRAINING CENTER CHINA – COURSE DESCRIPTION

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| PREPARED BY ZhiWu Wu | STATUS Approved | SECURITY LEVEL Internal | | |
| APPROVED BY Sam-QingZhong Shen | APPROVAL DATE 2022-12-28 | | | |
| OWNER Head of Training Function | DOCUMENT KIND Agenda | | | |
| TITLE GIS ELK-4/800 After-Sales Service Training | | | | |
| OWNING ORGANIZATION 2657-Service CN | DOCUMENT ID 2GHE004116 | REV. B | LANG. en | PAGE 1/4 |

Course goal:

To acquire:

- ❖ basic knowledge about SP circuit breaker overhaul
- ❖ TK combined disconnector earthing switch overhaul
- ❖ Fast act earthing switch overhaul

The course covers GIS type ELK-4/800kV

Main learning objectives:

- ❖ Safety introduction:
 - training center risks
 - safety requirements when working on electrical systems >1kV
- ❖ Practical training on SP circuit breaker
- ❖ Removal and reinstallation of HMB operating mechanism
- ❖ Re-coating of linear movement bushing
- ❖ Resistance measurement of arcing chambers
- ❖ overhaul of TE combined disconnector earthing switch
- ❖ overhaul of DH operating mechanism
- ❖ overhaul of DB fast acting earthing switch
- ❖ writing an overhaul report

Prerequisites:

- ❖ Good English skills (written and spoken)
- ❖ Attended the local required
- ❖ Health & Safety Training

Course type :

The training consists of both classroom lessons and hands-on practical sessions

This is a theoretical and practical training course.

Certification:

This training is part of the Field Service Engineer Certification program and is prerequisite to obtain Level 4 certification on:
"ELK-4/ 800"

A certificate will be issued if the certification requirements are fulfilled as described in the Global PGHV- GIS certification process (2GHE004183)

Duration:

10 days

Enrolments:

Send your request to

cn-hvtraining@hitachienergy.com

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| Day | Subject | Location |
|-----|---|----------------|
| 1 | Welcome and introduction to training center | Classroom |
| | Health & Safety rules for PGHV-CN Training Centre visitors | |
| | Electromagnetic induction when working on high voltage switchgear | |
| | Introduction to product main components <ul style="list-style-type: none"> ❖ Circuit breaker type SP | |
| 2 | Practical training | Training Field |
| | ❖ Removal of HMB operating mechanism | |
| | ❖ Opening of circuit breaker | |
| | ❖ Dismounting of the arcing chambers | |
| 3 | Practical training | Training Field |
| | ❖ overhauling the arcing chambers | |
| | ❖ re-coating of the linear movement bushing | |
| | ❖ re-assembling of SP circuit breaker | |
| 4 | Practical training | Training Field |
| | ❖ re-assembling of SP circuit breaker | |
| | ❖ resistance measurement on arcing chambers | |
| | ❖ re-installation of arcing chambers | |
| 5 | Practical training | Training field |
| | ❖ adjustment and re-installation of operating mechanism | |
| | week review | |
| | Q and A session | |

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| Practical Training | | Training field |
| 6 | ❖ removal and re-installation of SP4 arcing chamber | |
| Note: an overhaul of the SP3 arcing chamber is not foreseen | | |
| Practical Training | | Training field |
| 7 | ❖ removal of TE operating mechanisms ❖ overhaul of TE combined disconnecter and earthing switch | |
| Practical Training | | Training field |
| 8 | ❖ overhaul of DH\EM\DB etc. operating mechanisms ❖ re-installation of ES operating mechanism ❖ troubleshooting on ES operating mechanisms | |
| Practical Training | | Training field |
| 9 | ❖ removal of fast acting earthing switch ❖ re-installation of DB operating mechanism ❖ troubleshooting on DB operating mechanisms | |
| Final tests | | Classroom |
| 10 | Field service documentation | |
| | Final Q and A session | |

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