PASS_M0X-L3-M00_72.5kV_100kV & M0_145kV_170kV & M0S_245kV -Training Agenda

PASS PSC- Technical Training

PREPARED BY	STATUS	SECURITY LEVEL		
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Hitachi Energy

Course goal:

This training's primary objective is to ensure a safe and effective operating process that focuses primarily upon the Installation and commissioning (I&C) aspects of Hybrid PASS (Plug and Switch System).

Main learning objectives:

- Understanding of Detailed component assembly
- How to carryout Minor repairs
- Theoretical and practical knowledge of circuit-breaker's Relevant drive control
- Thorough understanding of the functioning mechanism for the relevant disconnector's Drive.
- comprehensive understanding of handling SF_6 gas.
- Foundational knowledge about Maintenance inspection aspects
- Understanding of how to conduct on-site testing, maintaining H&S aspects, and reporting to the PSC (Product Service center).

Prerequisites:

- Training in electrical and mechanical subjects
- Professional experience
- A certification that allows to perform an activity where it is necessary to work on electrical system, both dead and live working at LV or to work in the vicinity of HV systems.
- SF6 certification (relevant in EU)
- Sufficient English language skills
- PPE (Personal Protective Equipment)
- HSE (Health Safety and Environment) and PICW (Person in charge of work) training done
- Heavy loads training
- First aid/emergency

Topics:

- Training and Certification Process
- Hybrid PASS Portfolio
- PASS Overall Assembly
- Theoretical Part of Functionality, Setting and Troubleshooting of Circuit breaker and disconnector drive mechanism.
- Practical Part of Functionality, Setting and Troubleshooting of Circuit breaker and disconnector drive mechanism.
- Functionality & 3 step for setting Disconnectors and relevant drive mechanism Theoretical Part
- Functionality & 3 step for setting Disconnectors and relevant drive mechanism Practical Part
- SF_6 Handling
- Maintenance concept
- Installation of the module On-site activity: Theoretical Part
- Commissioning of the module On-site activity: Theoretical Part
- Installation and Commissioning PASS Installation (simulated) – Practical Part
- Installation and Commissioning: SF6 Gas Filling and LCC Power supply and Pre-Commissioning checks – Practical Part
- Commissioning & Reporting – Practical Part

This is a theoretical and practical training.

Certification:

This is a certification course. A certificate will be issued after the successful completion of the On-site I&C activity which will be conducted by the Training Center.

Duration:

Two Weeks

Enrolments:

- FSE's can fill the details in the form given in the below link for enrolment

https://forms.office.com/Pages/ResponsePage.aspx?id=2eYxe-Gzc0Uyexh3CtBMxlepgS_A8TdVFjOFVnAowonctUMFJHWEpJSEJOODVOTExCVjhDM1dWRkNQNS4u

And send your request to

it-training-psc_lodi@hitachienergy.com

Day	Subject	Location
1	**Training and Certification process presentation** • Introduction to Basic Trainings • Certification Concept • Different levels of Certification • Certification Process **Hybrid PASS Portfolio presentation** • Introduction to Hybrid high voltage switchgear • Product Description • PASS Types and Families • Additional Features • Commitment **Hybrid PASS Major components** • Bushings • Current Transformer • Voltage Transformer • Circuit Breakers • Disconnector **Factory Visit**	Lodi Factory
2	**Circuit Breaker and relevant drive mechanism** • Introduction • Technical Description of the equipment • Functionality of the equipment • Setting and Troubleshooting of the equipment- Theoretical Part • Setting and Troubleshooting of the equipment- Practical Part	Lodi Factory
3	**Disconnectors and relevant drive mechanism** • Introduction • Technical Description of the equipment • Functionality of the equipment • Functionality & 3 step for setting the equipment – Theoretical Part • Functionality & 3 step for setting the equipment –Practical Part	Lodi Factory

Day	Subject	Location
4	**Disconnectors and relevant drive mechanism** • Functionality & 3 step for setting the equipment – Practical Part • Operating Mechanism • Setting of different placements of the Disconnector Drive Mechanism	Lodi Factory
5	**SF_6 Handling** • Characteristics of SF6 • SF6 Health & Safety aspects • General Safety rules • Handling SF_6 During Installation and Commissioning • Rupture Disc – Theoretical & Practical part • Gas Compartment treatment – Theoretical & Practical part **Maintenance Concept** • Concept clarification • Maintenance Inspections • Maintenance Plan • Overhaul - Theoretical Part • Certification requirement	Lodi Factory
6	**Installation of the module: On-site (Theoretical Part)** • General Information • Specifying the Technical referral documents • Service Document requirement for I&C Activity • On-site Installation: Introduction • Fixing of Vertical Support • Installation of the main shipping unit • Lateral poles rotation • Earth cables connection	Lodi Factory
7	**Installation and Commission: On-site (Practical Part)** • PASS Installation (simulated) – Practical Part • Lateral poles rotation • Linking Shaft Installation of Circuit Breaker and Disconnector • Earth cables connection • SF6 Gas Filling – Practical Part • LCC (Local control cubicle) Power supply • Pre-Commissioning checks	Lodi Factory

Day	Subject	Location
8	**Installation and Commission: On-site (Practical Part)** • Commissioning requirements • Checklist for commissioning • Documentation • Findings reporting (For internal use) • Site Test Report (For Customers) • Actions taken to rectify any deficiencies	Lodi Factory
9	**Factory On-site Assessment for Participants** • Installation and Commissioning • Light Troubleshooting • Review of I&C action & reporting **Factory On-Site Assessment Evaluation** • Evaluation done by the Technical Trainer	Lodi Factory
10	**Conclusion** • Sharing the full-filled supervision Report • Sharing confirmation of attendance along with the current status of Authorization to perform on-site activity (Supervised by Level 3/Above Assessor)	Lodi Factory