

Retrofitting of Disconnectors at PGCIL, MALERKOTLA

Client : POWER GRID CORPORATION OF INDIA LIMITED, MALERKOTLA

Location : 420/220kV MALERKOTLA SUBSTATION, PUNJAB

Product: 420kV & 220kV Double & Centre break Disconnector



Before Retrofitting...



S&S Make Disconnector

After Retrofitting...

Effects of Retrofitting.

Issues identified at site

- Hot spots in current carrying parts
- Drive boxes MS SHEET Rusted
- Gear Box struck in Non operating conditions
- Electrical components not working



Challenges

- Only Current carrying parts replacement with New for RD 420kV & RC 420kV retaining insulator and Structure and Metallics
- Drive box conversion towards suitable for SCADA.

Solution provided

- RC 420 & 220kV & RD 420 & 220kV live parts replaced along with Drive box towards suitable for Digital SCADA compatible.

Quick turn around time

RD 420kV – 9 Poles & RC 420kV – 9 Poles & RD & 220kV 3 Poles Each along with SCADA Compatible suitable for Unmanned Digital substation successfully Supplied, Erected and in service.

Please Contact for support....

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S&S Make Disconnector

India's first 400 kV Full Digital Sub-station at Malerkotla



Mrs. Seema Gupta, Director (Operations), inaugurated full digital Sub-station at Malerkotla 400kV S/s on 21st December, 2020 in presence of ED(NR-II) and ED(TD). With this, POWERGRID is the first Indian utility to commission IEC 61850 Process Bus based (including Bus Bar protection) Digital Substation at 400kV level under retrofit project.

TD department, under POWERGRID's Research and Development initiative, carried out retrofitting of conventional control and protection system of a Sub-station commissioned in 1992 with the state-of-the art IEC 61850 Process Bus based Protection Automation and Control system, after successful implementation of pilot projects at Bhiwadi and Neemrana Sub-stations. Before implementation, extensive studies and testing were carried out at PARTeC's Protection, Automation and Control (PAC) and Real Time Simulation(RTS) Labs for Network Design, Architecture & Multi-vendor IED Interoperability Evaluation. The project could be commissioned successfully due to untiring efforts of NR-II, Malerkotla and TD teams with support from Enngg. and AM.

The implementation provides lot of flexibility in engineering, paves the way for faster commissioning, reduced downtime, enhanced diagnostics and ease in trouble shooting during asset management. In addition, the standardized protocol used in digital substation facilitates interoperability among different vendor's Intelligent Electronic Devices.