



SOLUTION NOTE

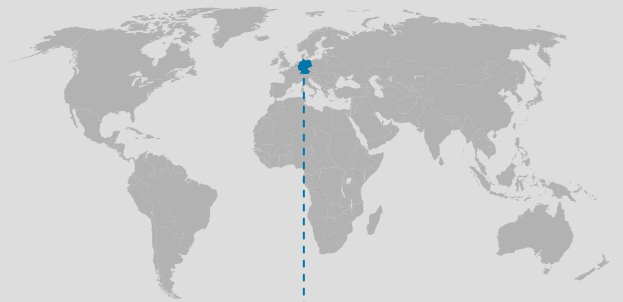
SYNCHROTRON RESEARCH FACILITY

German Electron Synchrotron (Germany)

SYNCHROTRON RESEARCH FACILITY ELECTRIC POWER SUPPLY SOLUTION

DESY (German Electron Synchrotron) develops, runs and uses accelerators and detectors for photon science and particle physics. The new synchrotron radiation source PETRA III of DESY in Hamburg was started up in April 2009. The reconstructions, in which the storage ring PETRA was converted into a synchrotron radiation source, did cost approximately 225 million Euro. The accelerator was originally built for research of elementary particles. Being the most powerful radiation source of its kind, PETRA is used mainly by researchers from all over the world to perform experiments with high quality synchrotron radiation. 14 test benches with up to 30 different measurement instruments are available in the new 300 m long research hall. Researchers find here excellent conditions for various applications, from medicine to material research.

DUE TO » 2008
CLIENT » SYNCHROTRON, DESY
LOCATION » Hamburg, Germany
SOLUTION » EA Air insulated switchgear
N. OF PANELS » 10
SEGMENT » End Users (E3U) – Industry



ORMAZABAL EA:
FIXED MOUNTED, SINGLE BUSBAR,
AIR INSULATED SWITCHGEAR UP TO 24 KV

Switchgear Types:
LOAD BREAK SWITCH (CKS)
CIRCUIT BREAKER (LS)



THE CHALLENGE AND THE SOLUTION

The reconstruction and modernization was realized in less than two years and PETRA is now the best storage ring synchrotron radiation source in the world. The costs were mainly paid by the German ministry for Education and Research, the city Hamburg and the Helmholtz association. The complete vacuum system, the measurement and control technology and the cooling water and electrical infrastructure have been renovated. Security and reliability were key requirements for the medium voltage technology elected in this project.

To guarantee a secure energy supply, Ormazabal EA medium voltage metal-clad switchgear was selected. The panels could also be extended on both sides if needed in future.

Electric Data:
10 kV – 630 A – 20 kA

Scope of Supply:
10 Panels

The switchgears were delivered with electrical position indicators, protection equipment and remote control.

Thanks to Ormazabal Solution, the client obtained the following benefits:

- High security of supply
- High reliability
- Modularity allows for upgrades and reconfiguration in future
- Maximum personnel safety
- Simple and robust design and operation