

Elektrotechnische Kolloquium

Thema: High Power Factor High-Current Variable-Voltage Rectifiers

Vortragender: M.Tech. Jitendra Solanki (LEA)

Abstract:

High-current variable-voltage (HCVV) rectifiers are used in the metal and chemical industries. Typical power ratings vary from tens of kW to hundreds of MW. The main issues with state of the art rectifiers are poor input power factor, high current harmonic distortion, high-maintenance cost, high weight and large volume. To tackle these issues, a two-pronged approach is taken. First, the power quality issues of thyristor rectifiers are addressed with the help of passive and hybrid filters. Second, completely different, medium-frequency transformer-based topologies are proposed for the HCVV applications. In this colloquium both approaches shall be discussed along with the present state of the art rectifier technology.