

Non-superconducting Fault Current Limiter

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Description

With the increase in demand for electrical power, undesirable fault currents in power systems have increased. In prior art, many fault current limiters (FCL)/technologies have been used to address this issue. However, these approaches are associated with possible limitations such as: high operational losses with extra energy requirements in the case of superconductor FCLs (SCFCL) and solid-state FCLs (SSFCL), bulkiness of systems, and frequent servicing or parts replacement requirement in the case of an Is-limiter. **This novel approach comprises the development and use of a non-superconducting fault current limiting (NSCFCL) system to control the fault current in a power system.**

Value Proposition

The system:

- Is non-intrusive
- Is highly compact and light-weight
- Is simple and reliable
- Has a faster processing and response time as compared to conventional techniques
- Avoids large current overshoots as observed with prior-art techniques
- Avoids any service or part's replacement as observed with prior-art techniques
- Allows for almost a negligible operational power dissipation/loss as compared to prior art techniques
- Allows for an insertion of impedance into a power system (during the fault condition only) to limit the fault current under a desired level
- Allows for a coupling of AC and DC currents to control the level of the fault current across the system
- Is effectively used with other secondary protection devices to clear the system faults

Intellectual Property Status

Utility Application 13/479,660

License Status

Available for license