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2.5 Fault Ride-Through Capabilities and Grid Code Compliance2.5.1 Advantages and Disadvantages of the Crowbar Protection; 2.5.2 Effects of DFIG Variables over Its Fault Ride-Through Capabilities; 2.6 Enhanced Control Strategies to Improve DFIG Fault Ride-Through Capabilities; 2.6.1 The Two Degrees of Freedom Internal Model Control (IMC); 2.6.2 IMC Controller of the Rotor Speed; 2.6.3 IMC Controller of the Rotor Currents; 2.6.4 IMC Controller of the dc Voltage; 2.6.5 IMC Controller of the Grid-Side Converter Currents; 2.6.6 DFIG IMC Controllers Tuning for Attaining Robust Control
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3.5.2 FRC-WT Based on Permanent Magnet Synchronous Generator

Sommario/riassunto

The offshore wind sector's trend towards larger turbines, bigger wind farm projects and greater distance to shore has a critical impact on grid connection requirements for offshore wind power plants. This important reference sets out the fundamentals and latest innovations in electrical systems and control strategies deployed in offshore electricity grids for wind power integration. Includes: All current and emerging technologies for offshore wind integration and trends in energy storage systems, fault limiters, superconducting cables and gas-insulated transformers