

Abstract

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A Novel Topology for Enhancing the Low Voltage Ride through Capability for Grid Connected Wind Turbine Generators

Energy shortage and environmental pollution have led to the increasing demand of using renewable sources for electricity production. Currently, power generation from wind energy systems (WES) is of global significance and will continue to grow during the coming years leading to concerns about power system stability where wind farms replace conventional generating technologies that use fossil fuels as the primary energy source. One of these concerns is Low-Voltage Ride-Through (LVRT). In this paper, a novel topology based on the use of magnetic amplifier for enhancing the low voltage ride through capability for grid connected permanent magnet synchronous generators (PMSG).