

## عنوان مقاله:

A Transient Rotor Current Limiter for Protection DFIG-Based Wind Turbine Under Fault Condition

## محل انتشار:

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## خلاصه مقاله:

This paper proposes a transient rotor current limiter (TRCL) to protect the rotor side converter (RSC) of doubly fed induction generator (DFIG) under different grid faults. It has simple structure and requires a simple control system to suppress the transient rotor overcurrent under fault condition without any delay. It is used instead of the crowbar protection scheme that avoids the RSC control system being disabled during fault. Also, it has no effect on RSC under normal operating condition. The power circuit, principle operating and control system of proposed TRCL are introduced and discussed. Then comprehensive evaluation of the proposed TRCL is investigated and its performance is compared to the conventional crowbar scheme under both symmetrical and asymmetrical fault condition. Simulation results show that TRCL provides a cost effective measure to protect the RSC against the rotor overcurrent and has superior performance compared to the crowbar scheme. Simulation are performed in PSCAD/EMTDC software.

## کلمات کلیدی:

Rotor side Converter (RSC); Transient Rotor Current Limiter (TRCL); Doubly Fed Induction Generator (DFIG); Fault (Ride Through (FRT

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1560434>

