

Rotor Side Speed Control Methods Using MATLAB/Simulink for Wound Induction Motor

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Abstract : In recent advancements in electric machine and drives, wound rotor motor is extensively used. The merit of using wound rotor induction motor is to control speed/torque characteristics by inserting external resistance. Wound rotor induction motor can be used in the cases such as (a) low inrush current, (b) load requiring high starting torque, (c) lower starting current is required, (d) loads having high inertia, and (e) gradual built up of torque. Examples include conveyers, cranes, pumps, elevators, and compressors. This paper includes speed control of wound induction motor using MATLAB/Simulink for rotor resistance and slip power recovery method. The characteristics of these speed control methods are hence analyzed.

Keywords : MATLAB/Simulink, rotor resistance method, slip power recovery method, wound rotor induction motor

Conference Title : ICECECE 2017 : International Conference on Electrical, Computer, Electronics and Communication Engineering

Conference Location : Singapore, Singapore

Conference Dates : July 04-05, 2017