

A Variable Speed DC Motor Using a Converter DC-DC

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Abstract : Between electronics and electrical systems has developed a new technology that is power electronics, also called electronic of strong currents, this application covers a very wide range of use particularly in the industrial sector, where direct current engines are frequently used, they control their speed by the use of the converters (DC-DC), which aims to deal with various mechanical disturbances (fillers) or electrical (power). In future, it will play a critical role in transforming the current electric grid into the next generation grid. Existing silicon-based PE devices enable electric grid functionalities such as fault-current limiting and converter devices. Systems of future are envisioned to be highly automated, interactive "smart" grid that can self-adjust to meet the demand for electricity reliability, securely, and economically. Transforming today's electric grid to the grid of the future will require creating or advancing a number of technologies, tools, and techniques—specifically, the capabilities of power electronics (PE). PE devices provide an interface between electrical system, and electronics system by converting AC to direct current (DC) and vice versa. Solid-state wide Bandgap (WBG), semiconductor electronics (such as silicon carbide [SiC], gallium nitride [GaN], and diamond) are envisioned to improve the reliability and efficiency of the next-generation grid substantially.

Keywords : Power Electronics (PE), electrical system generation electric grid, switching frequencies, converter devices

Conference Title : ICACECI 2014 : International Conference on Advances in Computing, Electronics, Communications and Informatics

Conference Location : Paris, France

Conference Dates : December 30-31, 2014