

ECONOMICAL VOLTAGE RESOLUTION OF AUXILIARY DRIVE CONVERTER IN TRACTION AUTOMOBILES

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ABSTRACT

This research defines a potential plan notion of a rigid switching input voltage stabilizer for the ancillary drives converters in dc catenary served light traction automobiles. Ancillary drives are frequently committed to produce customary power grid that delivers innumerable on-board equipment and indicting on-board batteries. The input voltage stabilizer (IVS) is the major responsive block of ancillary drives. This block delineates the voltage level of the ensuing DC-DC based isolated converter (IC). The utmost objective of this paper is to come up with the proposal of a cost efficient alternative of the voltage stabilizer. This designated input voltage stabilizer is premeditated as a buck (step-up) or boost (step-down) converter, functioning with an input catenary voltage limits of 400VDC to 950VDC. The innovative profligate, distinct IGBT H3 transistors and SiC diodes permit switching frequency from range 20 kHz to 30 kHz in a rigid switching mode with power regarded up to 22 kW.

KEYWORDS: DC-DC Power Conversion, Rigid Switchingconverters, Hard Switching, Auxiliary Drives, Switching Frequency

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