

Modular multilevel current source converter

The invention provides a modular multilevel current source converter with one or more auxiliary full bridge modules.

The modular multilevel current source converter is configured to increase number of output current levels based on one or more auxiliary full bridge modules.

A method of inserting or bypassing an auxiliary full bridge module and controlling inductor current in an auxiliary full bridge module in the modular multilevel current source converter is also provided.

The auxiliary full bridge module is inserted either in positive or negative direction based on the values of module inductor current and the polarity of arm voltage.

The number of half bridge modules to be inserted is then adjusted according to the direction of auxiliary module insertion.

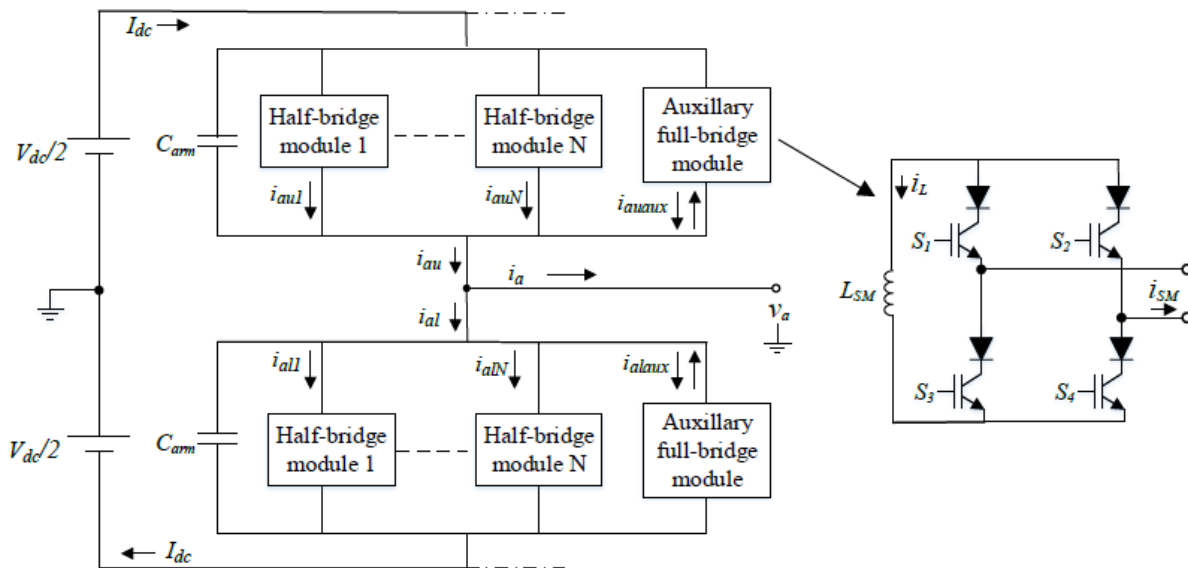


Fig – 1: Circuit configuration