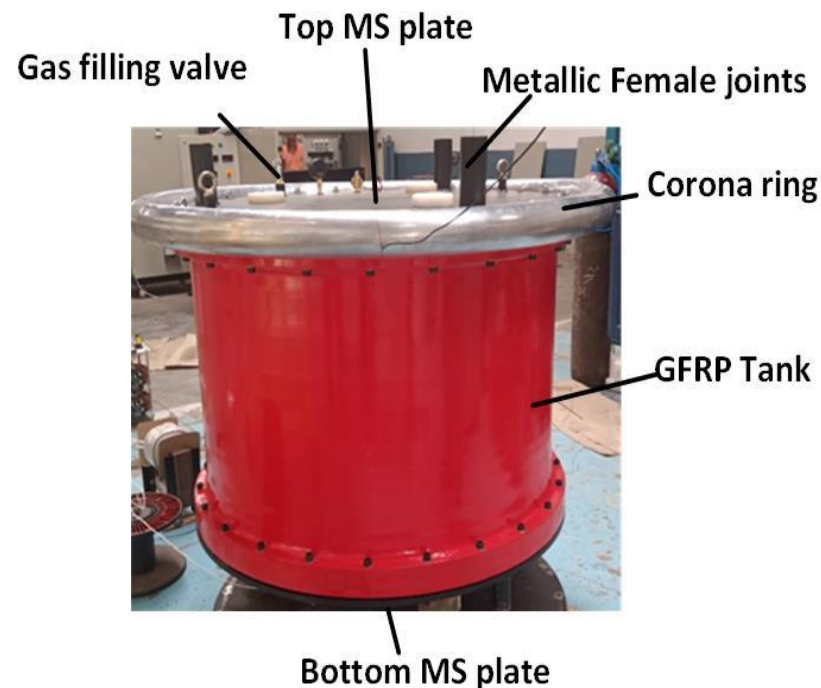
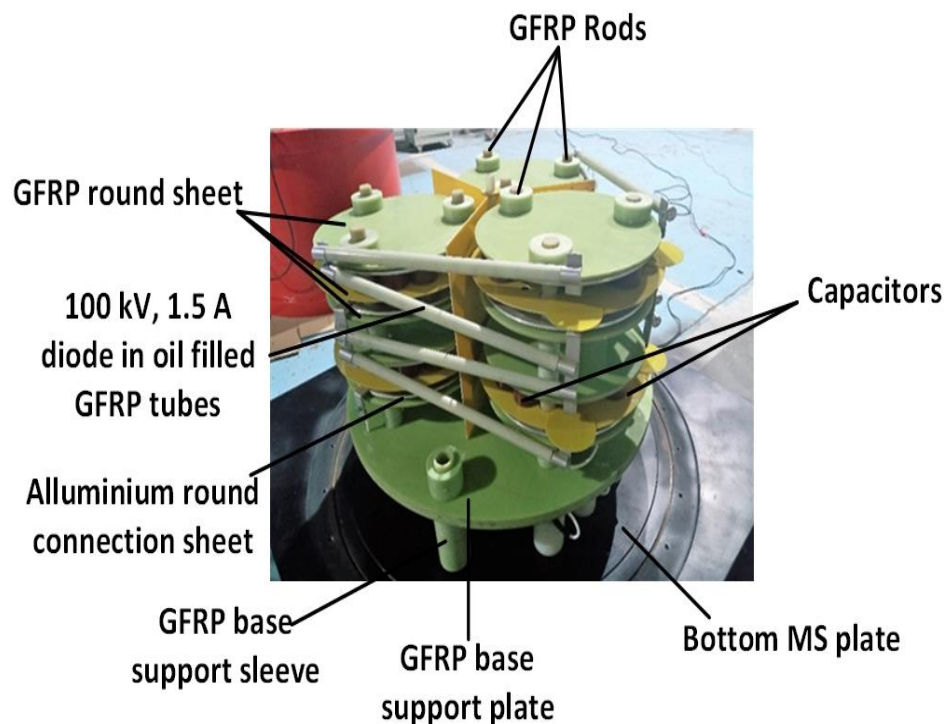


Title: Design, analysis, fabrication and testing of 100 kV, 100 mA DC full-wave voltage multiplier (FWVM) modular unit for accelerator power supply

Authors: Urmil Thaker , Santosh C. Vora, Amardas A, Amal S, Kumar Saurabh, Aritra Chakraborty, Paul Christian, Ashok Mankani , Ujjwal Baruah



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High Voltage Power Supplies are very useful for nuclear physics research, fusion research and also for various industrial applications such as laser, medical x-ray imaging, electrostatic precipitators etc. This 100 kV, 100 mA modular Full-Wave Voltage Multiplier (FWVM) was designed, developed and tested successfully in IPR. This FWVM is an essential part of 500 kV, 100 mA High Voltage power supply. The final output of 500 kV voltage can be achieved by cascading of five FWVM units. This 100 kV FWVM unit is developed using 2 stages of Full-Wave Cock-Croft Walton Voltage Multiplier Circuit. This FWVM is filled with dry nitrogen gas at 2 bar pressure to avoid any partial voltage discharges or high voltage breakdown inside the tank.

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