

voltage, the power was injected into the grid. The current control technique was utilized to inject the near sinusoidal current generated by the Pi-type thirteen-level PV inverter. Figure 15 shows the output voltage THD. Figure 16 shows the output voltage and output current of the proposed inverter, which generated a chopped output voltage. Here, M_a was set to be 1.17.

6. Conclusion

This paper presented an overview of the existing current control techniques for grid-connection of single-phase PV inverter systems. In addition, a current control scheme has also been proposed for the grid-connection of single-phase cascaded H-bridge inverter topologies. The control for the cascaded H-bridge PV inverter relies on a PI current controller supported by a MPPT algorithm, a PWM scheme and an anti-islanding technique to attain a grid-tied PV system. This control system offers faster operation, improved efficiency, reduced THD and better output current quality. Here, this technique had been implemented on a Pi-type thirteen level inverter in a two stage grid connected PV system.

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