

## C115740 : MAJOR ELECTRICAL ENGINEERING

KEY WORD : BILATERAL CONVERTER/UPS/AC-DC CONVERTER/DC-AC CONVERTER

PRASIT PUAPOOMCHAREON : A BILATERAL CONVERTER FOR UPS

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A bilateral converter is used in UPS to perform the function of rectifier/charger or inverter. The bilateral converter that has been constructed in this thesis is a fast response inverter. The settling time for the distorted output voltage to return to sine wave is less than 1 ms when the load changes from 0 to 50 %. When the bilateral converter works in the rectifier/charger mode, it has sine wave input current. This feature reduces the problem created by harmonic current and improves the power factor of the system.