

ABSTRACT

A technique for reducing power capacity required for a power buffer circuit is provided. A converter (3) full-wave rectifies a single-phase voltage (V_{in}), and outputs the rectified voltage (V_{rec}) across DC power supply lines (LL and LH). An inverter (5) receives the rectified voltage (V_{rec}), and supplies a three-phase AC current (I_u , I_v and I_w) to an inductive load (6). A power buffer circuit (4) is connected between the DC power supply lines (LL and LH). The power buffer circuit (4) includes a discharge circuit (4a) and a charge circuit (4b). The discharge circuit (4a) includes a capacitor (C4) and a switch (Sc) connected in series to each other. The discharge circuit (4b) is configured, for example, by a boost chopper, and includes a switch (Sl), a reactor (L4), and a diode (D40). The power buffer circuit (4) provides and receives part of pulsations of a power input into the converter (3) to and from the DC power supply lines (LL and LH).