

Abstract

Method and apparatus for reducing harmonics mains-power-supply perturbations of a self-commutated multilevel inverter

The invention relates to a method for reducing harmonics mains-power-supply perturbations of a self-commutated multilevel inverter (4, 6) which is clocked at the fundamental frequency and has capacitive storage devices (18, 20), and to an apparatus for carrying out this method. According to the invention, when a predetermined operating point of this multilevel inverter (4, 6) is left, the angular values for turn-on and turn-off instants of the individual voltage levels of the multilevel inverter (4, 6) are calculated for a newly determined operating point, on the one hand, and, on the other hand, a terminal voltage of this multilevel inverter (4, 6) is matched to an altered fundamental amplitude of the inverter output voltage. Consequently, the harmonics mains-power-supply perturbations of a multilevel inverter (4, 6) can be kept to a minimum at any time.

FIGURE 1