

ABSTRACT

An inverter control apparatus and a motor drive system according to an embodiment accurately control an electric current and includes an inverter main circuit INV that drives a synchronous motor; an electric-current detector SS that
5 detects an electric current flowing between the inverter main circuit INV and the synchronous motor M; a command generator 110 that generates an electric-current command value of an output electric current that is output from the inverter main circuit INV to the synchronous motor M, in accordance with a torque command that is supplied externally; and an electric-current controller
10 120 that generates a voltage command value for the inverter main circuit INV so that the electric-current command value and a detected electric-current value detected in the electric-current detector SS are equal to each other. The command generator 110 generates the electric-current command value so that a fundamental wave current that is equal to or greater than a threshold is supplied
15 to the synchronous motor M, in driving the inverter main circuit INV.