

Title of Invention: CONTROL DEVICE FOR DIRECT POWER CONVERTER

ABSTRACT

5 In a power buffer circuit included in a direct power converter, variations in voltage across a buffer capacitor are suppressed even when the electrostatic capacity of the buffer capacitor varies. A control device (10) includes a charge controller (103). The charge controller (103) includes an amplitude determining unit (103a), a charge command generating unit (103b), and a charging operation controller (103c). The amplitude
10 determining unit (103a) determines an amplitude (I_m) of a current to be input to a converter by performing at least proportional-integral control on a deviation (ΔV_c) between a voltage (V_c) across the buffer capacitor and an average voltage command value (V_c^*) that is a command value of an average of the voltage (V_c) across the buffer capacitor. The charge command generating unit (103b) determines a charge command
15 (iL^*) by multiplying by the amplitude (I_m) a function ($F(\theta)$) determined according to a discharge duty (dc), a rectifying duty (d_{rec}), and a distribution factor of power. The charging operation controller (103c) controls an operation of charging the buffer capacitor on the basis of the charge command (iL^*).

20 Fig. 2