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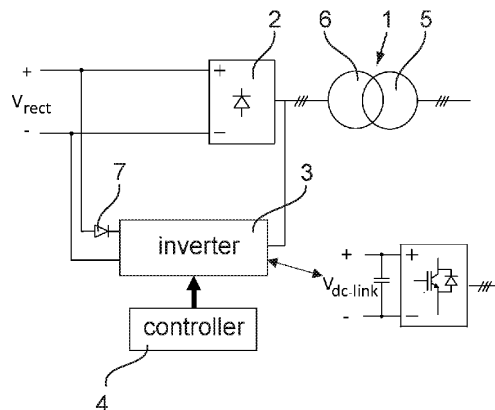


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(54) **Title:** DC POWER SUPPLY DEVICE AND RAILWAY SUBSTATION INCORPORATING IT

Fig.1



(57) **Abstract:** The DC power supply device according to the invention comprises: a transformer (1) having a primary side (5) and a secondary side (6); a diode rectifier (2) connected at its input side to the secondary side (6) of the transformer (1); an inverter (3) connected at its output side to the secondary side (6) of the transformer (1); and a controller (4). The inverter (3) is controlled by the controller (4) to generate reactive power and/or harmonics onto the secondary side (6) of the transformer (1) so as to regulate the DC voltage at the output side of the diode rectifier (2) to a target value. The controller (4) receives at its input side at least one DC signal outputted by the diode rectifier (2) and uses the at least one DC signal to control the inverter (3).

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