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(54) Title: ELECTRIC CHARGING SYSTEM FOR MARINE VESSELS

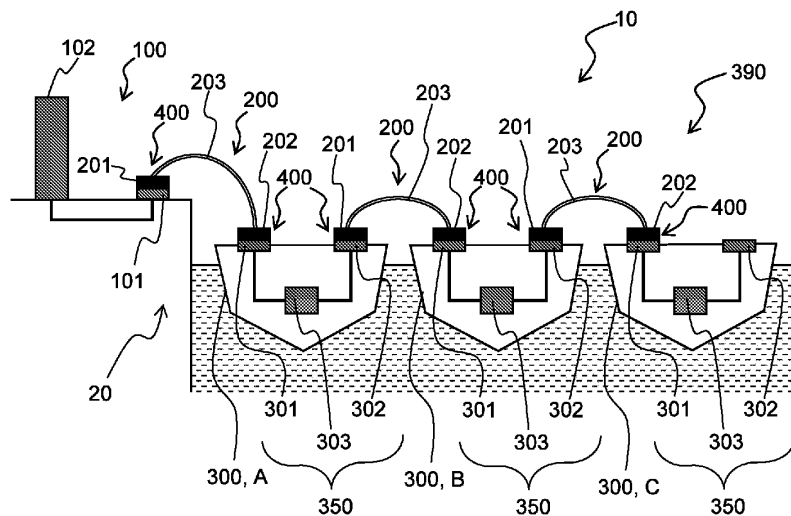


Fig. 1

(57) Abstract: An electric charging system for marine vessels, the system comprising: a charger configured to provide direct current (DC) power; a source fixed pad in electric communication with the charger via an inverter configured to convert DC power to high frequency alternating current (AC) power, the charger, the inverter and the source fixed pad provided on a fixed structure; a charging connector comprising a first connector pad, a second connector pad, and a flexible connector cable electrically connecting the first connector pad with the second connector pad, first and second vessel fixed pads provided on a marine vessel and each in electric communication with a vessel charging controller of the marine vessel, the vessel charging controller in electric communication with a battery system of the marine vessel and configured to convert AC power to DC power and DC power to AC power; wherein the source fixed pad, the first and second connector pads, and the first and second vessel fixed pads each comprise an induction coil encapsulated in a casing; wherein in use, the first connector pad forms a first charging connection with the source fixed pad for inductive power

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transmission from the source fixed pad to the first connector pad, the second connector pad forms a second charging connection with the first vessel fixed pad for inductive power transmission from the second connector pad to the first vessel fixed pad, thereby allowing power from the charger to be transmitted to the marine vessel via the charging connector, wherein AC power received by the marine vessel is converted to DC power by the vessel charging controller to charge the battery system of the marine vessel.