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**(54) Title:** SEA WATER GEOTHERMAL SYPHONING PURIFICATION, DESALINATION AND ELECTROLYSIS SYSTEM

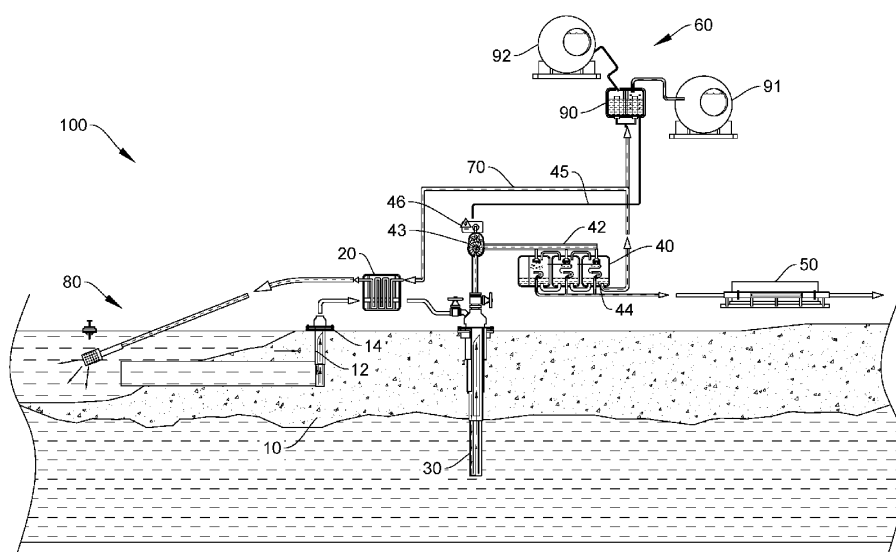


FIGURE. 1

**(57) Abstract:** A geothermal electrolysis system including a salt water intake to receive salt water from a salt water source, one or more geothermal wells to heat the salt water to produce heated salt water, a desalination plant including one or more desalination chambers for separating salt from the heated salt water to produce at least some fresh water, an electrolysis plant connected to the desalination plant and receiving a salt brine by-product from the desalination plant, wherein the electrolysis plant is configured to electrolyse the salt brine by-product to create electrolysed water, and one or more discharge outlets to discharge and store one or more of the products of the electrolysis system.

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