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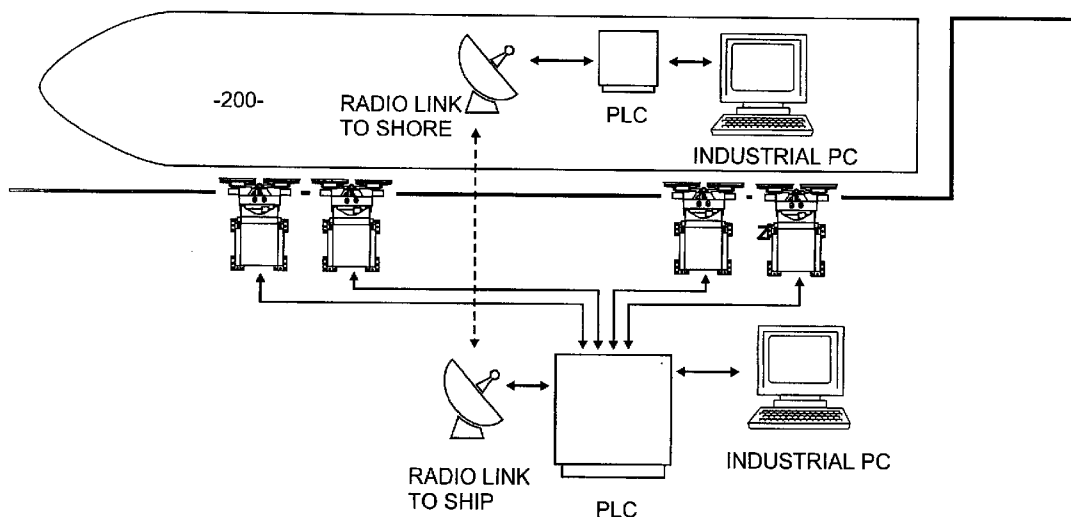
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(54) Title: **MOORING SYSTEM WITH ACTIVE CONTROL**



(57) **Abstract:** A vessel mooring system which includes at least two mooring robots secured to a terminal, each robot includes an attractive force attachment element eg. a vacuum cup and a base structure fixed relative to the terminal. The attachment element is able to be engaged with a vertically extending side vessel surface and to exert an attractive force normal to the vessel surface at where it is to be attached. Each robot includes means to measure the attractive force between the attachment element and the vessel to provide an "attractive force capacity reading". Also provided is a means to measure the force between the attachment element and the fixed structure of the mooring robot to provide a "normal force reading". From monitoring of the relationship between the attractive force capacity reading and the normal force a control of the mooring robot can be provided such that if there is a tending to separate the attachment elements from said vessel the attractive force may be increased and/or alarm is sounded.

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