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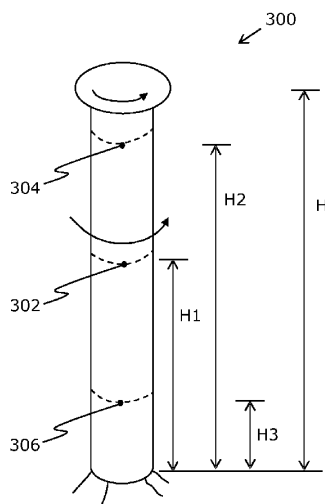


FIG. 3

(57) Abstract: Disclosed is a method for controlling a wind propulsion device (300, 600) arranged on a vessel. The method comprises providing pressure information from a first pressure sensor (302, 616) arranged on a surface of the wind propulsion device, estimating pressure distribution on the 5 surface of the wind propulsion device based on the pressure information from the first pressure sensor, providing angular position information of wind propulsion device, estimating apparent wind angle based on the angular position information of wind propulsion device and the estimated pressure distribution on the surface of the wind propulsion device, using 10 the estimated apparent wind angle for determining initial approximation for control parameters, and using the estimated pressure distribution as a feedback in closed-loop control method to optimise the control parameters of the wind propulsion device.

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