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Design and Implementation of Tanks' Amphibious Ferry

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In this work, the pontoons' folding hydraulic mechanism of PMM-2M amphibious ferry is designed. Computer aided design (CAD) program is used to design the mechanism and to calculate the joint reactions and stresses during its operation. The mechanism is powered using hydraulic actuators and pump to ensure smooth and effective opening and closing of the pontoons. Finally, a prototype of the amphibious ferry with scale of 1:10 was manufactured and pneumatic power was used instead of the hydraulic to reduce the prototype weight, the mechanism is controlled automatically using Arduino microprocessor.