

Mechanical Design of External Pressure Vessel to an AUV

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Abstract : The Autonomous Underwater Vehicles (AUV), as well the Remotely Operated Vehicles (ROV), are unmanned technologies used in oceanographic investigations, offshore oil extraction, military applications, among others. Differently from AUVs, ROVs uses a physical connection with the surface for energy supply e data traffic. The AUVs use batteries and embedded data acquisition systems. These technologies have progressed, supported by studies in the areas of robotics, embedded systems, naval engineering, etc. This work presents a methodology for external pressure vessel design, responsible for contain and keep the internal components of the vehicle, such as on-board electronics and sensors, isolated from contact with water, creating a pressure differential between the inner and external regions.

Keywords : vessel, external pressure, AUV, buckling

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