

Technology Transfer

Area of Technology: Mechanical Engineering

Title of the Innovation: UNDERWATER ROBOTIC VEHICLE

Patent Grant Number: 355581

Brief About Innovation

The ocean is a great place to start learning about the development of robotic technology. Robots perform a variety of tasks, from raising fish to analysing shipwrecks, and are helping marine biologists, water engineers, landscape developers, and even the police do their jobs better. The robot was created to bridge the gap between human divers and deep-water vessels. The present invention relates to underwater robotic vehicle. More particularly, the underwater robotic vehicle for inspecting the docks or venture down to the ocean floor, maintenance & surveillance of reactor pool by using automation. The main focus of URV (underwater robotic vehicle) is to clean rivers, cleaning and surveillance of ship hulls, maintenance and surveillance of the nuclear reactor pool.

Salient Features:

- The instant invention is developed as an underwater robotic vehicle capable of surveying ecosystem of rivers or ocean underwater thrusters capable for propagation and different sensors having different capability of work. The underwater robot is connected to Ethernet cable (or other cables) to transfer the data.
- The present invention involves the configuration of the underwater robotic vehicle having features of a robotics, real time video-image processing, pressure sensing and underwater thruster to maneuver in a manner such that it also provides a robot which can be taken anywhere due its mobility.
- In an aspect of the present invention, the underwater robotic vehicle comprising a maneuver body, two side panels, a centre panel, a centre chamber, a controller, two Forward/Backward Thrusters, three Upward/Downward Thruster, a Rotary Thruster, a PLC or microcontroller, a temperature sensor and humidity sensor, an ultrasonic sensor, a camera sensor, a Underwater Cables for communication, a Manipulator External assembly, LED Illuminators.
- The advantage of the present invention is effectively enables 5MP camera to take real time video images of underwater world. With the ability the capture, the camera enables the URV to survey