ROV Thruster Testing Document - Individual

ARB-ROV-Thru-001 - 151219

Serial No :

Date :

Time :

Bench Testing Method - Multimeter

Resistance Across 3 Phases

Phase 1 :

Phase 2 :

Phase 3 :

Continuity Test - Across Phases - Resistance

Meggar Tester (Careful ,Test to be carried out by certified Electrician)

Depends on Thruster Voltage (Kindly Remember)

----------Thruster Performance And Response Test----------

Simplified Subroutine in your Control Software to test the Thruster Performance and Response which helps to troubleshoot them as well carry out proper Maintenance

Software Version -

Hardware Components - Thruster Control Board, System Control Board,Ethernet Cable or Serial Cable or Fiber Optics ,Power Supply

Test Area - Safely Secured - Kindly Secure the Thruster and make sure no loose items near by also follow zero tolerance electrical safety policy

Once Thruster Secured ,Before powering up - Pls do carry out checklist which carries out the basic information about the

1. Any Physical
2. Any Wiring Damages
3. Motor,Shaft,Propeller Components are clear and are safe to run
4. Make sure Power supply is connected to independent power supply not running along with other motors so generate harmonics
5. Safely validate the environment and let everyone knows the testing in progress

Make Raw Sketch Diagram to make sure wiring all correct and Power up the thruster

Control the thrusters with multiple demand of thrust

1. 20% Thrust
2. 40% Thrust
3. 60% Thrust
4. 80% Thrust
5. Full Thrust

But careful kindly dont run for long in the air as the thruster induces more heat due to its powerful magnets inside the thrusters

Direction controls - Forward/ Reverse

Autonomous and Remote Operations - Controlling the thrusters autonomously through the Master Control Software , Independently running through the mission which offers the command validation as well as response time for the command

Autonomous Operations - Test them with inputs from External Inertial Measurement Unit(if Available) which provides the acceleration as well vehicle motion along with in built kalman filter it provides the neccesary thrust required for the thrust as per the mission

Remote Operations - Using Joystick based on the demand and provides the thrust validation and checks

All these test helps the thrusters to be ready for the command as well provides more understanding how it behaves with the software as well the electronics

Complete the Test at your convinience running it continuously is dangerous or Coolant is the water so sinking them inside the tank and testing them is very good but sometimes couldnt able to offer the real view of the thrusters in action

This is purely the methodology we follow with our own Thruster Testing Tool in Blue Robotics thrusters and is issued under the test to keep the thruster for long term use as well as troubleshooting and maintenance of individual thrusters

Thruster Testing Tool - Built in Linux Based CPP Program with MOOS IVP Base Framework and ATON Testing Framework for Blue Robotics Thrusters

Reach us or if you like to have more information - **one2one@arobot.in**

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