ROV Hacks, Tips, and Tricks

As of 8-Mar-19

Waterproof Testing TRICK

What: Use PVC drain pipe to build an inexpensive 8-20 ft. deep test tank.

Who: Phoenix Electronics, Bentley High School, Lafayette, CA

ROV System: N/A

Competition Class: Navigator, Ranger

When: June 2013

Plus: inexpensive, quick to build.

Minus: limited to 4-6 inch opening.

MATE Insights: The majority of ROV companies do not have access to deep water or a pressure vessel to test if their camera, motor, mission tool and instrumentation designs will be waterproof. At a minimum, products should be soaked in a bucket or tote full of water for a few days as a waterproof test. Long immersions in depths that simulate your ROV flight envelope is a superior waterproof test. A 4-6 inch diameter PVC, schedule 40, DWV pipe, capped at one end, safely secured to a structure, and filled with water can easily be built as a test tank. Just lower your test items down from the top pipe opening into the water. The pipes are typically sold in 8-10 foot lengths, if you put two together, as shown, in the picture, you can test to 16-20 feet. Make sure the pipes are safely secure to a structure; 20 feet of a 4 inch pipe filled with water weighs OVER 100 lbs. (45 Kg.). Do use flexible or corrugated drain pipe, only rigid pipe.

References: N/A

Search Words: PVC Schedule 40 drain pipe, DWV Pipe

Fun Facts: DWV stands for drain waste vent

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