

DeepWorks ROV Tooling Simulation



Fugro Subsea Services is rolling out enhanced tooling capabilities on its DeepWorks simulators. Improvements have been made to ROV manipulator deployed tools to provide easier access verification as well as more realistic deployment behaviours.

DeepWorks 2013 introduces a novel approach to simplify accessibility studies. As well as supporting the traditional approach using a Schilling T4 master arm, a new method has been introduced in DeepWorks Engineer to enable engineers who do not have specific ROV piloting skills or access to a master arm controller to precisely control manipulator tools. The tool tip is driven manually from a suitable input device such as a space navigator/3D mouse (as shown below) or automatically from a pre-defined set of instructions in a file. Manipulator joint positions follow the tool and are adjusted

automatically. This engineering solution supports full collision detection and with user-configurable receptacle tolerances can be used for position feedback and to verify successful tool deployment.

Similar improvements have also been made on the DeepWorks ROV pilot simulator using powered tooling components. Using the master arm controller, pilots can lift tools out of a holster and deploy them into receptacles with realistic collision and dynamic response. Tolerances of receptacles can be changed to cater for the skill level and experience of trainees. Torque tool can turn a valve to its open or closed position and this can activate linear actuators or hydraulic rams.

These enhanced tooling capabilities are available with new orders for DeepWorks and as an upgrade to existing installations.

<https://www.hydro-international.com/content/news/deepworks-rov-tooling-simulation>
