

# Commissioning and verification of newly installed modified diving system equipment

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One of our members has recently experienced a very serious near-miss when the recovery of a diving bell was started accidentally and unintentionally prior to the bell door being closed and secured.

## What happened?

On investigating the near-miss, it was found that a modification to the bell winch hydraulic and electrical systems had taken place on this newly-installed diving system and that vital parts of both the primary and emergency systems, including the emergency stops, were not functioning correctly.

Although the dive system had been installed and verified in accordance with the principles and checklist contained in IMCA guidance note AODC 052 –Diving Equipment Systems Inspection Guidance Note (DESIGN) – no test protocol had been developed or used in this instance during the final acceptance test of the modified winch hydraulics and control system. The acceptance test could thus not be verified or documented.

## Recommendations

To avoid a similar situation occurring in future, the following instructions have been issued by the contractor and applies to installation, commissioning and testing of newly installed or modified diving system equipment:

- Equipment which is to be installed or has been modified thereafter should meet the principles of DESIGN and/or any other applicable industry standards, codes of practice, etc.
- Responsibility for the installation or modification and testing of the equipment should be clearly defined.
- Any changes to the dive system configuration should be assessed for the implications of the changes before any work is carried out.
- A test protocol for the testing and verification of the system – and its individual sub-systems – should be developed and should include ‘as-built’ drawings/schematics of all vital sub-systems. Relevant equipment operating procedures should also be developed.
- The test protocol and associated ‘as-built’ drawing/schematics should be used as a tool during final acceptance test and hand over to the operations team. The test should be conducted by a competent person and witnessed by an appropriate supervisor. Both parties should normally sign the test protocol and any unexpected findings recorded. The test

protocol should, once signed, form part of the system documentation and be kept in the dive system certification file

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