

## IMCA Safety Flash 04/08

March 2008

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learned from them. The information below has been provided in good faith by members and should be reviewed individually by recipients, who will determine its relevance to their own operations.

The effectiveness of the IMCA safety flash system depends on receiving reports from members in order to pass on information and avoid repeat incidents. Please consider adding the IMCA secretariat ([imca@imca-int.com](mailto:imca@imca-int.com)) to your internal distribution list for safety alerts and/or manually submitting information on specific incidents you consider may be relevant. All information will be anonymised or sanitised, as appropriate.

A number of other organisations issue safety flashes and similar documents which may be of interest to IMCA members. Where these are particularly relevant, these may be summarised or highlighted here. Links to known relevant websites are provided at [www.imca-int.com/links](http://www.imca-int.com/links). Additional links should be submitted to [webmaster@imca-int.com](mailto:webmaster@imca-int.com)

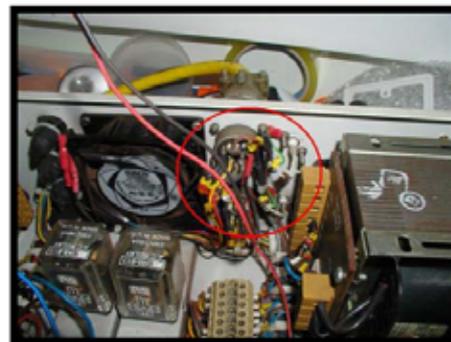
### I Unauthorised Modification to Electrical Plant Equipment

A member has reported the discovery of unauthorised modifications to electrical equipment used by divers. During the onshore refurbishment of two dual diver CLP (camera, light and power) surface control units it was noted that these had been modified offshore to enable the diver's hat light to be switched on and off remotely from the unit, presumably by the diving supervisor standing at the dive panel. The modifications involved adding wires to the back of the hat light on/off switch on the front panel of the CLP and wiring this through to a pair of unused pins on an output socket on the back of the unit.

The modifications to each of the two CLPs were carried out using a different colour and a different gauge of electrical wire and resulted in 220-240Vac being routed to the output sockets where there is normally only relatively low DC voltage (30-55Vdc). The modifications also changed the connection pins used, altering an internal company standard that has been in place for 20 years. Diver CLP surface control units are intended to be universally interchangeable; these modifications made them suitable only for the job they were used on. Also, the wiring drawings for the units became incorrect as a result of these unauthorised modifications.

The company involved recommended that offshore dive technicians and chief engineers be reminded that no modification to any item of plant is attempted without first asking for and receiving the express permission of the appropriate company authority onshore. The units were rewired back to the company standard and the onshore electronics technicians were warned to be aware of the modifications seen and include this as something to verify during all future checks.

The company also recommended investigation into whether or not there is a common requirement to switch on and off the divers' hat lights remotely and also to investigate the possibility of retro-fitting of a low voltage remote to the diver CLP surface control units to permit this.



*Unauthorised modification to electrical equipment*

## **2 DDC Chamber View-Port Catastrophic Failure**

IMCA has received the attached safety alert from the Association of Diving Contractors International which members should be aware of.



## ADCI

### SAFETY ALERT!

#### DDC Chamber View-port catastrophic failure

This view-port was in a deck chamber where someone had placed droplight too close to the port. The resulting radiant heat from the lamp exceeded the design temperature of the view-port (125 deg. F / 51.6 deg. C.) Enough heat was generated to allow the view-port to become soft and pliable enough to allow the pressure in the chamber to flow towards atmospheric pressure. (See pictures attached) The pressure boundary was breached and the chamber vented through the view-port to atmospheric pressure. No further information on this incident is available. The danger of incandescent light bulbs in close proximity to chamber ports is well known in the diving industry. To mitigate this danger, many diving contractors have changed to the fluorescent bulb drop lights, with the understanding that they operate at a lower temperature. **WE HAVE NOW DETERMINED THAT FLORESCENT LAMPS CAN ALSO GENERATE HEAT IN EXCESS OF 140 DEGREES!**

Do not put drop lights in contact with chamber view-ports, even florescent drop lights can generate enough heat to cause the view-ports to overheat. You must always assess the heat generated from any bulb and make sure you position the bulb a sufficient distance away from the port to eliminate the possibility of any heat build-up on the face of the port. If the port feels warm to the touch, the bulb is too close!!

Measured temperatures from florescent drop lights have averaged 145 deg. F / 62.7 deg. C. (20 deg. F / 6.6 deg. C. over maximum design temperature)

LED drop lights are exhibiting temperatures under 100 deg. F / 37.7 deg. C.

LED lamps are under close investigation and will most likely replace the commonly used florescent droplight.

