Near-miss: Live electrical cable

Safety Flash Published on **25 June 2012** Generated on **14 January 2025** IMCA SF 06/12

A member has reported a recent near miss incident involving live electrical cables on board a vessel.

What happened?

The incident has highlighted the importance of close interface between contractors working onboard and the vessel crews. During the demobilization of contractor equipment, the equipment had to be locked out and tagged out to ensure that it was no longer live and hence safe before work started.

The contractor, assisted by vessel crew, locked and tagged out electrical system in the engine control room. Once the power was verified as locked out at the equipment and isolated at the breaker in the deck distribution box, work started. During the work, the lock out key was passed to another member of the contractor team who proceeded to the engine control room to remove the lock out/tag out and re-energised the system. The de-energised cable from the equipment had been disconnected and placed on the chassis but when the lock out/tag out was removed from the engine control room switchboard, the cable became live at 440 volts.

Assuming that the cable remained de-energized, another contractor employee moved the cable to access the work and in that movement and action, his hand was very close to the live cable ends. The live cable ends touched the chassis and arced causing a loud bang. An immediate safety stand down was enforced by the contractor. There were no injuries.

A number of issues were identified which contributed to the incident:

- The job was planned by the contractor without reference to or liaison with the vessel operator or client.
- There was insufficient communication between the contractors' personnel and the vessel crew.
- There was no job safety analysis (JSA) conducted.
- A permit to work (PTW) should have been required for this kind of electrical isolation work, but was not raised.
- The lock out/tag Out mechanism should have allowed the use of multiple keys.
- A voltage discrepancy for breaker isolation resulted in the contractors' personnel being unable to confirm zero voltage.
- The deck cabinet was exposed to the elements and not easily accessible, and hence not fit for purpose.
- The electrical drawings were not properly 'controlled' documents
- There was no drawn by, checked by, approved by and no class or type

approval.
- The labelling on the breakers was not sufficient to purpose.

As a result of this incident, which could have resulted in a fatality, eighteen corrective actions were identified and are in the process of being implemented.