

Burns suffered in confined space

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An ROV pilot technician suffered burns to his hands, face and knee as a result of a fire in a confined space.

What happened?

The pilot technician entered the hub of a five ton ROV umbilical winch drum through a very small opening and attempted to remove moisture that had accumulated in the rotary junction box inside the hub.

The pilot technician opened the cover of the rotary junction box and sprayed CRC 2016 contact cleaner into the box in an attempt to remove moisture. Subsequently he used a heat gun to speed up the process of drying the moisture in the box. The instant he switched on the heat gun, flammable gases from the contact cleaner ignited and the subsequent fire burned both his hands and his face. The pilot technician managed to get to the opening of the drum, put his head and hands out and call for help.

He was removed from the hub of the drum with difficulty and subsequently evacuated to shore for treatment.



umbilical winch drum and small opening



What were the causes?

Following investigation the immediate causes of the incident were determined to be:

- The pilot technician applied a heat source directly to a flammable substance – CRC 2016 contact cleaner.
- The pilot technician was in a confined space with inadequate ventilation and illumination.

Further factors noted were:

- The pilot technician entered a confined space with no permit to work and with nobody present.
- There was no job safety analysis or toolbox talk conducted before the job started and no proper control measures or personal protective equipment (e.g. gloves, breathing apparatus, etc) for the task were identified.
- There was inadequate supervision and no communication – the pilot technician did not notify anyone that he was entering a confined space.
- The pilot technician was not fully aware of the flammable nature of aerosol contact cleaner.

It was concluded that relocation of the rotary junction box to a location where it could be accessed easily for maintenance should be considered, so that people do not need to work in confined space.

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