

SAFETY ALERT

SUBJECT: HIGH PRESSURE WATER JETTING DIVE INCIDENT

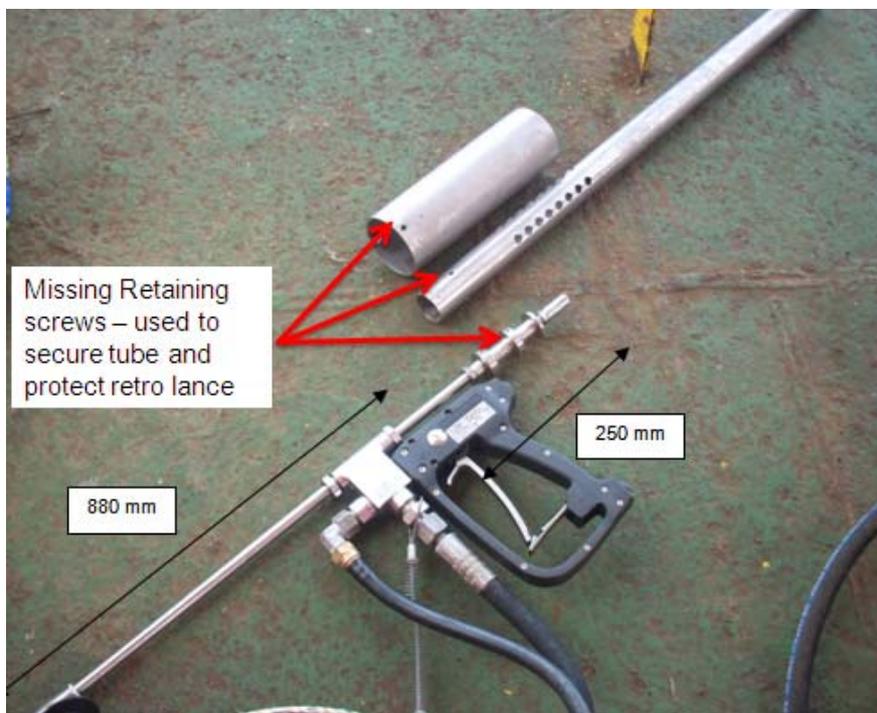
Background

The use of High Pressure (HP) water jetting underwater is inherently a hazardous operation. The activity is made more hazardous due to the associated turbulence, noise, effect on vision and communication with the diver.

What Happened

A diver was using a Hammelmann HP Water Blaster Gun (SP 3000 MB UW) for cleaning marine growth on a Riser Turret Mooring, at a depth of 28 metres. After 30 minutes of activity, the Protection Pipe and Tube came away from the water blaster gun, exposing the retro lance which was in the crook on the Injured Person's (IP) left forearm. The force of the retro water jet pierced the IP's hot suit and caused a puncture wound to the left forearm. The IP returned to the Dive Bell and vessel for treatment, and later medevac to hospital.

Water blasting injuries carry a high risk of infection if the wound is not properly flushed and cleaned as soon as practical.



What Went Wrong

The trigger for the incident was the failure and loss of three retaining cap screws used to secure the Protection Pipe and Tube. These pieces cover the retro lance, and thus exposed the retro jet from the short retro lance to the diver's forearm.

SAFETY ALERT

As part of the incident investigation, a small fragment of one of the retaining cap screws was found in the guide piece. This would indicate the cap screw was either faulty, damaged by excessive torque or impact.



HP Water Spray Gun fully assembled



Spray Gun without shroud - retro lance close to diver's foreman

Recommendations & Lessons Learned

The following recommendations and lessons learned are to be considered for Underwater Jet Blasting operations:

1. Review the risk of retro lance to divers, particularly for short retro lance guns. Ensure the retro lance is effectively protected from the operator.
2. Review Operating Manual of Water Blasting Guns for clear instructions on the assembly of the gun prior to, and during use, with particular attention to the method of securing and protecting the retro lance.
3. Ensure operators are competent and trained in the use of equipment, and are fully aware of the specific hazard – particularly short retro lance.
4. Ensure operation of water jetting includes regular checks of the gun throughout its use, and assembly to ensure all bolts and fittings are correct, as per operating manual.
5. Review Job Risk Assessments for setup and operation of water jetting to ensure the risks, particularly retro lance, are clearly identified, controlled and addressed.