

# Safety and health alert

## 32/00 Incident on a DSV during heliox gas transfer

---

### Incident

A serious incident occurred on a diving support vessel (DSV) on Saturday, 15 July 2000. The vessel was demobilizing from diving works on the North West Shelf of Australia when a loud bang was heard and felt throughout the ship.

A LST (life support technician) sustained severe traumatic injuries to his right hand, which it is understood was nearly severed at the wrist. This occurred due to a 'shrapnel' fragment hitting the LST, following a catastrophic failure of a pressurized diving gas transfer system.

At the time of the incident a Williams & James gas transfer compressor (Model K975) was pumping a heliox (20% oxygen in helium) gas mixture between storage tubes. The output pressure was reportedly about 19 MPa (190 bar). It is not clear at this time what caused the failure.

There was considerable damage to the third stage cooling system of the compressor, the outlet pipe and associated filters downstream of the compressor. A cast iron filter housing ruptured violently causing the above injury and damaging pipe work, bulkheads and other diving system equipment.

The subject equipment has been removed and quarantined pending a detailed engineering investigation. Further interviews and other investigative work are planned for the immediate future to identify the causes of the incident. It is understood that several similar incidents have occurred around the world.

### Factors

### Recommendations

- Until further information is available it is recommended that Williams & James gas transfer systems should not be used in Western Australia, unless the operator can demonstrate that the risks have been assessed and are acceptable.
- Owners and operators of Williams & James compressors are advised to contact the manufacturer (Hamworthy Bellis & Morcom Ltd) for information with regard to installation, maintenance and operation of the system and ancillary equipment (eg filters).
- All pressurized systems present some hazards. It is recommended that high-pressure gas transfer systems should be located and contained so that the hazards to personnel and/or equipment are minimised.

### Further Information

Further information can be obtained from the WorkSafe internet site [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au), or by contacting customer service on 1300 307 877 or email: [safety@docep.wa.gov.au](mailto:safety@docep.wa.gov.au).

A414521

Date: August 2000

