

Incident on a diving support vessel during heliox gas transfer

Safety Flash Published on 1 July 2000 Generated on 28 January 2026 IMCA SF 03/00

We have recently received the attached safety alert from the Department of Minerals and Energy, Western Australia.

SAFETY ALERT

Incident on a DSV During Heliox Gas-Transfer

A serious incident occurred on a diving support vessel (DSV), on Saturday, 15 July 2000. The vessel was demobilising 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 pressurised 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 control 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.

Recommendation

Until further information is available it is recommended that William & 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 William & James compressors are advised to contact the manufacturer (Hamworthy Belliss & Morcom Ltd), for information with regard to installation, maintenance and operation of the system and ancillary equipment (eg. filters). Further details will be made available when known.

All pressurised 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.

Contacts

Hamworthy Belliss & Morcom Ltd Tel: +44-1452-528431 Fax: +44-1452-381232

R J Craddock
ACTING DIRECTOR, PETROLEUM DIVISION
20 July 2000



Department of Minerals and Energy Western Australia

Petroleum Division

TEL: (08) 9222 3622

FAX: (08) 9222 3799

safety alert 19.doc

IMCA Safety Flashes summarise key safety matters and incidents, allowing lessons to be more easily learnt for the benefit of the entire offshore industry.

The effectiveness of the IMCA Safety Flash system depends on the industry sharing information and so avoiding repeat incidents. Incidents are classified according to IOGP's Life Saving Rules.

All information is anonymised or sanitised, as appropriate, and warnings for graphic content included where possible.

IMCA makes every effort to ensure both the accuracy and reliability of the information shared, but is not be liable for any guidance and/or recommendation and/or statement herein contained.

The information contained in this document does not fulfil or replace any individual's or Member's legal, regulatory or other duties or obligations in respect of their operations. Individuals and Members remain solely responsible for the safe, lawful and proper conduct of their operations.

Share your safety incidents with [IMCA online](#). Sign-up to receive Safety Flashes [straight to your email](#).