

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learned from them. The information below has been provided in good faith by members and should be reviewed individually by recipients, who will determine its relevance to their own operations.

The effectiveness of the IMCA safety flash system depends on receiving reports from members in order to pass on information and avoid repeat incidents. Please consider adding the IMCA secretariat ([imca@imca-int.com](mailto:imca@imca-int.com)) to your internal distribution list for safety alerts and/or manually submitting information on specific incidents you consider may be relevant. All information will be anonymised or sanitised, as appropriate.

A number of other organisations issue safety flashes and similar documents which may be of interest to IMCA members. Where these are particularly relevant, these may be summarised or highlighted here. Links to known relevant websites are provided at [www.imca-int.com/links](http://www.imca-int.com/links). Additional links should be submitted to [webmaster@imca-int.com](mailto:webmaster@imca-int.com)

## 1 Recall Notice Divex L.P. Hoses

We have recently received the attached safety notice from Divex.

## 2 Transport of Welding /Burning Gas

A member has reported a serious incident involving welding/burning gas cylinders. The cylinders, two oxygen and two acetylene had been transported on a vessel inside a container. They were neither adequately secured nor was the container labelled as containing dangerous goods.

During transit the cylinders which were loaded vertically, toppled onto the floor causing the cylinder cap protection to come off one of the acetylene cylinders, allowing its valve to open resulting in gas venting off inside the container. Fortunately no one was injured when the container door was opened.

The company has noted that the incident was a serious breach of international transportation of dangerous goods laws by transporting mixed gases in this manner, not labelling the container for dangerous goods and not passing the information to the transport company.

The company involved has issued guidelines to its personnel noting:

1. Gas cylinders should be transported in accordance with SOLAS consolidated edition 1997, Chapter VII, Part A – Carriage of dangerous goods in packaged form or in solid form in bulk.
2. All cylinders should be transported in racks or cages. Where containers are to be used, these should be identified as holding dangerous goods and should be transported along with the proper paperwork
3. Additional checks should be introduced at all sites to ensure that mixed gases are never transported in the same rack or container.

## 3 Parting of a Crane Lift Wire

During a lifting operation on board one of our member's ships, when an 82.5 te riser anchor was to be installed on the seabed, the main crane wire parted after the load had been swung away from the deck, causing the anchor to drop to the seabed. Fortunately no one was injured.

The cause of the crane wire separation appears to have been due to slack being paid out during hook up whereby the wire over ran the sheave's flange. When the load was raised, the wire slipped over the sheave and ended up bearing on the sheave pin rather than the sheave itself. As a result the wire's lifting capability was severely degraded since it was subject to the sharp bend radius and as a consequence parted.

The contractor involved as implemented the following:

1. Checks to be made on all cranes to ensure that the lift wire cannot come out of the sheave(s) either on the jib or lifting block during lift operations.
2. A viewing arrangement has been installed to ensure that the crane operator can see that the wire fits centrally in the sheave(s) during lifting operations.

3. As an additional precaution, just prior to raising the load, when the full load comes onto the crane wire, the person directing crane operations on deck should view the sheaves, if practical, to ensure that the lift wire is correctly located.

#### **4 Fast Rescue Craft Incident**

We have been alerted to a major incident that occurred during a routine personnel transfer between an FPSO and its support vessel resulting in five persons being injured.

A fast rescue craft was being used to carry out the personnel transfer. During the retrieval stage onto the FPSO, the lifting lug on the craft failed resulting in the craft and its occupants falling 11.5 metres. The lug and the transverse support frame were both made of aluminium. The reason for failure is currently under investigation.

The company involved as advised anyone operating a rescue craft or life boat to check the security of the lifting point(s) by appropriate means including, but not limited to visual inspection, non destructive testing and weight testing.

#### **5 Winching Equipment**

A client has recently alerted us to a couple of incidents involving winching equipment on board vessels. In the first incident a member of the vessel crew stood on a tugger winch support bracket with his foot protruding slightly from the support flange. As the drum rotated during operation, the securing bolts caught the man's boot, crushing his steel toe cap, resulting in injury to this big toe.

In the second incident, two members of the marine crew were carrying out routine maintenance on a cherry picker. This involved spooling off, greasing and respooling on, a section of crane wire rope. One person was positioned on top of the crane jib, crouched in front of the winch wire. His hand became trapped between the crane winch wire drum counter bar and rope guard during the respooling operation with the resultant loss of his left-hand index finger.

The client identified the following common themes:

- ◆ A full risk assessment had not been undertaken;
- ◆ No procedures of management of change;
- ◆ Procedure for new rope diameter manual spooling inadequate (second incident);
- ◆ The position of controls operator and his view of activities;
- ◆ Position of winch operator – standing on the winch frame.

#### **6 Gas Cylinder Valves – Potential Failures**

We have recently received the attached safety alert issued by Air Products regarding Sherwood valves.

#### **7 Rigging Incident**

One of our members has alerted us to an incident that occurred due to incorrect attachment of a personnel basket to a crane hook. Four people were being transferred from an FPSO to the deck of a barge some 30 metres below by a Billy Pugh personnel transfer basket suspended from the barge crane. The basket was rigged by the FPSO deck crew. As the basket has been lifted about 3 metres vertically and slewed towards the FPSO stern, it suddenly dropped and hit the FPSO handrail. One passenger jumped free onto the FPSO. One passenger was thrown clear, falling into the sea, the other two passengers fell into the sea with the basket. The three people in the sea received extensive injuries in the fall, but fortunately were quickly recovered and evacuated for urgent treatment. The other person was uninjured.

Baskets of this type are fitted with two slings, one is provided as a safety sling and 'shock absorber' in case the main wire sling parts. The safety sling, which is usually longer than the steel wire sling, was attached to the master lifting ring by an adjustable swivel allowing more or less tension to be applied to the sling.

The evidence suggests that on this occasion, the basket was attached to the crane hook by placing the hook between the two slings rather than attaching the master ring to the hook. As a consequence, when the tension was applied to the rigging the safety sling, being longer, slid across the saddle of the hook until the swivel arrangement was horizontal across the saddle.

At this point the basket had been raised three metres. The adjustment/swivel mechanism bore the full load horizontally (designed for vertical loading) and broke at the base of the thread.

To prevent recurrence the company involved has initiated the following actions:

1. Ensure, by physical verification, that those responsible for rigging personnel baskets know how to attach the slings to the crane properly, and this is reflected in procedures;
2. The master ring is painted in a conspicuous colour to help crane operators see if the ring is engaged in the hook, prior to lifting;
3. Ensure that personnel using a personnel basket have the knowledge and opportunity to check the rigging prior to being lifted, and this is reflected in procedures;
4. The use of personnel baskets be minimised and eliminated where safer alternatives are available.

## **8 Incident on a Diving Support Vessel during Heliox Gas Transfer**

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



**SAFETY NOTICE: No DVX001/2000**

**URGENT RE-CALL NOTICE**

**Divex Ltd.**

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e-mail info@divex.co.uk  
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**DIVEX L.P. HOSES**

**Prefix of Serial numbers:-**

207881	209124	2091991	209312	207563	207804
207843	207968	208068	208559	208895	

1. Divex Ltd. has identified a potential problem with certain batches of L.P. hoses which have been manufactured by a subcontractor. A recent incident has introduced some concern regarding these batches, the serial numbers of the hoses concerned are prefixed as detailed above.

**As a precautionary measure Divex Ltd are re-calling all hoses with the above prefix.** Please review hoses in your possession, and if you have any with the above prefix markings on the serial number label **DO NOT USE THEM**, return them as soon as possible to Divex Ltd for re-test and re-certification. (See 2 below for details)

2. Prior to returning hoses please contact Kathleen Scanlan QA Manager at Divex Ltd. who will co-ordinate their re-test and re-certification. Please state serial numbers of hoses to be returned.
3. Hoses that have been re-tested will be identified with the same serial prefix and an additional **R** after the prefix i.e. 207881/xxxxxx will become 207881 R/xxxxxxx.
4. Divex Ltd apologise for any possible inconvenience caused to all our valued customers by this problem but we have obviously taken this action in line with the company's commitment to safety.

**Mark the returned hoses for the attention of Kathleen Scanlan.**

**For further information contact Kathleen Scanlan on the above telephone or fax number. Alternatively e mail to [safety@divex.co.uk](mailto:safety@divex.co.uk)**

**SIGNED:**

**DATED: 13/06/00**

**G T Gilbert**  
For and on behalf of Divex Ltd.

*World leaders in diving equipment technology*

REGISTERED IN SCOTLAND No 123684

**SAFETY ALERT - ATTENTION SAFETY DEPARTMENT!!!****IMMEDIATE ACTION REQUIRED**

This alert is to inform you of potential hazards associated with two specific lots of compressed gas cylinder valves and provide recommendations for addressing cylinders which utilize these valves.

**The Problem**

Air Products and Chemicals, Inc. has been advised by a valve supplier that certain lots of cylinder valves, as described in the following section, may have had excessive torque applied to the bonnet during assembly, resulting in damaged threads. There have been a few reported failures of these bonnets during filling of cylinders with these valves. These failures have resulted in the high pressure expulsion of the handwheel and bonnet assemblies. These expulsions have been reported to be of sufficient force to potentially cause injury to personnel and damage to property.

**Affected Valves**

The valves were manufactured by Sherwood and sold for use throughout the industrial gas industry. They are of the TV series with CGA-580 cylinder connections. This connection is used for argon, helium, nitrogen and nonflammable gas mixtures. The valves have the connection number, **CGA 580**, and date code stamped into the wrench flat of the valve body. Please refer to *the information provided by Sherwood (see reverse side)* for the exact location of these stampings. The potentially impacted lots are identified by the date codes **48-99** and **03-00**.

**Recommendations**

Carefully check the valves on all industrial gas cylinders containing argon, helium, nitrogen, nonflammable gas mixtures or any other cylinders equipped with valves with **CGA 580** connections. Check the valves for the following stampings as shown in Illustration 1 of the Sherwood alert:

**CGA 580      or      CGA 580**  
**48-99                      03-00**

If you find any cylinders supplied by Air Products and Chemicals, Inc. (as identified on the product label or on the neck ring of the cylinder), with valves bearing these stampings in your inventory, the following actions must be taken.

If the cylinders are not in use, quarantine the cylinders immediately and mark with a **DO NOT USE** tag. Contact Air Products to arrange for pickup and replacement by Air Products.

***If your cylinder is connected to a pressurized system with or without the valve open, DO NOT TOUCH THE CYLINDER OR CYLINDER VALVE!*** The potential for bonnet expulsion primarily exists when the valve is opened or the cylinder is connected to a pressurized system. **Isolate the area and contact Air Products for assistance.**

**800-224-2724**

If the cylinders belong to a supplier other than Air Products, contact that company for instructions.

**Attachments: Sherwood Safety Alert (See Reverse Side)**

## **SAFETY ALERT\* - ATTENTION SAFETY DEPARTMENT**

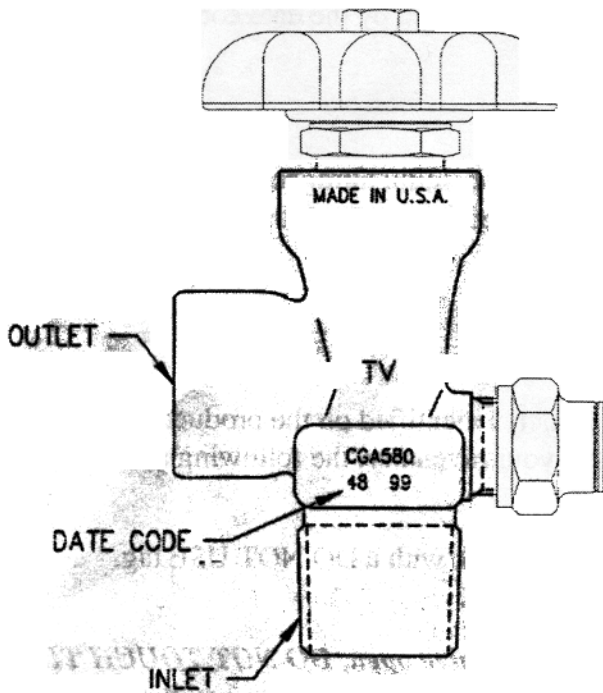
Sherwood has received three reports involving Sherwood TV 5861 valves in which the bonnet, upper stem and hand wheel assembly reportedly ejected from the valve body on the first filling event of the cylinder in which the valve was installed. Sherwood's initial investigation has revealed that the bonnet thread strength may have been compromised.

In the interest of safety we are requesting that our customers quarantine the following valves with the date code of 48-99 and 03-00 (location of date code on Illustration No 1).

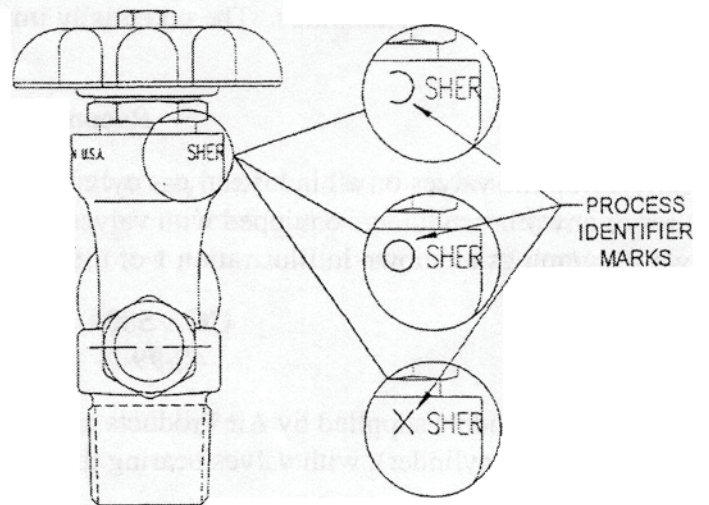
Sherwood does not believe that the reported phenomenon involves TV series valves listed above with a manufacturing process identifier mark "▷"; "O" or "X" and it is NOT necessary to quarantine TV series valves listed above with the specified date codes which have the manufacturing process identifier: "▷"; "O" or "X" (Illustration No. 2).

Sherwood will repair or replace quarantined valves as warranted.

**Illustration No. 1**



**Illustration No. 2**



\*Excerpt from Sherwood Safety Alert received June 15, 2000.

-See Reverse Side-

# 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



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