

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) 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. Additional links should be submitted to webmaster@imca-int.com

1 Dive Dynamics AH3 Diving Helmet

Set out below is a safety notice issued at the end of 1997 by UWI Circle Ltd of Aberdeen, UK. It should be self explanatory, but if you have any queries, please contact the company.

The AH3 and its forerunner AH2 have been in diving use for more than 30 years world-wide. Recent tests on the helmet have indicated that action levels for noise under the existing UK 'Noise at Work Regulations' are exceeded under most diving situations, and that without adequate controls over exposure there is a risk that prolonged use may lead to some hearing deficiency.

Under the UK 'Noise at Work Regulations' the maximum permissible exposure to noise is a function of duration and noise level – e.g. high level for a short period/low level for an extended period. This translates in diving use, to the problem being one of time in the helmet and increasing noise as the greater depth requires higher air flow. Lowering the flow rate reduces the noise level but could give rise to increased CO₂ during the breathing cycle.

An extensive programme to develop a modification to the helmet in order to address the problem has not been successful without incurring other operational penalties. As a result of this the Company has decided to cease supplying the product and advise all current users that the AH3 helmet should not be used unless there are no other more appropriate alternatives identified by risk assessment.

The free flow helmet has largely been superseded in most situations by quieter and more economical demand helmets and the company will provide specific advice to users on equipment appropriate to their needs.

The risk assessments being undertaken by employers of divers using the AH3 helmet should therefore take due regard of this safety notice.

Manufacturers – UWI Circle., 20 Woodlands Drive, Kirkhill Industrial Estate, Dyce, Aberdeen, UK, AB21 0GW.

Tel: + 44 (0) 1224 771 381, Fax: + 44 (0)1224 771 373

2 Cable Handling Incident

A technician was knocked unconscious when he was struck on the head by a cable. The incident occurred when cable being used to pull the beginning of a 23" pipeline by a 10 ton air tugger. The technician was trying to get to the other side of the pipe alley by passing beneath the cable when the nylon sling broke causing the cable to recoil and strike him. Fortunately he was not seriously injured.

The contractor involved has prepared procedures to ensure that no-one except designated personnel, is in the pipe alley while pipe is being pulled.

The incident also highlights the importance of the use of correct rigging. The pulling head at the beginning of the pipeline should have had a shackle attached to it instead of a nylon sling.

3 ROV Incident

During routine maintenance on a Slingsby TA9 seven function manipulator jaw assembly, while removing the finger retaining bolts, a bolt with 80% of the thread exposed as it was being removed was explosively ejected. Fortunately the bolt narrowly missed the technician's face.

The ROV vehicle had been working in a water depth of 110 metres for the previous 10 months. It was not known if the finger retaining bolts had been removed during that period. The vehicle had recently completed a series of long duration dives. It is thought that there may have been a gas build up caused by interaction between the metals concerned.

There are many bolts fitted to blind holes on various ROVs and sub assemblies; therefore as a general precaution care should be taken when disassembling all equipment that has been subjected to prolonged water pressure, or where bolts are fitted in blind holes where gassing could have taken place.

Failure of Transmission Systems Components on Aler 50-15 Offshore Cranes

Set out below is Safety Notice 2/97 issued by the UK Health and Safety Executive (HSE). It should be self explanatory.

Failure of Transmission Systems Components on Aker 50-15 Offshore Cranes

The Health and Safety Executive has been advised of failures which have occurred in mechanical components of the winch hoist transmission system on Aker 50-15 offshore cranes. This has resulted in the load and boom going into uncontrolled free fall with consequential severe damage occurring to the crane and surrounding structure. There may also be implications for injury to attendant personnel.

Failures have occurred at the following areas:

- (i) the hubs of winch drum castings where the drum support bearings are fitted;
- (ii) the hydraulic motor shaft on which the drum drive pinion is mounted;
- (iii) the drum drive pinion tail support bearing.

You are advised therefore that if any crane under your control is of the manufacturer indicated, then the boom, main hoist and whip hoist transmission systems should be dismantled and inspected around the regions indicated in Figure 1.

Please be aware that other models of this crane manufacture may be of a slightly different design to that illustrated. However in the interest of safety, dismantling and inspection is also advised in these cases.

Any queries relating to this HSE Safety Notice should be addressed to:

Health and Safety Executive
Offshore Safety Division
Room 134
Lord Cullen House
Fraser Place
Aberdeen, UK
AB23 3UB

Tel: + 44 (0)1224 252 500

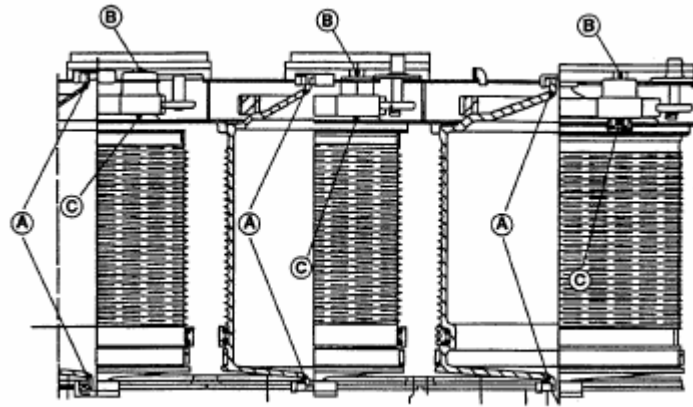


Figure 1: Main, boom and whip hoist transmission system Aker 50-15 cranes

Area A – covered by paragraph 2(i)

Area B – covered by paragraph 2(v)

Area C – covered by paragraph 2(iii)

This guidance is issued by the Health & Safety Executive. Following the guidance is not compulsory and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.

4 Crawler Crane Drive Chains

Recently a serious accident occurred at a contractor's facility when the drive chain of a crawler crane failed, causing parts to fly about injuring an employee. The American Skyhorse Crane was lifting a cement silo for loading on a transportation vessel. During the process it was necessary to move the crane a short distance and turn clockwise. When turning, a left drive chain connecting link failed, flew out and hit an employee's leg, fracturing both bones in the ankle.

It was found that the drive chain had failures and parts replaced before this accident and that the failed connecting link had been previously overhauled. The preventative maintenance program was found to be thorough and complete.

The contractor involved had elected to increase inspection frequency of drive chains and connecting links if the crane is used in turning and tracking with loads. They also now replace a chain if it breaks more than once. People working in the vicinity of cranes are instructed to stay clear of the side of such cranes when the tracks are moving.

5 Electrical Integrity of and ROV

During a vessel ROV mobilisation in port, a subcontractor's 3-phase hydraulic power unit was connected to the vessels' power supply. The unit was energised without either inspecting the third party equipment wiring or carrying out earth and continuity checks. This resulted in the contractors' supervisor receiving a potentially lethal electrical 220v shock.

This incident highlights the importance of checking all third party equipment mobilised to vessels for integrity and compatibility prior to hook up and energising. It also highlights the need to obtain proof of wiring integrity.

The contractor has elected to:

1. ensure that generic risk assessments address hook up and compatibility of all third party equipment mobilised to its work sites;
2. to review procedures for controlling third party activities and equipment; and
3. to ensure that wiring integrity assurance are requested from sub-contractors both at time of audits and on receipt of equipment at the work site.