

MINUTES OF THE FORTY-SIXTH MEETING OF THE SHIPBUILDING AND SHIP-REPAIRING HEALTH AND SAFETY CONSULTATIVE COMMITTEE ON 4TH DECEMBER 2002 AT SOUTH NORTHUMBERLAND CRICKET CLUB, GOSFORTH, NEWCASTLE-UPON-TYNE

PRESENT

Mr Eddie Paton, *BAE SYSTEMS (Marine) Ltd*
Mr David Allison, *Marine Painting Forum*
Mr Steve Evans, *Appledore Shipbuilders Ltd*
Mr Bill O'Neill, *HSE Northern Ireland*
Mr Jeffrey Arkle, *British Maritime Technology Ltd*
Mr Graham Morrison, *Warship Support Agency*
Ms Kay Nicholson, *BAE SYSTEMS (Marine) Ltd*
Mr Tom Brennan, *GMB*
Mr Joe Atkinson, *A & P Tyne Ltd*
Mr Graeme Hughson, *Institute of Occupational Medicine*
Mr Mark Eltringham, *Babcock Engineering Services Ltd*
Mr George MacLeod, *Engineering and Marine Training Authority*
Mr Alan Clisby, *Babcock Naval Services*
Mr Mark Lomas, *Devonport Management Ltd*
Mr Barry Irvine, *Fleet Support Ltd*
Mr Brad Hicks, *Fleet Support Ltd*
Mr Keith Strachan, *Pyeroy*
Mr Geoff Johnson, *Portsmouth Naval Base*
Mr Paul Gaynon, *Swan Hunter (Tyneside) Ltd*
Mr James Barrett, *HSE*
Mr Roger Sykes, *HSE*
Mr Graham Watson, *HSE*

APOLOGIES

Mr Nik Parker, *British Marine Federation*
Mr Gregg Renfree, *A & P Falmouth*
Mr Don McDonald, *Naval Base Portsmouth*
Mr Pete Harding, *Vosper Thornycroft*
Mr Andy Forbes, *Babcock Engineering Services Ltd*
Mr Alan Robson, *CSEU*
Mr Jim Picksley, *GMB, BAE SYSTEMS (Marine) Ltd*

1. WELCOME

Mr James Barrett welcomed members to the meeting including: Mr Alan Clisby who was attending for the first time as the representative of Babcock Naval Services and Mr Paul Gaynon who was attending for the first time as the representative of Swan Hunters.

2. MINUTES OF THE LAST MEETING

Members agreed the minutes following the correction of a minor error.

3. MATTERS ARISING

(a) Minute item 4(a) – Plate clamps

Following on from paper 44/C members were asked to report back on whether the issue of plate clamps with a minimum safe working load was of concern in their yards. Mr Hicks stated that they had difficulties in identifying some of the manufacturers of their plate clamps. As a precaution they had stamped all their clamps with a minimum safe working load and provided a briefing to their employees. Members were informed that this issue had been discussed with the Lifting Equipment Engineers Association (LEEA). The LEEA were aware of the problem and are in the process of amending their literature on plate clamps to include reference to the minimum safe working load. The LEEA had also emphasised the importance of adhering to any specified minimum thickness of plate that can be lifted.

(b) Minute item 4(b) – Health and safety passports

Members were updated on the situation regarding health and safety passports. EMTA are helping to try and secure funding for the North East Maritime Group's passport scheme. It was intended to trial the scheme in the North East before disseminating it nationally. A passport scheme is also being developed on Humberside in conjunction with the Ports Authority and the Safety Pass Alliance Scheme. Further developments included the possible extension of the Construction Skills Certification Scheme to other industries primarily as a way of clamping down on illegal workers. Details of a passport scheme operating in the ports were also detailed. A Code of Practice *The Engagement of Non-Permanent Employees on Cargo Handling Operations in the Ports Industry* containing details of the scheme is attached for information.

(c) Minute item 5 – Ultra-high pressure water jetting

An accident had occurred in the construction industry involving ultra-high pressure (UHP) water jetting. A lance had jammed on resulting in the operator dropping it, the water jet passing over his knees. The operator was wearing the new style of protective clothing (as described in paper 45/A). The water jet cut through 2 of the clothing's protective layers and penetrated the third resulting in some injury to the operator's knees. However, had the operator not been wearing the clothing his injuries would have been far worse. Despite the protection provided by the clothing, UHP water jetting equipment must be used with great care. Mr Atkinson advised members of a further accident in the construction industry involving UHP water jetting. The lance had again jammed on, the operator fell over and the water jet punctured a hole in his chest. Mr Atkinson believed the accident reinforced the need for protective clothing to be worn on the top half of the body as well as the bottom half.

At a previous meeting Mr Allison raised a query regarding an operator already displaying the symptoms of hand-arm vibration undertaking UHP water jetting. Feedback on this from an HSE Medical Inspector is that there should not be a

problem provided the individual involved is Stockholm 2V or 2SN or below. They will though need to take precautions to keep their body and their extremities warm for example by wearing warm gloves underneath waterproof gloves. They will also need to have breaks to rewarm and move their fingers about.

(d) Minute item 7 – SSA Health and Safety Guidance

The SSA health and safety guidance notes have now been placed on the SSA web site. They are available from a password-protected area of the web site as read only word documents. They are in a winzip format to speed up their accessibility. Anybody who has not got win zip on their p.c. can download it from Windows via the SSA website.

(e) Minute item 11 – Falls from a height

Members had been asked to report back if they had any particular problems with regards to working at a height. No such problems were reported.

(f) Minute item 15 – Video loaning scheme

Following a discussion of the practicalities, it was agreed to establish an informal video loaning scheme. Members were asked to forward to the Secretariat details of the videos, which they would be willing to share with other members. Could members please supply: the title of the video, the name of the publication company, a brief summary of the video's contents, the length of the video and contact details of the person to whom requests should be made. Once this information is received the Secretariat will circulate the details to members. The possibility of using CD Roms produced by paint suppliers was also raised.

Action: Members and the Secretariat

(g) Minute item 18 – Perago rotating blaster

The tool described in the feedback from BAE SYSTEMS (Marine) circulated with the minutes of the 45th meeting was not in fact a Perago rotating blaster as had been reported. BAE had however trialled a Perago rotating blaster mainly in connection with the use of consumables and had decided against their use. Following a trial Pyeroy had also decided against their use primarily due to concerns with guarding.

4. EUROPEAN DIRECTIVE UPDATE

Mr Sykes provided members with an update on the following directives;

CAD/ATEX Directives – the health requirements of CAD have been implemented through revisions of the Control of Substances Hazardous to Health Regulations, the Control of Lead at Work Regulations and the Control of Asbestos at Work Regulations. The revised regulations all came into force

on 21 November 2002 except for regulations 4 and 20 of the Control of Asbestos at Work Regulations. The duty under Regulation 4 to manage asbestos in non-domestic premises comes into force on 21 May 2004. Regulation 20 relating to the use of accredited laboratories for the analysis of bulk samples comes into force on 21 November 2004. Members were advised of a debate to take place in Parliament the following day calling for the asbestos regulations to be annulled. Update: the request for the regulations to be annulled was withdrawn. The regulations therefore remain in force; the Approved Code of Practices to accompany the regulations will be launched on 16 December 2002. A revised leaflet (INDG 223) *Managing Asbestos in premises* is already available and can be downloaded from HSE's web site at: <http://www.hse.gov.uk/pubns/indg223.pdf> Further information on asbestos is available on the HSE web site at: <http://www.hse.gov.uk/asbestos/index.htm>

The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) – implement the safety part of CAD and also ATEX. The regulations will come into force on 9 December 2002 except for duties designed to prevent explosions, which will come into force on 1 July 2003, or later in some cases. An Approved Code of Practice (ACOP) supporting the regulations is due to be published early in the New Year. Technical Approved Codes of Practice will define the safety standards required by DSEAR, which will be the same as those present in current regulations. The technical ACOPs will not though be published until six months after DSEAR comes into force. There will be a delay in repealing existing legislation to allow for the technical ACOPs to be produced. During this time inspectors will continue to use existing regulations. The new regulations make more explicit what is already required under existing regulations. The only main change is the need to produce an explosion zone plan. For additional details on the regulations see www.hse.gov.uk/spd/content/dsear.htm A simple guide to DSEAR is enclosed. This is the draft text of HSE free leaflet *Fire and explosion – how safe is your workplace? A short guide to the Dangerous Substances and Explosive Atmospheres Regulations* INDG370.

The Physical Agents (Vibration) Directive – the timetable of events is as follows: Consultative Document issued July 2003; consultation to end October 2003; Regulations laid September 2004; guidance published February 2005; Regulations in force March or June 2005.

The Physical Agents (Noise) Directive – a brief on the latest developments was circulated (enclosed for members not at the meeting). Mr Allison offered to circulate a brief report on his perceptions of the activities of the Engineering Industry Noise Task Group. Members agreed this would be useful.

Action: Mr Allison

The Temporary Work at Heights Directive - the Directive will be implemented as across the board Regulations. They will replace the staging parts of the Shipbuilding Regulations 1960. It is proposed to implement the Directive early, by July 2003. Draft regulations to implement the Directive are currently being developed. Formal consultation on the proposed regulations is

expected early in 2003. The Consultative Document is likely to be issued before the 47th meeting; members were therefore urged to keep an eye out for it and to submit any comments that they may have. Consultative Documents can be found on the HSE web site at: <http://www.hse.gov.uk/condocs/live.htm>

The Solvents Directive – a written brief on the Directive provided by the Environment Agency representative on the SSHSCC, was circulated at the meeting (copy enclosed for members not at the meeting). Members were advised to contact their local Environment Agency office should they have any queries on the Directive.

5. MOBILE ELEVATING WORK PLATFORMS (MEWPs)

Paper 46/A was presented introducing a draft HSE information sheet advising on the use of harnesses whilst working from a MEWP. Members' comments on the sheet included: there were possible inconsistencies on whether MEWPs could be used for access; what was meant by access needed to be better defined; and concern was expressed that MEWP manufacturers may be unwilling to state what the anchorage points on their MEWPs can be used for. It was also agreed that the SSA guidance note on the safe use of MEWPs in shipyards should be amended to correspond with the advice contained in the HSE information sheet. Paper 46/A also introduced a best practice guide *Mobile Elevating Work Platforms – Inspection, thorough examination and maintenance* produced by the Construction Plant-hire Association. Members were urged to obtain a copy of the guide which can readily be obtained by contacting the CPA on 0202 7630 6868 and requesting an order form.

6. MEDIUM PRESSURE DUCTILE IRON GAS PIPE WORK

Mr Barrett presented paper 46/B advising that medium pressure ductile iron (MPDI) gas pipe work can fail without warning. Where such pipe work is located close to buildings there is a risk of explosion. As a result Transco has been replacing all MPDI gas mains located within 30 metres of buildings. However, some MPDI gas pipe work may be privately owned particularly where it is located on a large site. Members were therefore urged to identify if they own their gas pipe work and if so to determine if it is made from MPDI. Where it is made from MPDI they should instigate a replacement programme as appropriate. Babcock Rosyth has already taken such action.

Action: Members

MPDI pipe work used to distribute other bulk supplies of gas is also of concern, as is cast iron pipe work. In such cases the need to replace the pipe work should be considered. DML had to take their cast iron pipe work into account when applying for an exemption from the Gas (Safety) Management Regulations 1996. Some issues of concern at the surface were identified even though the gas was under low pressure. Members were therefore advised to look at this issue even if their pipe work does operate at low pressure. If they have a large pipe work network they should also see if the Gas (Safety) Management Regulations apply. Appledore Shipbuilders had a problem with

gas leaching from the pipe work. With the involvement of a Corgi registered industrial gas fitter a pipe replacement programme was undertaken.

7. CHROMATE PRIMER PAINTS

Mr Watson presented paper 46/C raising the concern that shipyards may not always be aware of the presence of chromate primer paints on ships. There are also apparent differences of opinion regarding the precautions that should be followed during the removal of such coatings. Mr Allison reported that this was particularly the case with the provision of health surveillance. The action that has to be taken depends on the risk assessment however there was a problem of differences in interpretation. Mr Watson stated that as chromium is a skin and lung sensitiser and is classified as a carcinogen that as an absolute minimum health surveillance should consist of a health record of when a person is exposed to chromium. Skin checks should also be undertaken even if a wet process is used to remove the coatings. Any irritation should be reported straight away. Information and instruction on the health risks and the required precautions was also essential. This should include for example the need to cover any abrasions as this could otherwise result in skin ulcers. With regards to the lungs, as a minimum a health questionnaire should be completed which has been developed by a health professional although a lay person trained by the health professional can administer it. The lay person's job was not thought to diagnose any symptoms. Employees should also be made aware of the potential for nasal ulcers. The actual health surveillance that will be required will though depend on a number of factors including the chromium concentration of the coating, the level of exposure to it, the route of exposure etc.

Mr Strachan informed members that a chromate primer coating was discovered by chance under lagging onboard the HMS Ark Royal during a refit at the Rosyth Dockyard. Personal monitoring of exposure to hexavalent chromium identified exposure at 30 times the maximum exposure limit (MEL). As the coating breaks down to a fine dust exposure is consistently above the MEL, normally exceeding the MEL by 4 or 5 times. The only way to do a risk assessment of the work is to base it on the monitoring results. Using this information they decided that they had to undertake lung function tests, urine tests etc. Mr Sykes advised members that biological monitoring programmes, such as urine checks, need to be developed in consultation with a physician. It is also important that they are done at the right time. Mr Strachan stated that they carry out such checks at the end of the shift. Pyeroy's appointed doctor has also advised that as chromium is a carcinogen they must follow the carcinogens Approved Code of Practice. This means the use of containment, local exhaust ventilation, monitoring etc, which can cause disruption.

Concerns were also expressed about the reliability of information received from the Ministry of Defense regarding the presence of chromate primers on board their ships. As a result Pyeroy undertake their own paint surveys to see if chromium is present. Mr Morrison agreed to look further into this issue.

Action: Mr Morrison

Mr Paton stated that recent naval ships have had zinc phosphate applied except for an aluminium ship for which only chromate primers can be used.

Mr Barrett believed one of the aims of the Committee should be to make a difference. This issue also relates to health and therefore links in with what the Health and Safety Commission is seeking to achieve in this area. He therefore asked members to commit themselves to setting up systems to address this problem if they do not already have such systems in place. Members were asked to report back at the next meeting on any action taken.

Action: Members

Yards from the commercial repair side were asked to look into this issue and to report back at the next meeting on whether it also affected them.

Action: Members

Enclosed is documentation received from Babcock Engineering Services regarding personal monitoring and the control measures adopted.

8. Institute of Occupational Medicine

Mr Graeme Hughson from the Institute of Occupational Medicine (IOM) gave a presentation on research that he has recently been involved with. This included the Riskofderm project, which by linking exposure to a substance with how it is actually used seeks to produce a tool, which can be used to estimate skin exposure to different substances. This focused on the following activities spraying, mixing and diluting and wiping, which apart from wiping can be observed in a shipyard. The spraying and mixing and diluting of anti-foulants were studied. From monitoring dermal exposure they were able to calculate a deposition rate. This information and knowledge of which areas of the body were affected was then used to produce a predictive model. The aim of the research is to produce a toolkit, which employers can use to better protect their employees from dermal exposure to hazardous substances. It will however be at least a year before there is a working prototype of the model. The IOM are also currently working with the HSE to see how predictive models of exposure via the lungs can be improved.

Other research undertaken by the IOM included looking at ways to encourage people to use their ear protection. This involved using questionnaires, observing behavior etc in order to identify risk perceptions and looking at the compatibility of ear protection with other personal protective equipment. An intervention strategy was then drawn up for the companies involved. In medium and larger companies the intervention strategy was found to bring about sustained improvements. Providing hard hats, which allowed ear protection to fit better proved to be particularly successful in improving the use of ear protectors. This was also the case with increasing the perception of risk for example by using audio demonstrations of what it is like to have damaged hearing. This proved to be particularly successful where it was presented as a

toolbox talk. Information on legislation and technical issues was found to be of little interest. Written information only had a minimal impact as it tended not to be read.

9. WORK IN CONFINED SPACES

Mr Watson presented paper 46/D, which continued the discussion on confined spaces begun at the 44th meeting. The recommendations made by the Sheriff in his report on the Glomar Artic double fatality were discussed and in particular his recommendation that gas hoses should only be live when the torch they are connected to is actually in use. It was stated that this might be possible if working just below the weather deck however people can end up working as far down as the double bottom. The precautions that are needed partly depend on how much gas is used and the size of the workspace, if it is a small space it will not take long to fill it. A&P Tyne have started to issue spray cans so that hose connections can be checked to make sure they are okay. Even if the gas supply is switched off, a leak in a long hose may release enough gas to cause an explosion. A gas monitoring system could provide warning of such a leak. Whether monitoring is conducted at the torch end or where the hose passes should be decided by a risk assessment. As different squads of people can be working in different confined spaces at the same time a large number of monitors could be needed. The overall cost of using the monitors including the purchasing cost and costs associated with breakages and calibration could therefore be very high.

Additional concerns regarding the use of monitors included their incorrect placement in a confined space such that a leak may not be detected until it was too late. The monitors also need to be maintained and have their batteries changed/charged on a regular basis. There was also the potential that they may be used maliciously. It was felt to be more important to identify where hoses were getting damaged. If this is happening near to the torch more robust procedures were needed to try and prevent this from happening, the hoses should also be regularly inspected to identify such damage. If the hoses are damaged enroute the routing of the hoses needs to be looked at to see if it can be improved. Reinforced hoses can also be used which are less likely to be damaged. The legal standard was to provide, so far as is reasonably practicable, a safe system of work. Effective measures to reduce damage to hoses may reduce the need to monitor for leaks from that cause. However, the need to use monitors should be decided by a risk assessment of the work to be done. The assessment should take into full consideration the location of the work and the impact that this may have.

A system for remotely turning on the gas supply as recommended by the Sheriff was not believed to exist. Using radio control systems was also felt to be impractical. If the Glomar Artic incident had happened despite the existence of well controlled procedures and competent workers then it was felt there would be a need to overhaul the existing procedures for confined space work but not otherwise.

The Sheriff's proposal that people should pass a written test before being able to issue a permit-to-work was discussed. It was felt that instead it would be better to audit real work and the quality of training provided rather than undergo a written test. It would also be preferable to make sure that the permits issued were up to scratch. However, it was also stated that what the Sheriff was proposing would provide a back up to ensure that people were competent. It was important to demonstrate competency, a written test may be one way of achieving this.

The issue of revalidating permits was also discussed. No objections to this were raised provided there was an adequate system in place for doing so and that the system was audited. It should however only be done if the exact same work was to be repeated and all the conditions of the previous work remained the same.

A risk assessment completed by DML of TIG welding in a confined space was circulated (copy enclosed for people not at the meeting). The work represented the extreme end of risk for which it was decided that a rescue facility immediately next to the work area was required. Part B of the assessment is mainly based on the Confined Space Approved Code of Practice while Part C deals with emergency procedures. An assessment is made of the level of risk with the controls in place and without the controls in place. A Trade Union Safety Representative signs the risk assessment as this helps to get them involved. The people involved in the work are briefed on the findings of the assessment and a record kept to show that the briefing has been carried out. Those receiving the briefing also sign to say that they have understood it. The work is checked to make sure that it is carried out in line with the risk assessment. The assessment is then signed to say that this has been done.

Details of the procedures used by A & P Falmouth for the operation and training of the first response emergency team were circulated (copy enclosed for people not at the meeting).

While the discussion on confined spaces had so far focused on hot work there was a significant number of incidents involving painting. It was felt that there was widespread ignorance of the risks from solvents including amongst management. A lot of work had to be done to educate people on this issue. There was general agreement to the proposed series of seminars on work in confined spaces. There was also support in principle to each of the three seminars being hosted by member yards. Member yards were asked to consider hosting one of the seminars, which would be held in Scotland, North England and South England.

Action: Members

The proposed confined space audit tool was not discussed due to a shortage of time and will be carried forward to the next meeting.

10. REVITALISING HEALTH AND SAFETY

The discussion focused on musculoskeletal disorders (MSD), which has been identified by the Health and Safety Commission as a Key Programme. A new area of the HSE web site devoted to MSD contains key messages. One of these messages is the importance of early diagnosis and rehabilitation as a way of reducing days lost from occupational ill health, an objective of the Revitalising campaign. The MSD web pages include details of a company, which used a physiotherapist to report and treat MSD. The physiotherapist had a degree of autonomy and could advise on such issues as work schedules. It was concluded that such a measure was cost effective. DML have a part-time physiotherapist, research shows that such a measure has a cost effective ratio of 7:1. BAE SYSTEMS (Marine) also use a physiotherapist; referrals are made by the occupational health team. It has proved successful in getting people back to work sooner. Where a GP refers people to a NHS physiotherapist there is a long delay. With their own physiotherapist people are often back to work after 6 to 7 sessions. Having such a scheme can also help against personal injury claims. Cost benefit analysis of their scheme has found it to be very cost effective. If companies cannot afford a physiotherapist it may be possible to get help with this via their employer's liability insurer. The HSE widely commend the use of physiotherapists.

11. SLIPS, TRIPS AND FALLS

Paper 46/E was presented providing a breakdown of slip, trip and fall accidents in shipyards. Members were asked in particular to note the broadly equal split between the number of accidents occurring on vessels and those occurring elsewhere in the yard and to make sure that they gave equal focus to both. As the number of accidents onboard vessels involving slips significantly out numbered those involving trips members were also asked to ensure that sufficient attention is given to the prevention of slips. Members were in particular asked to focus on gaining access/egress including the use of steps/stairs, ladders, ramps, gangways and vehicles as this accounted for a significant proportion of the accidents.

12. HEALTH AND SAFETY NEWS UPDATE

A health and safety news update was presented (copy enclosed for members not at the meeting). Members' attention was drawn to: the Health and Safety (Miscellaneous Amendments) Regulations 2002, which affected a number of health and safety regulations; the application of Part III of The Provision and Use of Work Equipment Regulations to existing mobile work equipment; improvements to the HSE web site; changes to the National Vocational Qualifications for health and safety practitioners; and the Partnership at Work Fund.

13. RECENT ACCIDENTS

Paper 45/H was circulated, yet again falls from a height featured heavily. It was essential that employees had sufficient training, information and instruction on the risk of falls from a height and how they can be avoided. It

was mentioned in relation to the accident involving ultra-high pressure water jetting that the “yellow wellington” sometimes worn when water jetting, is to become CE Marked although only for certain lower pressures. An accident involving a plate clamp highlighted the importance of establishing their safe operating limits, undertaking risk assessments of their use and making sure that employees are properly trained on their safe use and that they have been examined as required by the Lifting Operations and Lifting Equipment Regulations 1998.

14. ANY OTHER BUSINESS

No items were raised.

15. DATES AND VENUES OF MEETINGS IN 2003

9th April – A & P Tyne Hebburn

17th September – Babcock Engineering Services Rosyth

3rd December – HSE Newcastle-upon-Tyne