PAINTING

24.1 Introduction

24.1.1 Based on the findings of the risk assessment, appropriate control measures should be put into place to protect those who may be affected. This chapter highlights some areas which may require attention in respect of painting.

24.2 General

24.2.1 Paints may contain toxic or irritant substances, and the solvents may give rise to flammable and potentially explosive vapours, which may also be toxic. Personnel using such paints should be warned of the particular risks arising from their use. Paints containing organic pesticides can be particularly dangerous. If the manufacturer's instructions are not given on the container, information should be obtained at the time of supply about any special hazards, and also whether special methods of application should be followed. Such advice should be readily available at the time of use but the following precautions should always be taken.

24.3 Preparation and Precautions

24.3.1 Painted surfaces should always be rubbed down wet to reduce dust from the old paint, which may be toxic if inhaled. Where the dust is known to contain lead, other dust treating methods should be used. Dust masks should be worn as protection against other dusts.

24.3.2 If the surface to be rubbed down is known to contain lead, then methods that do not create dust should be adopted. It is safer to avoid or minimise dust creation than to try to clean up the dust afterwards. Sanding or abrasive blasting should be avoided. Lead based paint should never be burnt off as fumes will contain metallic lead in a readily absorbed form.

24.3.3 Rust removers are acids and contact with unprotected skin should be avoided. Eye protection should be worn against splashes (see section 4.7). If painting aloft or otherwise near ropes, care should be taken to avoid splashes on ropes, safety harness, lines etc. (see section 20.9 on the effect of such contamination on ropes).

24.3.4 Interior and enclosed spaces should be well ventilated, both while painting is in progress and until the paint has dried.

24.3.5 There should be no smoking or use of naked lights in interior spaces during painting or until the paint has dried hard. Some vapours even in low concentrations may decompose into more harmful substances when passing through burning tobacco.

24.3.6 When painting is done in the vicinity of machinery or from an overhead crane gantry, the power supply should be isolated and the machine immobilised in such a way that it cannot be moved or started up inadvertently. Appropriate warning notices should be posted (see 22.12.7). Close-fitting clothing should be worn.

24.4 Use of Paint Spraying Equipment

24.4.1 As there are many different types of paint spraying equipment in use, operatives should comply with the manufacturer's instructions for use.

24.4.2 Airless spray-painting equipment is particularly hazardous since the paint is ejected at a very high pressure and can penetrate the skin or cause serious eye injuries. Spray should not be allowed to come into contact with the face or unprotected skin.

24.4.3 Suitable protective clothing such as a combination suit, gloves, cloth hood, and eye protection should be worn during spraying.

24.4.4 Paints containing lead, mercury or similarly toxic compounds should not be sprayed in interiors.

24.4.5 A suitable respirator should be worn according to the nature of the paint being sprayed. In exceptional circumstances it may be necessary to use breathing apparatus (see Section 4.8).

24.4.6 If a spray nozzle clogs, the trigger of the gun should be locked in a closed position before any attempt is made to clear the blockage.

24.4.7 Before a blocked spray nozzle is removed or any other dismantling is attempted, pressure should be relieved from the system.

24.4.8 When blowing through a reversible nozzle to remove a blockage, all parts of the body should be kept clear of the nozzle mouth.

24.4.9 The pressure in the system should not exceed the recommended working pressure of the hose. The system should be regularly inspected for defects.

24.4.10 As an additional precaution against the hazards of a hose bursting, a loose sleeve, for example a length of 2 to 3 meters (6 to 10 feet) of old air hose, may be slipped over that portion of the line adjacent to the gun and paint container.

HATCH COVERS AND ACCESS LIDS

26.1 Introduction

26.1.1 Based on the findings of the risk assessment, appropriate control measures should be put into place to protect those workers whose health and safety may be put at risk by the operation of hatch covers and access lids. This chapter highlights some areas which may require attention in respect of hatch covers and access lids.

26.2 General

26.2.1 Information about the regulations governing the use of hatches is given in Marine Guidance Note MGN 322 (M+F)

26.2.2 Any hatch covering used on a ship is to be of sound construction and material, of adequate strength for the purpose for which it is used, free from patent defect and properly maintained.

26.2.3 A hatch covering is not to be used unless it can be removed and replaced, whether manually or with mechanical power, without endangering any person. Information showing the correct replacement position is to be clearly marked, except where hatch coverings are interchangeable or incapable of being incorrectly replaced.

26.2.4 A hatch is not to be used unless the hatch covering has been completely removed, or if not completely removed, is properly secure.

26.2.5 Before vessel departure, weather deck hatch covers should be secured in the correct closed position. Whilst the vessel is at sea they should be regularly inspected to ensure that integrity is being maintained.

27.4 Asbestos dust

27.4.1 All types of asbestos have a fibrous structure and can produce harmful dust if the surface exposed to the air is damaged or disturbed. The danger is not immediately obvious because the fibres which can damage the lungs and can cause lung cancer are too small to be seen with the naked eye. Asbestos which is in good condition is unlikely to release fibres, but where the material is damaged or deteriorating, or work is undertaken on it, airborne fibres can be released. Dry asbestos is much more likely to produce dust than asbestos that is thoroughly wet or oil-soaked. Asbestos is particularly likely to occur on older vessels in insulation and panelling, but certain asbestos compounds may also be found elsewhere and on other vessels in machinery components such as gaskets and brake linings.

27.4.2 Ship owners should advise masters of any location where asbestos is known or believed to be present on their ship. Masters and/or safety officers should keep a written record of this information and should also note any other position where asbestos is suspected, but they should not probe or disturb any suspect substance. Crew members who work regularly near asbestos or a substance likely to contain it should be warned of the need for caution and should report any deterioration in its condition such as cracking or flaking.

27.4.3 The condition of old asbestos may deteriorate and where reasonably practicable consideration should be given to its removal. This should be carried out in port and a specialist removal contractor should be used, to ensure adequate protective procedures. Where the port is in the UK and the work involves asbestos insulation or asbestos coating it is usually necessary for the contractor to hold a licence issued by the Health and Safety Executive. If such work is carried out outside the UK the contractor should be of equivalent competence.

26.2.6 All hatch covers should be properly maintained. Defective or damaged covers should be replaced/repaired as soon as possible. All covers and beams should only be used if they are a good fit and overlap their end supports to an extent which is adequate but not excessive.

26.2.7 All personnel involved with the handling and/or operation of hatch covers must be properly instructed in their handling and operation. All stages of opening or closing hatches should be supervised by a responsible person. When hatches are open, the area around the opening and in the hatchways should be appropriately illuminated and guard-rails erected. Guard-rails should be tight with stanchions secured in position, and properly maintained. No hatch cover should be replaced contrary to information showing the correct replacement position.

26.2.8 Where lifting appliances are used, they should be attached to hatch covers from a safe position and without personnel being exposed to the danger of falling or being trapped.

26.2.9 No loads should be placed over, nor work take place on, any section of hatch cover unless it is known that the cover is properly secured and can safely support the load.

26.2.10 Partly opened unguarded hatches should never be covered with tarpaulins; this would present a serious hazard for any person walking across the hatch.

26.2.11 Hatch covers should not be used for any other purpose.

26.3 Mechanical hatch covers

26.3.1 The manufacturer's instructions for the safe operation, inspection, maintenance and repair of the type of mechanical hatch cover fitted should always be followed.

26.3.2 During operations, personnel should keep clear of the hatches and the cover stowage positions. The area should be kept clear of all items which might foul the covers or the handling equipment.

26.3.3 Special attention should be paid to the trim of the vessel when handling mechanical covers. The hatch locking pins or preventers of rolling hatch covers should not be removed until a check wire is fast to prevent premature rolling when the tracking is not horizontal.

26.3.4 Hatch wheels should be kept greased and free from dirt and the coaming runways and the drainage channels kept clean. The rubber sealing joints should be properly secured and be in good condition so as to provide a proper weathertight seal.

26.3.5 All locking and tightening devices should be secured in place on a closed hatch at all times when at sea. Securing cleats should be kept greased. Cleats, top-wedges and other tightening devices should be checked regularly whilst at sea.

26.3.6 Hatch covers should be properly secured immediately after closing or opening. They should be secured in the open position with chain preventers or by other suitable means. No one should climb on to any hatch cover unless it is properly secured.

26.3.7 Except in the event of an emergency endangering health or safety, no person should operate a hatch covering which is power-operated or a ship's ramp or a retractable car-deck unless authorised to do so by a responsible ship's officer.

26.4 Non-mechanical hatch covers and beams

26.4.1 Each non-mechanical hatchway should be provided with an appropriate number of properly fitting beams and hatch covers, pontoons

or slab hatches adequately marked to show the correct replacement position, and with an adequate number of properly fitting tarpaulins, batten bars, side wedges and locking bars so that the hatch will remain secure and weathertight for all weather conditions.

26.4.2 Unless hatches are fitted with coamings to a height of at least 760 mm (30 inches) they should be securely covered or fenced to a height of 1 metre (39 inches) when not in use for the passage of cargo.

26.4.3 Manually handled hatch covers should be capable of being easily lifted by two people. Such hatch covers should be of adequate thickness and strength and provided with hand grips. Wooden hatch boards should be strengthened by steel bands at each end. One person should not attempt to handle hatch covers unaided unless the covers are designed for single-handed operation.

26.4.4 Hatch boards, hatch beams, pontoon hatches, hatch slabs and tarpaulins should be handled with care and properly stowed, stacked and secured so as not to endanger or impede the normal running of the vessel. Hatch boards should be removed working from the centre towards the sides, and replaced from the sides towards the centre. Personnel hauling tarpaulins should walk forwards and NOT backwards so they can see where they are walking.

26.4.5 A derrick or crane should be used to handle beams. Pontoons or slab hatches should be positioned directly over them to lessen the risk of violent swinging once the weight has been taken.

26.4.6 Appropriate gear of adequate strength should be specially provided for the lifting of the beams, pontoons and slab hatches. Slings should be of adequate length, secured against accidental dislodgement while in use and fitted with control lanyards. The angle between arms of slings at the lifting point should not exceed 120°, in order to avoid undue stress. The

winch or crane should be operated by a competent person under the direction of a ship's officer or other experienced person.

26.4.7 Beams and hatch covers remaining in position in a partly opened hatchway should be securely pinned, lashed, bolted or otherwise properly secured against accidental dislodgement.

26.4.8 Hatch covers and beams should not be removed or replaced until a check has been made that all persons are out of the hold or clear of the hatchway. Immediately before beams are to be removed, a check should be made that pins or other locking devices have been freed.

26.4.9 No one should walk out on a beam for any purpose.

26.4.10 Hatch covers should not be used in the construction of deck or cargo stages or have loads placed on them liable to damage them. Loads should not be placed on hatch coverings without the authority of a ship's officer.

26.5 Steel-hinged inspection/access lids

26.5.1 Inspection/access hatch lids should be constructed of steel or similar material, and hinged so they can be easily and safely opened or closed. Those on weather decks should be seated on watertight rubber gaskets and secured weathertight by adequate dogs, side cleats or equivalent tightening devices.

26.5.2 When not secured, inspection/access hatch lids should be capable of being easily and safely opened from above and, if practicable, from below.

26.5.3 Adequate hand grips should be provided in accessible positions to lift inspection/access hatches by hand without straining or endangering personnel.

26.5.4 Heavy or inaccessible hatch lids should be fitted with counterweights so that they can easily be opened by one or two persons. Where a counter-weight cannot be fitted due to inaccessibility, the hatch lids should be supplied with a purchase or pulley with eye-plates or ringbolts fitted in appropriate positions so that the hatch can be opened and closed without straining or endangering personnel.

26.5.5 The hatch lids when open should be easily and safely secured against movement or accidental closing. Adequate steel hooks or other means should be provided.

26.6 Access to Holds/Cargo spaces

26.6.1 Entry to holds/cargo spaces should only be undertaken on the authority of a responsible ships officer, who should ensure prior to granting authority that the space has been adequately ventilated and, where appropriate, tested for noxious gases/oxygen content (see Chapter 17).

26.6.2 Entry should be made where at all possible through the permanent means of access. Where this is not possible, portable ladders may be used (see section 15.3). When necessary, lifelines and safety harness should be available and used.