



NOTIS PERKAPALAN BIL: 02/2012
SHIPPING NOTICE: 02/2012

Jabatan Laut
Marine Department

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Untuk Perhatian: Pemilik, Syarikat Pengurusan, Nakhoda dan Ejen-Ejen Perkapalan
For the attention of: Shipowner, Ship Management, Shipmaster and Shipping Agents

KEPERLUAN PENGGUNAAN ALAT-ALAT PERLINDUNGAN PERIBADI
REQUIREMENT OF WEARING PROPER PERSONAL PROTECTIVE EQUIPMENT

Berkuat-kuasa serta merta mengikut tarikh notis ini, Jabatan Laut Negara Brunei Darussalam menguatkuasakan keperluan penggunaan alat-alat perlindungan peribadi yang berpatutan mengikut Peraturan Kapal Pedagang, 2002 Penggal VII. Peraturan 107, 109.2(i) dan 109.3.

Ini adalah untuk meningkatkan tahap keselamatan pelaut-pelaut yang terlibat didalam pengendalian operasi kapal di perairan dan pelabuhan-pelabuhan Brunei Darussalam.

With immediate effect on the date of this notice, the Marine Department Brunei Darussalam hereby enforcing on wearing proper and appropriate personal protective equipments in accordance with Merchant Shipping Order, 2002 part VII. Regulation No 107, 109.2(i) and 109.3.

This is to increase the level of safety to all personnel involved in the Ship Operations in ports and Brunei Darussalam Waters.

(HAJI MATNOR BIN HAJI SALLEH)

Pmk. Pengarah Laut
Act. Director of Marine

Ruj / Ref : 39 / JL / OL / 23.1
Tarikh / Date : 21 Mac 2012 / 21st March 2012
s.k / c.c : Master File
File

hms '12



Requirement of Personal Protective Equipment

1 Introduction

- 1.1 Risks to the health and safety of workers must be identified and assessed. It will often not be possible to remove all risks, but attention should be given to control measures which make the working environment and working methods safe.
- 1.2 Personal protective equipment must be used only when risks cannot be avoided or reduced to an acceptable level by safe working practices, that cause no health risk to any worker. This is because personal protective equipment does nothing to reduce the hazard, and can only protect the person wearing it, leaving others vulnerable.
- 1.3 It should be noted that the use of personal protective equipment may in itself cause a hazard – for example, through reduced field of vision, loss of dexterity or agility.

2 Employer duties

- 2.1 It is the responsibility of the employer to ensure that workers are provided with suitable personal protective equipment where it is needed.
- 2.2 As a general rule, personal protective equipment should be supplied at no cost to the worker. The exception to this is where it is not exclusive to the workplace and so workers may be required to contribute to the cost or when workers wish to have equipment which exceeds the minimum standards required (e.g. a more attractive design).
- 2.3 Employers should assess the equipment required to ensure that it is suitable and effective for the task in question, and meets the appropriate standards of design and manufacture.
- 2.4 Suitable equipment should:
 - (a) Be appropriate for the risks involved, and the task being performed, without itself leading to any significant increased risk;
 - (b) Fit the worker correctly after any necessary adjustment;
 - (c) Take account of ergonomic requirements and the worker's state of health;
 - (d) Be compatible with any other equipment the worker has to use at the same time, so that it continues to be effective against the risk.
- 2.5 The appropriate personal protective equipment of the required standard must be supplied to the workers, wherever risk assessment indicates that there is a risk to health and safety

from a work process which cannot be adequately controlled by other means, but which can be alleviated by the provision of such clothing or equipment.

2.6 The employer is also required to ensure that personal protective equipment is regularly checked and maintained or serviced. Records should be maintained of servicing and any repair required and carried out.

2.7 All workers who may be required to use protective equipment must be properly trained in its use. This should include being advised of its limitations. A record should be kept of who has received training.

2.8 Defective or ineffective protective equipment provides no defence. It is therefore essential that the correct items of equipment are selected and that they are properly maintained at all times. The manufacturer's instructions should be kept safe with the relevant apparatus and if necessary referred to before use and when maintenance is carried out. Personal protective equipment should be kept clean and should be disinfected as and when necessary for health reasons.

2.9 A competent person should inspect each item of protective equipment at regular intervals and in all cases before and after use. All inspections should be recorded. Equipment should always be properly stowed in a safe place after use.

3 Worker duties

3.1 Workers must wear the protective equipment or clothing supplied when they are carrying out a task for which it is provided, and follow appropriate instructions for use.

3.2 Personal protective equipment should always be checked by the wearer each time before use. Workers should comply with the training they have received in the use of protective items, and follow the manufacturer's instructions for use.

4 Types of equipment

4.1 Overalls, gloves and suitable footwear are the proper working dress for most work about ship but these may not give adequate protection against particular hazards in particular jobs. Personal protective equipment must always be selected according to the hazard being faced and the kind of work being undertaken, in accordance with the findings of the risk assessment.

4.2 Personal equipment can be classified as follows:

Type	Examples
Head protection	Safety helmets, bump caps, hair protection
Hearing protection	Ear muffs, ear plugs
Face and eye protection	Goggles and spectacles, facial shields

Respiratory protective equipment	Dust masks, respirators, breathing apparatus
Hand and foot protection	Gloves, safety boots and shoes
Body protection	Safety suits, safety belts, harnesses, aprons, high visibility clothing
Protection against drowning	Lifejackets, buoyancy aids and lifebuoys
Protection against hypothermia	Immersion suits and Thermal aids

5 Head Protection

Safety Helmets

5.1 Safety helmets are most commonly provided as a protection against falling objects. They can also protect against crushing or a sideways blow, and chemical splashes.

5.2 Since the hazards may vary, it will be appreciated that no one type of helmet would be ideal as protection in every case. Design details are normally decided by the manufacturer whose primary consideration will be compliance with an appropriate standard.

5.3 The shell of a helmet should be of one piece seamless construction designed to resist impact. The harness or suspension when properly adjusted forms a cradle for supporting the protector on the wearer's head. The crown straps help absorb the force of impact. They are designed to permit a clearance of approximately 25mm between the shell and the skull of the wearer. The harness or suspension should be properly adjusted before a helmet is worn..

Bump caps

5.4 A bump cap is simply an ordinary cap with a hard penetration-resistant shell. They are useful as protection against bruising and abrasion when working in confined spaces such as a main engine crankcase or a double bottom tank. They do not, however, provide the same protection as safety helmets and are intended only to protect against minor knocks.

Hair nets and safety caps

5.5 Personnel working on or near to moving machinery have always to be on their guard against the possibility of their hair becoming entangled in the machinery. Long hair should always be covered by a hair net or safety cap when working with or near moving machinery.

6 Hearing protection

6.1 All persons exposed to high levels of noise, e.g. in machinery spaces, should wear ear protection of a type recommended as suitable for the particular circumstances. Protectors are of three types – ear plugs, disposable or permanent, and ear muffs.

6.2 The simplest form of ear protection is the ear plug. This type however has the disadvantage of limited capability of noise level reduction. Ear plugs of rubber or plastic have only limited effect, in that extremes of high or low frequency cause the plug to vibrate in the ear canal causing a consequential loss in protection. It may be difficult to keep re-usable ear plugs clean on a ship, and disposable ear plugs are recommended. Ear plugs should never be used by anyone with ear-trouble without medical advice.

6.3 In general, ear muffs provide a more effective form of hearing protection. They consist of a pair of rigid cups designed to completely envelope the ears, fitted with soft sealing rings to fit closely against the head around the ears. The ear cups are connected by a spring loaded headband (or neck band) which ensures that the sound seals around the ears are maintained.

7 Face and eye protection

7.1 The main causes of eye injury are:

- (a) Infra-red rays – gas welding;
- (b) ultra-violet rays – electric welding;
- (c) exposure to chemicals;
- (d) exposure to particles and foreign bodies.

7.2 Ordinary prescription (corrective) spectacles, unless manufactured to a safety standard, do not afford protection. Certain box-type goggles are designed so that they can be worn over ordinary spectacles.

8 Respiratory protective equipment

8.1 Respiratory protective equipment is essential for protection when work has to be done in conditions of irritating, dangerous or poisonous dust, fumes or gases. There are two main types of equipment which perform different functions.

- (a) A respirator filters the air before it is inhaled;
- (b) breathing apparatus supplies air or oxygen from an uncontaminated source.

8.2 It is most important that the face-piece of respirators and breathing apparatus is fitted correctly to avoid leakage. The wearing of spectacles, unless adequately designed for that purpose or of beards is likely to adversely affect the face seat. This is a particularly important consideration in emergency situations.

Respirators

8.4 The respirator selected must be of a type designed to protect against the hazards being met.

(a) The dust respirator gives protection against dusts and aerosol sprays but not against gases. There are many types of dust respirator available but they are generally of the ori-nasal type, i.e. half-masks covering nose and mouth. Many types of light, simple face masks are also available and are extremely useful for protecting against dust nuisance and non-toxic sprays but should never be used in place or proper protection against harmful dusts or sprays.

(b) The positive pressure powered dust respirator incorporates a battery-powered blower unit, connected by a tube to the face-mask to create a positive pressure in the face-piece. This makes breathing easier and reduces face-seal leakage.

(c) The cartridge-type respirator consists of a full face-piece or half mask connected to a replaceable cartridge containing absorbent or adsorbent material and a particulate filter. It is designed to provide protection against low concentrations of certain relatively non-toxic gases and vapours.

(d) The canister-type respirator incorporates a full face-piece connected to an absorbent or adsorbent material contained in a replaceable canister carried in a sling on the back or side of the wearer. This type gives considerably more protection than the cartridge type.

8.5 The filters, canisters and cartridges incorporated in respirators are designed to provide protection against certain specified dusts or gases. Different types are available to provide protection against different hazards and it is therefore important that the appropriate type is selected for the particular circumstances or conditions being encountered. It must be remembered, however, that they have a limited effective life and must be replaced or renewed at intervals in accordance with manufacturer's instructions.

8.6 RESPIRATORS PROVIDE NO PROTECTION AGAINST OXYGEN DEFICIENT ATMOSPHERE. They should never be used to provide protection in confined spaces such as tanks, cofferdams, double bottoms or other similar spaces against dangerous fumes, gases or vapours. Only breathing apparatus (self-contained or airline) is capable of giving protection in such circumstances.

Breathing apparatus

8.7 The type of breathing apparatus to be used when entering a space that is known to be, or suspected of being deficient in oxygen or containing toxic gas or vapours

8.8 Breathing apparatus should not be used underwater unless the equipment is suitable for the purpose, and then only in an emergency.

Resuscitators

8.9 It is recommended that resuscitators of an appropriate kind should be provided when any person may be required to enter a dangerous space

9 Hand and foot protection

Gloves

9.1 The exact type of glove selected will depend on the kind of work being undertaken or the particular substance being handled, and in these cases expert advice should be followed.

The following are general rules:

- (a) Leather gloves should be used when handling rough or sharp objects;
- (b) Heat-resistant gloves should be used when handling hot objects;

(c) Rubber, synthetic or PVC gloves are generally best for handling acids, alkalis, various types of oils, solvents and chemicals in general.

Footwear

9.2 Foot injuries most often result from the wearing of unsuitable footwear (e.g. sandals, plimsolls and flip-flops) rather than from failure to wear safety shoes and boots. It is nevertheless strongly advisable that all personnel whilst at work on board ship wear appropriate safety footwear.

9.3 Injuries are commonly caused by impact, penetration through the sole, slipping, heat and crushing. Safety footwear is available which is designed to protect against these or other specific hazards identified in the risk assessment, manufactured to various standards appropriate to the particular danger involved.

10 Protection from falls

10.1 All personnel who are working aloft, outboard or below decks or in any other area where there is a risk of falling more than two metres, should wear a safety harness (or belt with shock absorber) attached to a lifeline. If a vessel is shipping frequent seas, nobody should be required to work on deck unless absolutely necessary. However, where this is unavoidable, persons on deck should wear a harness and, where practicable, should be secured by lifeline as a protection from falls and from being washed overboard or against the ship's structure.

10.2 Inertial clamp devices allow more freedom in movement.

11 Body protection

11.1 Special outer clothing may be needed for protection when personnel are exposed to particular contaminating or corrosive substances.

11.2 High visibility clothing should be worn when it is important to be seen to be safe – for example, during loading and unloading operations.

11 Protection against drowning

11.1 Where work is being carried out over side or in an exposed position where there is a reasonable foreseeable risk of falling or being washed overboard or where work is being carried out in or from a ship's boat a lifebuoy with sufficient line should be provided. In addition and as appropriate a lifejacket or buoyancy aid should be provided.