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THE MERCHANT SHIPPING ACT, 2009  
(No. 4. of 2009)

**THE MERCHANT SHIPPING (EYESIGHT AND MEDICAL EXAMINATION) REGULATIONS, 2012**

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**THE MERCHANT SHIPPING (EYESIGHT AND MEDICAL EXAMINATION) REGULATIONS, 2012**

IN EXERCISE of the powers conferred by Section 170(1) (c) read with section 450 of the Merchant Shipping Act, 2009, the Minister for Transport makes the following Regulations:—

PART I—PRELIMINARY

Citation.

1. These regulations may be cited as the Merchant Shipping (Eyesight and Medical Examination) Regulations, 2012.

Purpose of Regulations.

2. These regulations—

(a) for the purposes of section 170(1)(c) of the Act-

(i) make provision for and in relation to the medical examination of, and the issue of medical certificates to, masters and seafarers and persons proposing to engage in employment as masters or seafarers; and

(ii) prescribe the colour and form vision tests and the medical standards to be applied by eyesight examiners and medical examiners, respectively;

(b) for the purposes of the seafarer certification regulations, prescribe matters relating to the health of persons performing, or intending to perform, the duties of a qualified master or seafarer;

(c) pursuant to section 170 (1)(c) of the Act, the observance of the provisions in relation to certain non-SOLAS ships applies;

(d) give effect to Regulation I/9 annexed to the STCW Convention and Section B-I/9 of the STCW Code referred to in that Convention.

Interpretation.

3. In these regulations, unless the context indicates otherwise—

"applicant", except in Part 3, means a person who applies for a medical certificate, and, in Part 3, means a person who applies for an eyesight certificate;

"approved" means approved by the Authority;

"Authority" means the Kenya Maritime Authority established by Act No. 5 of 2006;

"contravene", in relation to a provision of these regulations, includes failing or refusing to comply with that provision;

"eyesight certificate" means a certificate, issued in accordance with Part III relating to an applicant's colour and form vision;

"eyesight examiner" means a person designated under regulation 25;

"holder", in relation to a certificate or other document, means the person identified as holder by that certificate or document;

"medical certificate" means a certificate, issued in accordance with Regulation 10, relating to an applicant's medical fitness;

"medical examiner" means an approved medical practitioner contemplated in regulation 19 or 20;

"seafarer" means a person serving, or intending to serve, on a ship and includes a master or seafarer but does not include a pilot, a person who is not a member of the crew of the ship or a supernumerary and includes a cadet, an apprentice-officer, and any other person engaged on a ship in a training capacity;

Application.

4. These Regulations apply in respect of-

(a) to sea-going Kenyan ships; and

(b) Regulations 27 and 28 apply to sea-going foreign ships when they are in a Kenyan port or Kenyan waters, being ships which are of 100 GT or over, including sea-going tugs, other than fishing vessels, pleasure craft and offshore installations whilst on their working stations.

## PART II—MEDICAL FITNESS

Prohibition of employment of unfit persons.

5. (1) Subject to sub-regulation (6), no person shall employ a seafarer in a ship unless that seafarer is the holder of a valid medical fitness certificate.

(2) Any seafarer who has served at sea at any time during the one year immediately preceding the coming into force of these Regulations shall within a period of one year of such coming into force, obtain a medical fitness certificate in accordance with these regulations.

(3) Any seafarer, the validity of whose certificate expires while he is in a location where medical examination in accordance with these Regulations is impracticable, may continue to be employed without such a certificate for a period not exceeding three months from the date of expiry of such medical certificate.

(4) Subject to sub-regulation (6), no person shall employ a seafarer in a ship in a capacity or in a geographical area precluded by any restriction in that seafarer's medical fitness certificate.

(5) Subject to sub-regulation (6), no person shall employ a seafarer in a ship carrying chemicals in bulk unless that seafarer is the holder of a valid medical fitness certificate issued in respect of a medical examination undertaken not more than twelve months previously, notwithstanding that the period of validity specified in the medical fitness certificate may exceed twelve months.

(6) Sub-regulations (1), (4) and (5) shall not apply to the employment of—

(a) a pilot who is not a member of the crew;

(b) a person employed in a ship solely in connection with the construction, alteration, repair or testing of the ship, its machinery or equipment, and not engaged in the navigation of the ship;

(c) a person solely employed in work directed to -

(i) the exploration of the seabed or subsoil or the exploitation of their natural resources;

(ii) the storage of gas in or under the seabed or the recovery of gas so stored;

(iii) the laying, inspection, testing, repair, alteration, renewal or removal of any submarine telegraph cable; or

(iv) pipe-line works, including the assembling, inspection, testing, maintaining, adjusting, repairing, altering, renewing, changing the position of, or dismantling a pipe-line or length of pipe-line,

who is not engaged in the navigation of the ship or in the deck, engine room, radio, medical or catering department of that ship;

(d) a person employed in a port who is not ordinarily employed at sea; or

(e) a person employed in a ship solely to provide goods, personal services or entertainment on board who is not employed by the owner or the person employing the master of the ship and has no emergency safety responsibilities.

Evidence of medical fitness.

6. For the purposes of regulation 6, and section 170 (1) (c) of the Act, a person is medically fit to perform duties as a seafarer if that person—

(a) holds a valid medical certificate declaring him or her to be fit for those duties; and

(b) there is no evidence that his or her medical condition has changed since the last medical examination to an extent that would make him or her unfit for those duties.

Application for medical certificate.

7. A person requiring a medical certificate shall apply to a medical examiner.

Medical examination.

8. (1) A medical examiner is to conduct such examinations, tests and interviews and make such enquiries in relation to an applicant as appear appropriate to determine whether the applicant is medically fit to perform the intended duties as a seafarer.

(2) An applicant shall disclose to the medical examiner all pre-existing medical conditions that are known to the applicant and that could affect the determination of the applicant's medical fitness.

Determination of fitness.

9. (1) In determining an applicant's medical fitness, a medical examiner shall have regard to the guidelines set out in the First Schedule in addition to applying normal medical fitness considerations after which he shall complete part B of the medical examination report.

(2) If an applicant is found by a medical examiner to be unfit for service at sea, the applicant, or his or her employer, may, at own expense, appeal against the finding to a medical appeal panel constituted in accordance with sub-regulation (3).

(3) A medical appeal panel consists of three members appointed by the Authority, of whom—

(a) two shall be medical examiners, one of whom shall be appointed as chairperson; and

(b) one shall be a specialist physician or surgeon from the appropriate specialty.

- (4) A quorum for a meeting of a medical appeal panel is three members.
- (5) A decision of the majority of the members of a medical appeal panel is taken to be a decision of the panel.
- (6) Subject to this regulation and any directions that the Authority may give, a medical appeal panel may regulate its own procedure.
- (7) In determining an appeal, a medical appeal panel may confirm, vary or set aside a medical examiner's finding.

Issue of medical certificate.

10. (1) If a medical examiner—

(a) is satisfied as to the identity of an applicant; and

(b) is able to attest to the true state of the applicant's health, he shall issue to the applicant a medical certificate substantially in accordance with the form of certificate set out in Part D of the First Schedule to these regulations.

(2) The medical examiner shall set out in the medical certificate his assessment of the applicant's medical fitness as either—

(a) unfit for service at sea;

(b) fit for service at sea with restrictions; or

(c) fit for service at sea without restrictions.

(3) A medical examiner who assesses an applicant as fit for service at sea with restrictions shall state those restrictions in the medical certificate.

Further examination.

11. A seafarer who is the holder of a valid medical certificate may at any time be required by the owner or master of a ship, or by the Authority, to obtain a new certificate where as a result of illness, injury or other cause it is believed the seafarer may no longer be medically fit.

Cancellation of medical certificate.

12. A medical certificate shall be considered to be cancelled when the person to whom it is issued—

(a) is issued with a later medical certificate; or

(b) is required, in accordance with Regulation 11, to obtain a further medical certificate.

Production of medical certificate.

13. A person required to hold a medical certificate shall not fail, except with reasonable excuse, to produce the certificate on demand to the owner or master of the ship on which the person serves or wishes to serve, or to the Authority.

Delivery of cancelled medical certificate.

14. A person whose medical certificate is taken to be cancelled under Regulation 12 shall deliver the certificate to the Authority on demand.

Aids to vision or hearing.

15. A person whose medical certificate indicates that an aid to vision or hearing was used for the purpose of being found fit shall be required to—

- (a) use the aid when performing duties as a seafarer; and
- (b) in the case of an aid to vision, to keep at least two such aids while performing duties as a seafarer.

Certificate equivalent.

16. (1) Subject to sub-regulation (2), any certificate of medical and visual fitness for seafaring employment issued by an approved medical practitioner to a seafarer in respect of a medical examination conducted before the coming into force of the Regulations shall be deemed for the purposes of these Regulations to be equivalent to a medical fitness certificate issued under these Regulations.

(2) Any certificate issued by practitioner shall remain valid from the date of the medical examination only for the appropriate maximum period, according to the age of the seafarer, prescribed in Regulation 12, or for such lesser period as may be specified in the certificate.

Certificates issued by foreign States.

17. Any medical fitness certificate issued to a seafarer in accordance with the Medical Examination (Seafarers) Convention 1946 (International Labour Organization Convention 73 of 1946) or the Merchant Shipping (Minimum Standards) Convention 1976 (International Labour Organization Convention 147 of 1976)

(a) by an authority empowered in that behalf by the laws of the country outside Kenya which is a party to either of those Conventions; or

(b) by an approved authority empowered in that behalf by the laws of any other country outside Kenya, shall be deemed for the purposes of these Regulations to be equivalent to a medical fitness certificate issued under these Regulations and the list of countries shall be published as a Notice to Mariners.

Approval of medical practitioners.

18. (1) A medical practitioner may be approved for the purposes of the Act, and in particular section 170 (1) (c) thereof, if the medical practitioner—

- (a) holds a qualification in occupational health recognized by the Authority; or
- (b) has at least three years' practical experience in the treating of seafarers.

(2) Every approval under subregulation (1) —

- (a) shall be given in writing;
- (b) shall specify the date on which it takes effect and the date on which it expires, and the conditions, if any, on which it is given; and
- (c) may be varied or revoked by a subsequent notice.

(3) Within thirty days after the commencement of these regulations, the Authority shall publish a marine notice setting out a consolidated list of medical examiners approved, or deemed to be approved, for the purposes of the Act.

(4) The Authority shall from time to time review the list under subrule (3) but shall do so at least six months.

Serving approved medical practitioners.

19. Notwithstanding regulation 18 every medical practitioner who was, immediately before the commencement of these regulations, an approved medical practitioner for the purposes of the Act is to continue to be an approved medical practitioner for those purposes for the period expiring on the earlier of the following two dates-

- (a) the date appearing from the instrument of approval to be the date on which the approval ceases to be valid; or
- (b) the date on which the period of three years after the commencement of these regulations expires.

### PART III—COLOUR AND FORM VISION

#### Eyesight tests.

20. A person shall be required to pass the colour and form vision tests set out in the Second Schedule (in this Part called "eyesight tests") if that person's intended duties as a seafarer include watchkeeping duties in the deck department and that person—

- (a) is an applicant for certification and is required to produce an eyesight certificate; or
- (b) having failed to meet a relevant visual standard specified in paragraph 3 of that Schedule has been referred by a medical examiner for further examination in accordance with this Part.

#### Application for eyesight certificate.

21. A person requiring an eyesight certificate shall apply to the Authority on the prescribed form.

#### Conduct of eyesight tests.

22. Eyesight tests shall be conducted by an eyesight examiner at such times and places that the Authority may determine.

#### Issue and period of validity of eyesight certificate.

23.(1) The eyesight examiner shall issue an applicant who passes the eyesight tests with an eyesight certificate in the approved form.

(2) An eyesight certificate shall be valid for a period of twelve months from the date of issue.

#### Eyesight examiners.

24. The Authority may designate any person who, in the Authority's opinion, is qualified to be so designated, as an eyesight examiner for the purposes of this Part.

### PART IV—COLOUR AND FORM VISION SUPPLEMENTARY

#### Inspection and detention of Kenyan ships.

25. (1) An inspector duly authorized by the Director-General may inspect any Kenyan ship to which these Regulations apply and may detain the ship where, upon inspection, the inspector is satisfied that—

- (a) any seafarer whose employer is required by Regulation 4 to ensure that he is the holder of a medical fitness certificate is unable to produce such a certificate; and
- (b) the state of his health is such that the ship could not sail without serious risk to the safety and health of those on board.

(2) The inspector shall not in the exercise of these powers detain or delay the ship unreasonably.

#### Inspection and detention of foreign ships.

26. (1) An inspector duly authorized by the Director-General may inspect any foreign ship to which these Regulations apply when the ship is in a Kenyan port, and where he is satisfied that any seafarer is unable to produce a valid medical fitness certificate he may—

- (a) send a report to the government of the country in which the ship is registered, and a copy thereof to the Secretary General of the International Maritime Organization; and

- (b) subject to sub-regulation (2), where he is satisfied that conditions on board are hazardous to safety or health-
- (i) take such measures as are necessary to rectify those conditions; and
- (ii) detain the ship.

(2) Measures referred to in sub-regulation (1)(b) may be taken only when the ship has called at a Kenyan port in the normal course of business or for operational reasons.

(3) Where the inspector takes either of the measures specified in sub-regulation (1)(b) he shall forthwith notify the nearest maritime, consular or diplomatic representative of the flag state of the ship.

(4) Sections 435 and 436 of the Act shall have effect in relation to a ship detained under these Regulations.

Offences, penalties and defences.

27. A person who contravenes Regulations 6, 14, 15 or 16 commits an offence and shall be liable on conviction to a fine not exceeding two hundred thousand shillings or to imprisonment for a period not exceeding six months or both.

Director General may impose penalty upon admission of guilt.

28. (1) If a person –

(a) admits to the Director-General that he has failed to comply with the requirements of the Act or these regulations, or that he has failed to comply with any such requirement with which it is his duty to comply; and

(b) agrees to abide by the decision of the Director-General; and

(c) deposits with the Authority such sum as may be required of him, but not exceeding the maximum fine which may be imposed upon a conviction for failure to comply,

the Director-General may, after such enquiry as he deems necessary, determine the matter summarily and may without legal proceedings, order by way of penalty the whole or any part of the said deposit to be forfeited.

(2) Any person aggrieved by the decision of the Authority under sub-regulation (1) may appeal to the Minister.

(3) Nothing in these Regulations shall in any way affect liability to forfeiture of ships, shares therein or goods. Repeal of Regulations. L.N. of 2000.

29. Regulations 63–73 of the Merchant Shipping (Training, Certification, Watchkeeping and Safe Manning) Regulations, 2000 are revoked.

## FIRST SCHEDULE

(R.9)

### GUIDELINES FOR THE MEDICAL EXAMINATION OF SEAFARERS AND COASTAL PILOTS

#### PART A – GENERAL INTRODUCTION

1. Seafaring is a potentially hazardous occupation, which calls for a high standard of health and fitness for those entering or re-entering the industry. A satisfactory standard of continuing good health is necessary for serving seafarers throughout their career because of the high inherent risks of the occupation. It is better, therefore, at an initial examination, to exclude an applicant if there is any doubt about his or her continuing fitness. Flexibility should be exercised only during examinations for retention.

2. These medical and visual standards give guidance on health criteria to be met. Allowance should be made for the inevitable impairment of health that time and change bring, so that a reasonably fit seafarer can, if he or she wishes it, continue at sea until the approved age or retirement. Firm recommendations have been made to exclude those suffering from medical conditions considered to be incompatible with continued seafaring.

3. It is clearly impossible to encompass within the standards specific advice on every medical condition. However, as a general rule the medical examiner should be satisfied in each case that no disease or defect is present which could either be aggravated by working at sea or represent an unacceptable health risk to the individual seafarer, other crew members or the safety of the ship.

4. Apart from the purely medical aspects, the occupational background should be considered especially in cases where there is doubt. It is necessary to emphasize that a ship is not only a place of work requiring attention throughout the day and night, but also a temporary home in which the crew shall eat, sleep and find recreation. Most important of all is the need to adjust to each other, often for long periods, during a voyage. Although much is done to ameliorate living and working conditions, certain inherent characteristics remain. A crew is a closed community living in a ship that is seldom quiet or still. Individual eating habits and tastes cannot easily be met; facilities for physical exercise are limited; forced ventilation systems are used; the tedium of routine can easily become oppressive in the absence of normal diversion enjoyed by those ashore. An inability to fit in, or unwillingness to take responsibility, or to accept a reasonable measure of necessary discipline, could impair the safe and efficient working of the ship.

5. Very few merchant ships carry doctors. Acute illness or injury is dealt with by designated ship's officers whose training is limited to first aid or medical aid treatment. It should be borne in mind that a crew complement is carefully adjusted in terms of its size. Sickness can burden other crewmembers or even impair the efficient working of a ship. The examining doctor should therefore be satisfied that no condition is present which is likely to cause trouble during a voyage and no treatment is being followed which might cause worrying side effects. It would be an unsafe practice to allow seafaring with any known medical condition where the possibility of serious exacerbation requiring expert treatment could occur as a calculated risk.

6. The absence of doctors in most ships means that seafarers will not be able readily to consult a doctor or obtain special treatment until the next port call. Ship turnaround in ports is often very rapid allowing no time for necessary investigation subsequent to consultation with a doctor. The standard of medical practice abroad varies and facilities, which we in this country would regard as necessary, may not be available at smaller, remote ports. It is doubtful that it is even wise to permit seafaring if the loss of a necessary medicament could precipitate the rapid deterioration of a condition.

7. It should be remembered that some trades will require that seafarers spend lengthy periods in tropical climates. Furthermore, most seafarers will need to join and leave ships by air travel. They should, therefore, be free from any condition, which precludes air travel, eg. Pneumothorax and conditions, which predispose to barotrauma.

8. Where medication is acceptable for serving seafarers, arrangements should be made for a reserve stock of the prescribed drugs to be held in a safe place, with the agreement of the ship's master.

9. Article 4 of ILO Convention No. 73 states that "when prescribing the nature of the examination, due regard shall be had to the age of the person to be examined and the nature of the duties to be performed". In addition, Article 3 of the Convention states that a serving seafarer should have a medical certificate "attesting to his fitness for the work for which he is to be employed at sea". In reaching a conclusion, the attending doctor should therefore consider any medical conditions present, the age and experience of the seafarer, the specific work on which he or she will be employed and the trade in which he or she will be engaged (where known). If a seafarer is found to be unfit to continue in his or her present capacity because he or she does not meet the full unrestricted sea service category, a restricted service certificate may be issued stating the restrictions applicable.

10. The standards are framed to provide the maximum flexibility in their interpretation compatible with the paramount importance of maintaining the safety of vessels at sea, the safe performance of the serving seafarer's

duties while, at the same time, protecting his or her health. Conditions not specified in the standards, which interfere with job requirements, should be assessed in the light of the general principle outlined above.

11. It may be necessary on occasion and, with the seafarer's consent, for the doctor to consult the medical consultant. When it is necessary to consult with other doctors the usual ethical considerations will apply, but it should be clearly understood that the decision on fitness in accordance with the required medical standard, rests with the initial examining doctor, subject to the medical appeal process.

12. Full clinical notes should be kept of any detailed medical examination and be retained for at least six years.

#### HOW TO USE THESE GUIDELINES

13. (1) The guidelines should be read in full, at least once, at the time of issue.

When a seafarer presents for a full medical examination:

(a) Refer to the relevant job task analysis in Part C;

(b) Examine the person and note any abnormalities on either history or physical examination.

(c) If any abnormalities are detected, refer to the appropriate section in the guidelines.

(d) Complete the Certificate of Medical Fitness and make appropriate follow-up and referral arrangements for seafarers found to be temporarily or permanently unfit for duties.

(2) For clarification on any of the administrative procedures, please contact the Registrar of Seafarers, Kenya Maritime Authority Tel: 254 41 2318398/9 or email at [info@kma.go.ke](mailto:info@kma.go.ke)

(3) Copies of these Regulations and Guidelines can be purchased from the Government Printers, Haile Selassie Avenue, Nairobi.

#### PART B – SEAFARING AND MEDICAL FITNESS

The Merchant Shipping (Eyesight and Medical Examination for Seafarers) Regulations, 2012 are implemented by the Kenya Maritime Authority. Part II makes provision for the issue of Certificates of Medical Fitness for duty at sea for seafarers (masters, mates, engineers, integrated ratings and pilots) and gives effect to Article 3 of ILO convention 73.

These guidelines have been compiled for the use of Medical Examiners when they are assessing an individual's fitness to work at sea. The medical fitness standards have been developed in relation to the basic job task analyses in Table 1. An employer may have more stringent guidelines developed by his own Physician. Such guidelines will depend on the nature of the jobs and any specific equipment operated. Where such guidelines exist, they should also be followed.

While the final judgment on whether or not an applicant is fit to work in a particular job at sea rests with the Medical Examiners, these guidelines draw attention to those conditions that have the potential to present a high level of risk in some circumstances.

##### 1.1 Why is fitness important?

1.1.1 Employers have a duty of care to provide a safe work environment and protect the health, safety and welfare of employees. Employees similarly have a duty of care for their own safety and that of the people they work with and the community. Medical assessment of fitness is one aspect of meeting this duty of care.

1.1.2 The primary objectives of a medical assessment of fitness for duty at sea are to ensure that individuals are fit to perform the essential tasks of their job at sea effectively and to anticipate and, where possible, prevent the

avoidable occurrence of ill-health offshore which could place individuals, their colleagues and emergency personnel at risk.

1.1.3. Medical conditions may impinge on work in the following areas:

(a) the condition may limit, reduce or prevent an individual from performing the job effectively eg. loss of mobility and dexterity making engine room work and other maintenance tasks difficult;

(b) the condition may be made worse by the job eg an asthmatic exposed to allergens on a grain ship;

(c) the condition may make it unsafe for the person to do the job eg liability to sudden loss of consciousness whilst transferring from a smaller vessel to a larger vessel by climbing a rope ladder;

(d) the condition is likely to make it unsafe both for the individual and other crew eg a ship's crane operator liable to sudden loss of consciousness; catering crew with infectious STI or gastro-enteritis;

(e) the condition is likely to make it unsafe for other shipping eg a master or mate who is at risk of sudden loss of consciousness due to a cardiac arrhythmia; and

(f) the condition, if it worsens, is one which will require emergency evacuation for medical treatment eg gastric ulcer haemorrhage.

1.2 The work environment of seafarers

1.2.1. Medical Examiners should bear in mind the aspects of seafaring life, listed below, when assessing fitness for duty at sea.

1.2.2. As ships often operate far offshore or in inaccessible areas, it is often difficult to replace seafarers who become injured or ill. Many ships have only the minimal number of persons on board necessary to operate the ship; thus the incapacitation of even one seafarer may place a substantial additional burden on his or her shipmates.

1.2.3. Ships' officers generally receive basic first aid and other medical training, and ships are usually equipped with basic medical supplies.

Nevertheless, it is often quite difficult to transport sick or injured seafarers ashore where they can be treated by qualified physicians. In some geographical areas, the closest medical care ashore may be well below the standard of the seafarer's home country. It is therefore inadvisable and often unsafe to allow persons with certain medical conditions to become seafarers or to return to seagoing employment.

1.2.4. Seafarers live close to each other at sea, often for long periods. Contagious diseases therefore may be a serious threat, endangering not only the health of other seafarers but also the safety of the ship and, where carried, passengers.

It is particularly important that seafarers concerned with the preparation of food do not suffer from conditions which may be transmitted to others through their work.

(Consider development of continuous revalidation for food handlers on board a ship)

1.2.5. Seafarers should be medically fit to perform their normal duties correctly and to be able to respond to emergency situations (eg fighting fires, lowering lifeboats, assisting passengers).

1.2.6 Seafarers should be able to adjust to the often violent motions of the ship, to be able to live and work in sometimes cramped spaces, to be able to climb ladders, to lift heavy weights and to be able to withstand exposure to harsh weather conditions on deck or excessive heat in the machinery spaces. They should not suffer from conditions which are exacerbated by air travel.

1.2.7 Seafarers should be able to live and work closely with the same people for weeks and perhaps months on end and under occasionally stressful conditions.

They should be capable of dealing effectively with isolation from family and friends and, in some cases, from persons of their own cultural background.

1.2.8 Shipping operations and shipboard duties vary substantially. For a fuller understanding of physical demands of particular categories of work on board ship, the Medical Examiners should consult the employer.

## 2 PROCEDURES

### 2.1 Frequency of health assessments

2.1.1 All seafarers and coastal pilots should be assessed as to medical fitness for duties at sea:

- (a) less than 18 years of age: annually
- (b) 18 - 54 years of age: twice a year
- (c) 55 years of age and over: annually with resting ECG (stress ECG, if in safety critical job and clinically indicated)
- (d) if there is a change in the medical condition of the employee
- (e) after prolonged sickness absence of 3 months or more due to injury or illness.

2.2 What information should go to the employer, KMA and the seafarer?

#### Distribution

2.2.1 The applicant is to receive the original of the Certificate of Medical Fitness and may receive a copy of the Medical Examination Report.  
KMA will receive the duplicate of the Certificate of Medical Fitness and a copy of the Medical Examination Report.

The employer (if the bill is not paid by the applicant) should get the invoice for the examination and any separate tests (if not charged by the provider directly to the applicant or employer) and should be sent a photocopy of the Certificate of Medical Fitness.

#### Confidentiality

2.2.2 The Medical Examiners should keep all the medical examination forms, including results of investigations, in a confidential file, for a period of at least 30 years. This information is not to be released to any other person, agency or employer without a signed consent form or as required by law.

### 2.3 Health assessment outcomes

2.3.1 An applicant or seafarer is either fit for the intended duties at sea or unfit.

2.3.2 Those declared unfit may be temporarily or permanently unfit or may be fit for duties other than the intended duties.

2.3.3 If temporarily unfit, the Medical Examiners should specify a minimum period after which the assessment can be reviewed.

## 3 FORMS

(1) The form of the Certificate of Medical Fitness is prescribed in Third Schedule.

(2) Other forms that may be found useful are available from KMA, Tel: 254 41 2318398/9 or from the KMA web site at [www.kma.go.ke](http://www.kma.go.ke)

## PART C—MEDICAL STANDARDS

### 1.1 Overview

1.1.1 This section provides information and guidance on medical conditions which may affect individuals in the safe performance of their duties at sea.

1.1.2 The medical standards attempt to be specific and give examples of tasks/jobs which may be affected. The standards cannot cover every clinical situation and the Medical Examiner should exercise judgment in relation to the key objective i.e. – maintaining safety. For example, could the condition cause sudden loss of control of a ship, or sudden loss of consciousness when working at heights, or interfere with the performance of emergency duties?

1.1.3 Medical Examiners should make a comprehensive medical assessment of overall health in the knowledge that errors or omissions of a critical task in some jobs can lead to serious consequences in terms of human health and life, environmental impact or major property loss.

1.1.4 The critical time needed for treatment/access to appropriate land-based care is also a consideration when determining fitness.

1.1.5 Medical Examiners of Seafarers should consider what medical conditions could increase the probability of poor performance of critical tasks, and the probability and severity of the consequences when determining “Is this applicant medically fit for duty at sea?”

### 1. OBESITY

#### Body morphology

1.1 As obesity can hamper evacuation procedures, persons with a body mass index of more than 30 kg/m<sup>2</sup> should be able to demonstrate that they can climb ladders and fit through hatches. A physician or an occupational therapist may need to conduct a functional assessment on board ship.

1.2 A body mass index of more than 35 kg/m<sup>2</sup> presents a high risk. Applicants in this category may need to undertake weight reduction and be reassessed. It should be noted that sleep apnoea is more common in those with morbid obesity, as are diabetes and hypertension.

### 2. EYES/VISION

#### Visual acuity

2.1 Far vision is required for:

- (a) watchkeeping duties; and
- (b) control of ships, ships' small craft and cranes.

2.2 Near vision is required to read charts, weather maps, computer screens, monitors and instructions.

2.3 Night and depth vision are required for watchkeeping and control of the ship; (depth vision is especially important for operating cranes at close distances).

#### Colour vision

2.4 Good colour vision is required for bridge watchkeeping duties to distinguish red and green port and starboard channel markers, navigation beacons and ships' navigation lights. The ability to identify red, green and white navigation lights is an essential part of the job for masters, deck officers and seamen required to carry out lookout duties.

2.5 Impaired colour vision presents a risk to engineers who may be required to distinguish the colours of electrical wiring in order to make proper electrical connections. As such, it presents a risk depending on the degree of impairment that may affect a person's ability to perform his duties.

However, engineers and ratings may provide evidence from a relevant employer that, within the last two years, impaired colour vision, if present, has not been found to affect their work.

2.6 When testing colour vision, coloured lenses should not be worn by the seafarer.

*Note: The wearing of contact lenses or spectacles with chromagen lenses with red filters will increase the contrast of greens, yellows & browns, thus enabling a colour deficient seafarer to pass the Ishihara test. Unfortunately, these lenses are not sufficient to enable safe watchkeeping duties at sea.*

2.7 Information regarding colour vision impairment shall be provided on the medical certificate to assist the employer to make an appropriate decision regarding engagement or continued employment.

Note: Guidance on appropriate screening for colour vision is contained in Second Schedule of these guidelines.

2.8 Any eye disease or defect which affects vision needs to be corrected.

2.9 A history of glaucoma or uveitis needs ophthalmological assessment.

2.10 The vision standards listed in Table 1 are those that are internationally accepted as appropriate.

Other departments

2.11 Engine room (includes electrician): (aided vision if necessary)

**Table 1: Visual standards**

	Distant vision			Near vision (a)	Colour vision	Visual fields.
	Better eye not less than	Other eye (a) not less than	Both eyes not less than			
<b>Deck department</b>						
Seafarers required to undertake Watchkeeping duties:						
for new entrants						
with or without glasses or contact lenses.	6/6	6/9	6/6	N8 for charts, weather maps and N12 for other reading tasks with or without visual aids.	Normal (b)	Normal visual fields
Unaided vision					Normal (b)	
for existing staff	6/6	6/9	6/6	N8 for charts,	Normal (b)	Normal visual fields
with or					Normal (b)	

without glasses or contact lenses. Unaided vision.	6/36	6/36	6/36	weather maps and N12 for other reading tasks with or without visual aids.	Distinguish red (d)	Normal visual fields
2. Seafarers required to operate lifting plant eg ship's cranes, hoists;	6/9	6/12	6/9	N12 with or without visual aids	N/A	Sufficient visual fields
- with or without glasses or contact lenses - unaided vision	6/60	6/60	6/60	N12 with or without visual aids		Sufficient visual fields
3. Seafarers not required to undertake duties in 1 and 2: (aided vision if necessary)	6/18	6/60	6/18	N12 with or without visual aids		
<b>Other Department</b>						
1. Engine room (includes electrician);	6/12	6/60	6/12	N12 to read instruments, gauges on control panes	See Annex2	Sufficient visual fields
2. Catering department (aided vision if necessary)	6/12	6/60	6/12	N12 to read instructions and catering equipment control panels	Not required	Sufficient visual fields

**Note:**

(a) For seafarers who have proof of a satisfactory record of service, monocular vision is permitted excepting seafarers who have to operate lifting equipment such as cranes. See Second Schedule.

(b) In all cases, where visual aids (spectacles or contact lenses) are required for the efficient performance of duties, a spare pair shall be carried when seafaring. When different visual aids are used for distance and

(c) near vision a spare pair of each shall be carried on.

(d) It is sufficient if the applicant can distinguish red from other colours. See Second Schedule.

**3. HEARING, EAR, NOSE AND THROAT CONDITIONS**

**Hearing standard**

3.1 Hearing is required for communication by radio, by telephone or person to person and therefore the critical frequencies are in the speech range 500 to 2,000 Hz. Hearing loss for new entrants should be checked by means of an audiogram. If the new entrant uses a hearing aid, the person should be referred to an audiology centre unless evidence is produced of recent testing and hearing using the aid is apparently satisfactory. For existing seafarers, an audiogram is only required if hearing is not apparently satisfactory in conversation. Additionally, those seafarers wearing hearing aids who have unsatisfactory hearing in normal conversation should have their hearing aid checked by the supplier and may also require a practical test to assess functional hearing.

3.2 The speech shall be reasonably clear and free of stutter and hesitation sufficient to use radios and communicate on deck. Those using cranes shall be able to hear whistle signals where these are used.

Table 2: Minimum Standards of Hearing for Deck and Engine Departments

	Frequency Hz			
	500	1,000	2,000	3,000
dB loss in better ear without aids	40	40	40	

3.3 If hearing loss is 40dB or more at the frequencies specified in Table 2, ability to use a radio will need to be demonstrated. In this circumstance the applicant shall pass a conversation test.

The conduct of the conversation test

3.4 The following is a recommended procedure for conduct of a conversation test.

3.5 The test should be conducted in a quiet room with a stable background noise level. Hearing aids should be worn if normally used at work or if retesting following their fitting.

3.6 The examiner should face the subject and address him/her from a distance of 3 metres for normal speech.

3.7 The subject should be seated facing away from the examiner to preclude lip reading and the use of non-verbal clues.

3.8 A normal conversational vocal volume should be used.

3.9 The test material should be a mixture of alphabetical letters and numerals in any order, not to exceed a total of three in any one phrase, eg 6Y3, 2N4, S5G, 7BL.

3.10 Ten combinations should be used, each preceded by the carrier phrase "PLEASE SAY".

3.11 The subject should repeat what was thought to be heard. Guessing is encouraged if uncertain.

3.12 Six or more combinations should be repeated without error to be considered satisfactory.

3.13 Applicants who do not pass this test should be referred for further assessment of functional hearing and speech discrimination by an audiologist.

3.14 A functional hearing loss sufficient to interfere with communication or to impede safety (eg hearing audible warning devices) presents a high risk.

Other ear, nose and throat conditions

3.15 Acute infections require treatment. Although chronic middle ear disease presents a high risk, recurrent or chronic sinus infection presents less of a risk if the Medical Examiner is satisfied that the seafarer can manage the condition with appropriate medication at sea.

3.16 Vestibular malfunction can occur suddenly and with sufficient severity to make safe operations of vessels and cranes impossible. It may be accompanied by nystagmus which compounds the disability. Ménière's disease therefore presents a high risk.

3.17 Hay fever which responds to therapy (without side effects) presents a lower level of risk.

3.18 Frequently recurring tonsillitis presents a high risk until corrected.

#### 4. CARDIOVASCULAR SYSTEM

4.1 Cardiovascular conditions can cause sudden loss of consciousness putting others at risk or interfere with exercise tolerance as in climbing or working in confined spaces. Some cardiovascular conditions, if they become acute, can require immediate emergency medical care or medical evacuation, neither of which may be available, particularly in remote locations and/or in bad weather.

4.2 Careful assessment is required to ensure applicants are free of any cardiovascular condition which puts themselves or others at risk. Seafarers 55 years and over, or those with a history of cardiovascular disease, will require a resting ECG. A stress ECG may be performed if clinically indicated.

##### Ischaemic heart disease

4.3 Current angina presents a high risk. Any occurrence within the previous 3 months of confirmed myocardial infarction, coronary artery bypass grafting, coronary angioplasty or stent presents a high risk.

4.4 A lower risk is presented if the seafarer has had no symptoms of coronary artery disease for more than 3 months and there is good control of risk factors with no medication for angina control necessary. Review should be by a cardiologist using results of tests, e.g. angiogram, stress ECG.

Any doubt about medical fitness should be referred to an independent medical panel.

4.5 If the review finds that 3 months or more has elapsed since the last symptom incident, there are no signs of ischaemia on the exercise ECG (less than 2mm ST segment depression) and/or coronary angiography shows a lumen reduction of less than 70% in a major coronary branch and less than 50% in the left main coronary artery, and the ejection fraction is 50% or more, the seafarer could be declared fit for duty at sea but with annual or more frequent cardiological review highly recommended.

##### Arrhythmia/pacemaker

4.6 A history of recurrent or persistent arrhythmia which may result in syncope or incapacitating symptoms presents a high risk.

4.7 A seafarer who has had surgery (eg for Wolf- Parkinson White syndrome), or successful treatment by medication for at least 3 months, may be declared fit subject to annual cardiological review.

4.8 If the seafarer has had a pacemaker implanted and the Medical Examiner has taken into account the nature of the person's underlying disease and is satisfied that the pacemaker function has been appropriately tested, the seafarer may be declared fit subject to 6-monthly testing at a pacemaker clinic and cardiological review. Note that some ships have strong electromagnetic fields near communications equipment and aerials which may affect pacemaker functions.

##### Valvular heart disease

4.9 A history or evidence of valve disease, associated with symptoms or a history of, embolism, arrhythmia, cardiac enlargement (on chest X-ray), abnormal ECG, or high blood pressure presents a high risk.

4.10 Taking anticoagulants is acceptable if the dosage has been stable over time and monitoring of the blood is compatible with swings.

4.11 A seafarer may be considered fit for duty at sea if cardiological assessment shows mild or treated valvular disease of no haemodynamic significance, and it is not associated with any symptoms, and any monitoring of the condition can be done at frequencies compatible with swings.

4.12 Equivocal cases should be referred to an independent medical panel.

#### Cardiomyopathy

4.13 Established cardiomyopathy presents a high risk.

4.14 A heart or heart/lung transplant presents a high risk.

#### Aneurysms

4.15 A history of an aortic aneurysm, thoracic or abdominal, either before or after surgery presents a high risk.

#### Hypertension

4.16 Blood pressure (taken whilst seated) of 160/ 100 mm/hg or greater (treated or untreated) presents a high risk.

4.17 End organ damage (cardiac, cerebral, retinal or renal) which would impair safe operation of ships, cranes or small craft presents a high risk.

4.18 Any medical condition that requires the use of medication which can result in marked hypotension or impaired alertness which would cause distraction of attention whilst operating a ship, crane, or small craft presents a high risk.

4.19 A Certificate of Medical Fitness may be issued, subject to annual review-

(a) if the seafarer is treated with anti-hypertensive drug therapy and effective control of hypertension is achieved (ideal blood pressure less than or equal to 140/90 but no greater than 150/95) without appreciable side effects over a four week follow-up period;

(b) if there is no evidence of target organ damage, associated ischaemic or other forms of heart disease; and

(c) if other causative risk factors have been treated.

#### Congenital heart disease

4.20 Congenital heart disease (eg atrial septal defect, small ventricular septal defect) without symptoms and with no haemodynamic significance may be acceptable.

#### Peripheral circulation

4.21 Current or recent history of deep vein thrombosis with or without embolization presents a high risk. Varicose veins associated with ulcers or other complications presents a high risk.

4.22 Intermittent claudication presents a high risk.

#### Pulmonary circulation

4.23 A history of more than one pulmonary embolus presents a high risk. A single episode requires careful assessment of the underlying cause and risk of recurrence.

## 5. RESPIRATORY SYSTEM

5.1 Disorders of the respiratory system should be considered in the context of the risk of an acute exacerbation requiring emergency medical treatment (eg asthma, pneumothorax) or symptomatic airway disease sufficient to

reduce capacity for physical work or ability to wear a respirator. Ability to wear a respirator may be required in ships carrying cargoes of grain or cement, or oil tankers and ships carrying chemical cargoes.

#### Pneumothorax

5.2 A history of recurrent pneumothorax presents a high risk. A single episode without recurrence for a year, or after successful surgical correction is acceptable.

#### Asthma

5.3 Asthma, chronic obstructive or restrictive airways disease and emphysema affect the ability of an individual to use self-contained breathing apparatus, and to wear respirators. Persons with asthma or allergy may find working on grain ships affects their respiratory function.

5.4 Asthma requiring oral corticosteroids and/or frequent medication presents a high risk.

5.5 A history of childhood asthma subsequently resolved in adolescence is acceptable.

5.6 Well-controlled asthma on inhaled corticosteroids and intermittent need of bronchodilators may be acceptable. A report from the seafarer's treating physician may be required.

*Note: There are persons with mild asthma whose symptoms are precipitated by obvious causes such as a respiratory tract infection and there are persons who can suddenly develop life-threatening asthma requiring hospitalization. The latter have an asthma which is often more difficult to control and an obvious precipitating factor may not be identified for each asthma attack. This sub-group of asthmatics presents a high risk.*

#### Reduced lung function

5.7 Severe respiratory disorders can interfere with the safe operation of ships and cranes and confined space work through inadequate oxygen and/or increased carbon dioxide to the brain and heart, leading to poor judgement, agitation or drowsiness, reduced concentration and cardiac effects such as right heart failure or arrhythmia.

5.8 For jobs requiring the use of a respirator because of entry into confined spaces or for work on grain and cement ships, an FEV<sub>1</sub> below 65%, FVC below 70% and/or FEV<sub>1</sub>/FVC less than 70% are grounds for concern. A practical respirator assessment should be requested if wearing respirators is an essential task requirement.

5.9 In some cases of reduced lung function, individuals who get dyspnoea on exertion may find climbing ladders on ships too difficult. A person who is unable to keep pace with people of the same age and body build when walking on level ground or who has dyspnoea on one flight of stairs will have difficulty climbing stairs and ladders, climbing over plant and equipment, and walking reasonable distances on board ship. If in doubt, a practical test should be requested.

#### Tuberculosis

5.10 Untreated tuberculosis or other serious infection presents a high risk. Where the applicant has suffered tuberculosis or other serious lung infection, a letter from the treating physician should be obtained to certify that the seafarer is no longer infectious.

#### Chest X-rays

5.11 A chest X-ray is required at entry i.e. for pre sea medicals and may be required where there is a history of tuberculosis, or pneumothorax and/or when clinically indicated. There is no requirement for routine chest X-rays.

## 6. GASTROINTESTINAL SYSTEM

## Teeth and gums

6.1 Seafarers shall be dentally fit as, other than temporary pain relief, there is no dental treatment aboard ship. Dental abscesses or severe gingivitis presents a high risk. Seafarers with impacted wisdom teeth may need dental review.

## Peptic ulcer

6.2 Acute peptic ulceration presents a high risk. However treated peptic ulceration is acceptable provided that the Medical Examiner is satisfied that the risk of recurrence, especially haemorrhage, is minimal. A letter from the treating physician, together with endoscopy report, may be required.

## Liver and pancreas

6.3 A history of recurrent or chronic pancreatitis presents a high risk. Serious or progressive liver disease such as cirrhosis with complications of oesophageal varices presents a high risk.

## Gall bladder disease

6.4 A person with a history of cholelithiasis and/or cholangitis should be carefully evaluated for the risk of recurrence before being accepted as fit for duty at sea.

## Hernia

6.5 A hernia presents a high risk unless surgically corrected, with the exception that an applicant who has a small inguinal hernia where there is no risk of strangulation and where there is surgical opinion to state that there is no clinical indication for surgery may be determined as fit for lifting tasks.

6.6 A rectus divarification or large umbilical hernia should be surgically corrected before applicants can be accepted as fit for lifting tasks.

6.7 A diaphragmatic hernia without disabling reflux oesophagitis or other symptoms is acceptable.

## Colostomies

6.8 A person with an uncomplicated stoma is acceptable provided that the underlying cause is compatible with work offshore and there are adequate facilities for changing colostomy bags on board ship.

## Enteric diseases

6.9 Catering crew should be free of infectious enteric diseases, including hepatitis A. A blood sample may be required for detection of antimicrobial antibodies to hepatitis A, unless the applicant produces evidence of satisfactory immunisation. A blood test would only be required in a seafarer who is symptomatic and in whom there are clinical reasons to suspect hepatitis A.

6.10 Catering crew and those exposed to sewage (eg engineers maintaining sewage treatment plants) require hepatitis A immunization on employment

## Genital-urinary

6.11 Any person who has haematuria and/or protein on urinalysis should be carefully assessed to exclude any condition which may suddenly worsen and require urgent medical attention, eg renal calculi.

6.12 A history of renal calculi requires advice on fluid intake in hot weather. The presence of untreated renal calculi presents a high risk.

6.13 Urinary incontinence presents a high risk.

6.14 A large untreated hydrocele presents a high risk. A small symptomless hydrocele is acceptable.

6.15 Prostatism, due to prostatic hypertrophy sufficient to cause urinary symptoms such as frequency or poor stream, presents a high risk until treated due to the risk of acute urinary retention.

6.16 Menstrual dysfunction which can lead to incapacitating pain or haemorrhage, eg severe endometriosis or menorrhagia, presents a high risk.

6.17 Pregnancy affects fitness for duties at sea because of-

(a) the risk of hypertension, especially in hot weather;

(b) the risk of falls due to the change in the centre of gravity;

(c) Difficulty climbing because of increased abdominal girth and additional cardiovascular load; and

(d) nausea from 'morning sickness' which may be exacerbated by sea conditions.

6.18 Antenatal and obstetric care is not available at sea, and a miscarriage could be life-threatening. Pregnancy therefore presents a high risk except for a woman with a previous uncomplicated pregnancy who is less than 28 weeks into her pregnancy and who works on short coastal runs only. A report from the treating obstetrician should be obtained.

## 7. NEUROLOGICAL SYSTEM

7.1 Sudden loss of consciousness or loss of control of limbs or balance impairs the ability to control a ship, ship's small craft or a crane, and to work at heights or alone.

### Epilepsy

7.2 Epilepsy can be affected by fatigue. Shift work can therefore exacerbate the condition if a person fails to get adequate sleep. Confirmed or current epilepsy, with a fit within the previous 2 years, presents a high risk. For seafarers with well controlled epilepsy, evidence of treatment and control of epilepsy (eg letter from treating specialist) shall be provided for the condition to be acceptable.

*Note: Although only about one-third of patients with a first unprovoked seizure will have further seizures within 5 years, about 75% of those with two or three unprovoked seizures have further seizures within 4 years.*

7.3 A past history of convulsions after the age of 5 years, with a seizure-free period of at least two years, and not requiring medication, should be carefully assessed.

A past, single seizure or cluster of seizures due to exceptional and non-repeatable circumstances (eg head injury with complete recovery) may be acceptable.

### Migraine

7.4 Acute incapacitating attacks of migraine which may be accompanied by neurological signs such as hemiparesis and visual defects presents a high risk.

7.5 An established history of migraine which does not interfere with capacity to work safely is acceptable.

## Stroke

7.6 A history of cerebrovascular accident generally presents a high risk. However, depending on the degree of recovery from the stroke, and provided that problem solving skills and judgement have not been affected, a person may be considered fit for duty at sea after neuropsychometric evaluation and a report from the treating neurologist/rehabilitation physician indicating that a recurrence is unlikely and that there is no residual disability.

## Transient ischaemic attacks (TIAs)

7.7 If a cardiac cause for such episodes is found and treated, then any restriction should be based on the prognosis of that condition, and the likelihood of recurrences.

7.8 Where the aetiology of the attacks has been identified, the underlying cause removed, and a six-month period free of attacks has elapsed, the condition may be acceptable.

7.9 In such cases as outlined above, a review by a cardiologist/neurologist will be required.

## Neuromuscular Disorders including Multiple Sclerosis, Parkinsonism

7.10 Parkinsonism, multiple sclerosis, or other neuromuscular disorders would preclude being in control of a ship, operating cranes or other equipment and, where the disability is any more than minor muscular weakness, can affect climbing ability on ship's rope ladders and steel rung ladders. Because of the progressive nature of most forms of neuromuscular disorder, these conditions generally present a high risk.

7.11 Drug induced Parkinsonism may disappear on cessation of the treatment. Should this occur, and the underlying cause for which the drugs were administered not be a cause for exclusion in its own right, then the applicant may be considered fit for duty at sea.

## Psychiatric conditions

7.12 Affective disorders affect judgement, attention and motor activity and the Medical Inspector should consider this in relation to any jobs with responsibility for the safe operation of ships, cranes and equipment, including emergency procedures. The Medical Examiner should also be aware that ship-board life involves periods of months away from home, family and other support mechanisms, including psychiatric support.

7.13 An acute episode of mental illness (eg schizophrenia, manic depressive or other psychosis) or a chronic mental illness manifested by symptoms which indicate there is the likelihood of relapse such that the sufferer may cause harm to herself or himself or others, the ship or its cargo, presents a high risk .

7.14 A mental disorder requiring psychotropic drug therapy presents a high risk if the side-effects of such medication affect alertness, co-ordination, cause drowsiness or postural hypotension.

7.15 A present or past mental disorder affecting judgment or psychomotor ability presents a high risk.

7.16 Where the mental illness has been controlled and a report obtained from the treating psychiatrist to the effect that a recurrence is unlikely, the person may be considered fit, subject to regular review.

7.17 In all cases, where there is doubt about fitness, a psychiatric consultation should be sought.

## Prescribed medication, drugs and alcohol

7.18 Some prescription, over-the-counter, or illegal substances have the capability of altering vision, perception, judgement, attention span, motor function and other characteristics important in the safe operation of ships, cranes, lathes, and powered tools.

Prescribed and over-the-counter drugs

7.19 The main issues with these drugs in relation to fitness for duty at sea are:

- (a) can side-effects place the safety of the person or the safety of others at risk?
- (b) does the medication require monitoring?
- (c) is the underlying disease, for which the medication has been prescribed, compatible with working at sea?
- (d) what is the likely effect of several missed doses if seasickness precludes taking or absorbing medication?

7.20 If the medication is for short term administration, the person may be considered as temporarily unfit and re-examined.

7.21 Long term administration of some medications may lead to tolerance of sedative side effects eg antihistamines. Once this has stabilized, the taking of medications per se is not a bar to operating plant and equipment. The Medical Examiner should be satisfied that the person does not suffer sedative side effects and is aware of the potentiation effects of alcohol.

7.22 The short or long term use of prescribed psychoactive drugs requires, at a minimum, strong warnings about the potentiation by alcohol. It is desirable that alternative therapy, with nonpsychoactive drugs if possible, is undertaken. Each case will need to be assessed individually and discussed with the person's treating practitioner. More frequent reassessment will be required.

7.23 Persons using anti-histamines should use those with the least sedative side-effects eg astemizole (Hismanal).

7.24 Cytotoxic agents, insulin, immunosuppressants, oral corticosteroids present a high risk.

7.25 Major tranquillisers, narcotics and hypnotics present a high risk. A previous history of such treatment will require further consideration.

7.26 Prescribed medication shall be listed on the health assessment report form. The applicant shall be warned that he or she shall have adequate medication to last a swing.

TABLE 3: CLASSES OF DRUGS WITH POTENTIAL TO AFFECT AN INDIVIDUAL'S SKILLS TO OPERATE SHIPS, BOATS, PLANT AND EQUIPMENT, INCLUDING CRANES.

Class of drug sedative, hypnotic or anti-anxiety agents	barbiturates	barbiturates benzodiazepines	
analgesics		codeine propoxyphene	narcotics
ophthalmic agents (topical)		most agents for treating glaucoma	
anti-allergy agents		antihistamines	
bronchodilators and asthma medications		salbutamol, dipropionate, sodium cromaglycate	beclomethason

		budesonide	
		minocycline	
antibiotics		antipsychotic or antidepressant	tricyclic
antipsychotic or antidepressant agents		anti-depressants	
		haloperidol	
		phenothiazines	
		sodium valproate	
		phenytoin	
anticonvulsants		anticoagulants	aspirin
		Coumadin	
anticoagulants	aspirin	clonidine	
		methyldopa	
		reserpine	
antihypertensives		antihistamines	
anti-motion sickness agents			
antihistamines		alcohol	
unprescribed substances		amphetamines	
		cocaine	
		marijuana	

CLASS OF DRUG: EXAMPLES

Illegal drugs

Illegal drugs such as opiates, cannabis and amphetamines may reduce a person’s ability to safely operate ships, cranes and machinery. Drug screening is not required for a Certificate of Medical Fitness, although individual employers may initiate drug and alcohol screening as part of company policy eg in the offshore oil industry. Such policies are beyond the scope of these guidelines and further information, if required, should be sought from the NACADA.

Any use of illegal drugs presents a high risk.

Alcohol

1. Alcohol is implicated as a significant factor in work-related accidents. It is a statutory requirement that all persons, whilst on duty on a commercial vessel, have essentially a zero blood alcohol level.
2. Chronic high alcohol intake (60g per day) impairs cognitive function such as the processing and handling of sensory information and reduces the speed and accuracy of response to psychomotor tasks. This may not become apparent until the person is in an emergency situation.
3. A person with a clear history and clinical evidence of chronic alcohol abuse, where there is evidence of end organ damage such as organic brain damage or hepatomegaly, presents a high risk.
4. A seafarer who has been diagnosed as suffering from alcoholism should not be considered as fit for duties at sea until a rehabilitation program has been completed and the Medical Examiner is satisfied that the seafarer is fit to return to service on a ship (see note at end).

Musculoskeletal

1. Normal mobility, agility and strength in the spine and all limbs are important for tasks involving climbing, lifting and confined space work.
2. Ships have steep stairs, rope ladders and vertical steel rung ladders which shall be climbed and hatches which shall be got through.
3. Rough weather will increase the need for reasonable hip, knee and shoulder strength, flexibility and agility in relation to climbing.
4. The majority of lifting tasks are 25 kg or below and much use is made of lifting equipment (cranes and hoists, forklifts) both on ships and onshore. Lifting is harder to control during emergency procedures, when moving chains on deck, or when lifting and carrying in confined spaces.
5. The following conditions present a high risk:
  - (a) amputation or congenital loss of an upper limb or lower limb if this affects climbing;
  - (b) amputation or congenital loss of a lower limb if this is required to operate a foot control;
  - (c) peripheral neuropathy resulting in loss of sensation or proprioception in the extremities as this makes climbing hazardous;
  - (d) uncorrected knee instability eg locking, giving way;
  - (e) uncorrected shoulder dislocation/subluxation; and
  - (f) acute inflammation and pain in any joint which interferes with concentration or impairs the range of motion such that disembarking from a boat cannot be performed safely - the person may need to be re-examined at a later date.
6. The following conditions also present a high risk because they affect the ability to undertake manual handling, climb and occasionally maintain awkward postures in engine rooms and other confined spaces-
  - (a) reduced range of movement or pain when rotating the neck - unable to look behind and/or up when operating plant, including cranes and hoists
  - (b) low back pain which affects activities of daily living and/or results in an inability to shovel, climb, maintain sustained and/or repetitive awkward postures
  - (c) painful spinal or shoulder movements with or without limitation in range of strength.
7. The Medical Examiner should carefully assess a person with a lower limb prosthesis (eg for a below-knee amputation). An agility test may be required to prove that rope ladders, steel rung ladders and ships' stairs can be climbed, or alternatively evidence of satisfactory work performance at sea.
8. A person with a significant loss of range of motion or some loss of muscle power may also require an agility test.
9. Where there is any doubt about mobility, the Medical Examiner should ask for a practical test by contacting the referring employer.

## 8. DIABETES AND OTHER ENDOCRINE DISORDERS

Diabetes mellitus

8.1 The Medical Examiner should bear in mind the risk to safety if the applicant had a hypoglycaemic attack or developed a ketacidotic coma. In particular, attention is drawn to watch keeping duties as there may be periods when the Master or Mate is alone on the bridge and responsible for the safety of the ship eg whilst the Rating or Mate is doing a round of the ship.

*Note: Insulin dependent diabetes mellitus is more difficult to manage for a person on rotating shift work. There is also the problem of administering optimal emergency care at sea to a person in a coma who may require urgent intravenous therapy.*

8.2 The following conditions present a high risk:

(a) insulin dependent diabetes mellitus (IDDM) ; and

(b) poorly controlled non-insulin dependent diabetes with unsatisfactory glucometer readings and/or recurrent glycosuria.

*Note: The International Labour Office (ILO) and the World Health Organization (WHO) have produced Guidelines on conducting pre-sea and periodic medical fitness examinations of seafarers which preclude persons with IDDM serving at sea.*

8.3 Seafarers or applicants with a demonstrated responsible attitude to self-management of a diabetic condition and a report from their treating practitioner confirming adequate control of diabetes, lack of complications (ulcers, retinopathy, renal disease) and ability to work shift work without the risk of a hypoglycaemic attack, may be accepted.

8.4 If the person's diabetes is currently uncontrolled e.g due to change in therapy, it may be necessary to consider him as temporarily unfit and subject to re-examination in, say, three months.

Thyroid disease

8.5 Fitness for duties at sea will depend on the degree of control of thyroid disease, the absence of complications, especially cardiac, and the requirements for monitoring medication.

Adrenal disease

8.6 Disorders affecting adrenocortical hormone production such as Cushing's syndrome or Addison's disease present a high risk unless the underlying cause has been treated and the individual's adrenal function is sufficient.

## 9. SKIN DISORDERS

Infections

9.1 Contagious skin disease presents a high risk unless the disease has been treated and is no longer contagious.

Dermatoses

9.2 Mild endogenous eczema is acceptable but the Medical Examiner should be satisfied that the condition will not be aggravated by exposure to oils, detergents or other substances at work to a degree sufficient to render the applicant unfit for duty at sea.

9.3 Psoriasis, not associated with polyarthritis, is acceptable.

Haemopoietic disease

9.4 Routine blood tests are not required for assessing medical fitness unless clinically indicated, for example there are clinical signs of anaemia, lymphadenopathy, haemarthroses.

9.5 Coagulation disorders such as Factor VIII deficiency present a high risk because it will not usually be possible to treat an acute traumatic haemorrhage at sea with replacement of clotting factors.

9.6 Leukaemias and myeloproliferative diseases present a high risk.

9.7 Chronic lymphatic leukaemia if mild and asymptomatic may be acceptable.

## 10. INFECTIOUS DISEASES

10.1 Active infectious disease presents a high risk. Tuberculosis and contagious skin diseases are mentioned in the relevant sections.

10.2 Catering staff shall be free of enteric diseases, including hepatitis A.

10.3 HIV testing is not routinely required and should not be done unless there is a clinical indication. Whilst a positive HIV test is not a bar to employment, evidence of AIDS(Acquired Immunodeficiency Syndrome) presents a high risk. Of particular concern are neurological or neuropsychiatric and other complications which would compromise safety.

## 11. NEOPLASMS

11.1 Neoplasms of any type have the potential to disqualify an applicant or seafarer from duties at sea because of:

- (a) acute symptoms, eg hemianopia with pituitary tumours
- (b) complications eg pulmonary emboli
- (c) side-effects of treatment/medication, eg immunosuppression, anaemia, nausea.

11.2 Frank malignant disease presents a high risk.

12. Seafarers should be carefully reassessed after a diagnosis of cancer is confirmed and treatment instituted. The natural history and prognosis of the neoplasm should be taken into account. The progress and likelihood of complications of the disease or its treatment shall also be carefully evaluated.

## PART D—JOB TASK ANALYSES

Table 1 Master/Mate/Pilot

Table 2 Chief Engineer/Engineer/Electrician/Fitter

Table 3 Rating

Table 4 Catering Attendant and Steward

Table 1: Master/Mate/Pilot

1.vision rread instructions rread instruction manuals rread charts rread weather maps ddistinguish red/white/green navigation lights ddistinguish coloured light alarms oobserve aspect of other vessels rread computer screens iidentify navigation lights from beacons, buoys, lighthouse towers, other vessels kkeep watch for obstacles to navigation	CClimb steel rungs/ladders LLift hatch covers ffine motor skills to plot courses on charts, use keyboards on computer, rotate knobs, pull levers, push buttons aassist with lifting, manual labour eg lifting cylinders, 25 litre drums etc ccleaning/maintenance of the bridge(wheelhouse) pplace tags for safety checks cclean own cabin, shower, ie bending, reaching, scrubbing, and wiping (varies from ship to ship) 5. Additional for supply vessels hhandle cargo on the back deck of a supply vessel* hhandle wires, chains and ropes during anchor handling* hhook and unhook tows*
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<p>standing watch-night vision and depth perception</p> <p>2. Hearing/speech give/take instructions use 2-way radios and telephones distinguish different auditory alarms</p> <p>3. Consciousness alert to changes in machinery vibration eg engines alert to movements of other vessels alert to position of ship's ancillary craft interpret complex information from digital, analogue and graphic computerized monitoring equipment eg radar, GPS, computerized charts, compass respond to alarms alert to changes in weather high level decision-making in emergencies responsible for safety of ship's crew and safety of vessel alert to movements and position of crew</p> <p>4. Physical climb narrow, steep stairs climb 3 metre rope ladders at sea climb mast*</p>	<p>6. Other work shiftwork (4 or 12 hour watches) occasional long hours of work (18+) write reports (log) plan ship repairs* plan work schedules* away at sea for up to 6 months at a time* fit through escape hatches* work at high temperature, humidity and/or in extreme cold &amp; in storms/cyclones etc wear PPE-boots, overalls, hard hat, hearing protection and occasionally respirators order deck stores* use computers to write reports, keep chart catalogues* check radio equipment, liferafts* inspect oil, other cargo, ballast and water tanks and other confined spaces* work with heavy seas on deck work in conditions involving heavy rolling and pitching of vessel</p>
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\*These duties are not normally required of a pilot

Table 2: Chief Engineer/Engineer/Electrician/Fitter

<p>1. Vision Read instruction Manuals Distinguish coloured light alarms Read computer screens Read instructions, procedures Read gauges, dials Read labels on chemical</p> <p>2. Hearing/speech communicate by 2-way radio hear alarms and pager give/take instructions</p> <p>3. Consciousness alert to changes in machinery vibration eg engines alert to alarms (visual and auditory) respond to emergencies alert to position of ship's ancillary craft interpret complex information from monitors and gauges on instrument control panels in engine room</p> <p>4. Physical lifting and carrying condenser coils, pipes, motors, pumps up to 35 kg – but can be carried by two persons lifting and carrying 25 kg containers of chemicals use lathes, circular saws, hand tools, grinders &amp; pedestal drill welding/oxy-cutting fine manual dexterity in placing nuts, bolts, screws turning valves, levers pushing button controls climbing steep stairways, steel rung ladders, rungs on masts and onto ship's crane standing and walking most of the shift</p>	<p>working in awkward postures working in confined spaces working overhead clean own cabin, shower, ie bending, reaching, scrubbing &amp; wiping (varies from ship to ship) Additional for supply vessels handle cargo on the back deck of a supply vessel handle wires, chains and ropes during anchor handling hook and unhook tows</p> <p>5. Other work shift work (4 hour watches) write reports (log) plan ship repairs plan work schedules away at sea for up to 6 months at a time fit through escape hatches work at high temperature, humidity and/or in extreme cold &amp; in storms/cyclones etc wear PPE-boots, overalls, hard hat, hearing protection and occasionally respirators order engine room stores exposure to heat and fumes use computers to write reports, keep chart catalogues safe handling of chemicals check radio equipment, liferafts inspect water tanks work in conditions involving heavy rolling and pitching of vessel</p>
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Table 3: Rating

<p>Vision read instructions, procedures read gauges, dials</p>	<p>lifting weights up to 50 kg (two person lift) lifting cables, boxes, batteries, winches, hoists up to 40 kg use powered tools, saws, drills, rattleguns, chisels, sledgehammers mooring/unmooring vessels</p>
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<p>rread labels on chemicals  ddistance vision when operating small craft, crane, hoist  ssee navigation lights of other vessels, beacons, lighthouses etc  ddistinguish red/green/white coloured lights  ddistinguish coloured light alarms  sstand watch – night vision and depth perception  nnear vision for identifying shackles, markings on  sslings, bolts, nuts, screws etc</p> <p>H2 Hearing/speech  ggive/take instructions  hhear whistles for crane/hoist movements  uuse 2-way radio  llisten to machinery eg crane, LARC  hhear warning signals/alarms  uuse hands free headsets to communicate by radio in rough seas</p> <p>C3 Consciousness  aalert to movements of other persons, operating machinery, ship’s  small craft and helicopter  mmonitor equipment including radar, digital and analogue read  outs on gauges, GPS, compass, and  ggenerally assist officer on watch</p> <p>P4 Physical  mmanual dexterity to tie knots, splice ropes, splice wires, repair/use  canvas tarpaulins, place slings,  uuse pliers, spanners &amp; other hand tools  ppulling knobs, levers, pushing buttons to operate crane,  machinery, incinerator  rreaching and working overhead  sshovel ash from incinerator and lift bags of rubbish into  incinerator  llift stores  llifting from deck to overhead to load ship’s small  ccraft climbing ship’s rope ladders (3m) in rough seas, and  ssteel rung ladders on towers (up to 30m) whilst carrying ropes,  light tool bag</p>	<p>uuse air/electric chain hoists – pulling on ropes, chain, and pressing  buttons on handheld control box  ccarpentry/shipwright duties  sstanding for long periods (3 hours)  cclean own cabin, shower, ie bending, reaching, scrubbing, and wiping  additional for supply vessels  hhandle cargo on the back deck of vessel  hhandle wires, chains and ropes during anchor handling  hhook and unhook tows</p> <p>5. Other  wwork at heights  wwork in high temperature, humidity and/or in extreme cold, and in  storms, cyclones etc  llong work hours (up to 10-12 hours per day  aaway at sea for up to 6 months at a time  ffit through escape hatches  sshiftwork when on 4-hourly watch  sship’s fire and safety rounds – inspect all areas regularly  pplan work schedules  wwear personal protective equipment eg safety boots, earplugs or  earmuffs, hard hat, gloves, overalls, safety spectacles and occasionally  respirators  eeexposure to paints, thinners, oils, antifoul,  ddegreasers  uuse fire-fighting hoses, extinguishers  wwork in oil, other cargo, ballast and water tanks and other confined  spaces  wwork in conditions involving heavy rolling and pitching of vessel</p>
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Table 4: Chief Cook/Cook/Steward

<p>Vision  nnear vision for reading labels, menus, recipes, computer, instructions,  orders for stores, invoices, telexes, faxes  nnear vision for cutting, slicing, cooking</p> <p>2 Hearing/speech    ggive/take instructions  uuse telephones to contact providers, clients  ccommunicate with ship’s crew  hhear alarms</p> <p>3 Consciousness    aalert to movements of persons in galley because of hot food in  saucepans and trays  aalert to position of deep fryers, cooking pots, pans  eespecially in rough weather alert to hazards on ship eg fire etc</p> <p>P4 Physical    llifting, carrying, unpacking stores from gangway or deck to store  spaces, and stores to galley  ununpack and place stores on shelves in fridges and freezers from floor</p>	<p>ccleaning pots and utensils  wwiping benches, stove tops  ccleaning galley and laundries – mopping, scrubbing  sscrub mats out of fridge  ppolish passageways  sstanding for long periods (3 hours)  ffine manual dexterity to use kitchen utensils, knives and to turn  knobs, flick switches on ovens, hot plates  and appliances  cclean own cabin, shower, i.e. bending, reaching, bending, scrubbing  and wiping  ccleaning grease traps and tanks  ccleaning ovens and deep freezers  nnarrow stairways</p> <p>55. Other  oorder all food provisions  pplan menus  ccooking all meals for all persons on board  wwork split shifts with early starts plus additional hours for  administration and other paperwork  aaway at sea for up to 6 months at a time although calling in at  various ports during the voyage  ffit through escape hatches</p>
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height to shoulder height unpack cartons each trip eg soft drinks, cans, foodstuffs, and cleaning gear	use a computer wear safety footwear work in conditions involving heavy rolling and pitching of vessel
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Table 5: Catering Attendant and Steward

<p>1. Vision near vision for:     reading labels     reading instructions     cleaning floors, surfaces etc distinguish coloured light alarms/indicator lights on galley range</p> <p>2. Hearing/speech give/take instructions</p> <p>hear alarms</p> <p>communicate with ship's crew and passengers</p> <p>3. Consciousness     alert to movements of other persons in galley, pantry because of hot saucepans, food trays etc</p> <p>4. Physical     general interior cleaning of ship eg portholes     daily vacuum of mess room     polishing mess room twice weekly and other floors weekly (3 levels in all)     lifting, carrying, unpacking stores     carrying hot trays and stocking pantry     lifting floor polishing machines (24kg) up stairs (2 persons)     mopping, sweeping and/or vacuuming     wiping and scrubbing benches, deckheads, bulkheads</p>	<p>working overhead, above shoulder height to clean/ wipe surfaces washing dishes/pans in sink at waist height load/empty dishwasher – bending required washing/drying crew's bed linen and towels on crew change day occasional cleaning of cabins when passengers are on board keeping washroom toilets clean on all levels clean own cabin, shower, ie bending, reaching, scrubbing, and wiping vacuum all carpet areas</p> <p>5. Other assist Cook in food preparation as required work split shifts with early morning starts away at sea for up to 6 months at a time although calling in to various ports during the voyage fit through escape hatches wear safety footwear work in conditions involving heavy rolling and pitching of vessel take an active role in all vessel safety and emergency drills take an active role in crisis management in emergencies</p>
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SECOND SCHEDULE

(R.20)

GUIDANCE IN SCREENING FOR COLOUR VISION

1. Need for good colour vision

1.1 Deck officers need to be able to distinguish red, green and white navigation lights in order to be able to make correct decisions regarding the aspect of an approaching vessel, and regarding what action needs to be taken, if any, to avoid a collision. Confusion between such lights would lead to incorrect decisions being taken, with the potential for collision and resultant deaths, injuries and loss.

1.2 Ratings on lookout duty similarly need to be able to distinguish red, green and white navigation lights in order to provide correct advice to the officer of the watch.

1.3 Engineering officers and ratings on engine room duty need to be able to distinguish both warning lights (normally coloured red) from correct status lights (normally coloured white or green) and also need to be able to distinguish the colours of electrical wires when making connections.

2 Tests

2.1 The Ishihara pseudoisochromatic tests should be used to screen seafarers in the deck and engine departments for colour vision impairment. If the tests indicate impaired colour vision, further testing should be carried out.

2.2 In the case of persons in the deck department who are required to keep watches, the further test should use the Holmes-Wright Type B lantern test. This test is conducted by some ophthalmologists and the Schools of Optometry in various Universities and various hospitals.

2.3 In the case of persons in the engine department whose duties may include making electrical connections, the further test should be the UK Electricity Supply Industry Colour Vision Trade Test.

*Note: For information on where to refer seafarers with colour vision deficiencies, contact the Registrar of seafarers, Kenya Maritime Authority.*

2.4 A person undergoing any of these tests shall not wear chromagen (colour tinted) lenses or spectacles.

### 3 Ishihara Test

3.1 The Ishihara pseudoisochromatic tests (using either the full set of 38 plates or the abridged version of 24 plates) should be used.

3.2 A satisfactory response on all plates on the first showing, or a single wrong response on first showing which is corrected on a second or third showing, should be considered to indicate 'Normal' colour vision. If the tests indicate impaired colour vision, further testing should be carried out.

### 4. Holmes Wright Type B Lantern Test

4.1 The lantern test is a practical test of a person's ability, in conditions simulated to represent a watchkeeping situation, to recognise and discriminate between navigation lights used at sea.

4.2 A lantern test is conducted by means of a Holmes/Wright type B lantern, which projects red, green and white lights viewed indirectly through a polished mirror at a virtual distance of 6 metres from the eyes. The large aperture of the lantern projects one coloured light at a time and the small apertures project 2 coloured lights side by side at a time. Each full circuit of the lantern contains 9 settings of single large apertures or 9 settings of small apertures. The small apertures of the lantern show any combination of 2 of the 3 colours.

4.3 A person who uses an aid to vision for a letter test is required to use the same aid to vision in the lantern test.

4.4 A person who does not use an aid to vision for a letter test is not permitted to use an aid to vision in the lantern test.

4.5 A person undergoing the lantern test shall not wear a tinted aid to vision for the purpose of passing the test.

4.6 The lantern test shall be conducted in a room from which daylight is excluded.

4.7 A person who requires to adapt to conditions of darkness is to be allowed up to 10 minutes complete or partial darkness in preparation for the lantern test.

4.8 A person is considered to have passed the lantern test if he or she correctly names the colours of one full circuit of large apertures, 4 full circuits of small apertures shown in sequence, and 9 sets of small apertures shown at random.

4.9 The procedures specified in 4.10 to 4.16 should be followed if a person undertaking the lantern test fails to achieve a pass in accordance with 4.8.

4.10 At the first mistake in naming a colour correctly, the examiner shall inform the person being tested of the mistake and continue the test, adding a further circuit.

4.11 If no further mistake is made in the test and the further circuit, the person being tested will be considered to have passed.

4.12 If a second mistake is made, the procedure under 4.10 and 4.11 of this Annex is to be repeated.

4.13 If a third mistake is made, the test is to be repeated from the start after the person being tested has been given the opportunity to rest his or her eyes or regain composure.

4.14 In repeating the test under 4.13, the examiner is to record the result but not inform the person being tested of mistakes being made.

4.15 A person who in the repeated test under 4.13, correctly names all colours in accordance with 4.8 will be considered to have passed.

4.16 A mistake of red for green or green for red in the repeated test under 4.13 means failure of the lantern test.

4.17 A person who has failed the lantern test may request a further test.

## 5 Colour Vision Trade Test

5.1 When mistakes are made on the Ishihara pseudoisochromatic plates, this test should be used.

5.2 The applicant should sit opposite the Medical Examiner in good natural light. One at a time, each of the coloured wires should be placed in front of the applicant on a flat surface. The applicant should be asked to identify the colour of the wire. Slowness in answering indicates difficulties. Care shall be taken that the applicant cannot compare the colour of one wire with others.

5.3 Applicants who wrongly identify a colour should be given an individual wire. The examiner should then present all nine wires to the applicant one at a time. The candidate should be asked to indicate when there is a match. All nine colours should be tested in this way.

5.4 Failure to find a correct match shows unreliable colour vision.

5.5 Matching colours correctly but wrongly identifying them singly, means mistakes will be made in identifying certain colours without comparing them with others.

5.6 The apparatus required is:

(a) One centimetre of coloured plastic covered wire is exposed on a white card housed in a photographic colour transparency slide, size 5 x 5 cm, with a viewing window of 3.5 x 2.5 cm. Two complete sets of colours are made up (18 slides), these being housed in a slide magazine.

(b) For matching purposes 9 individual wires are to be available, one in each colour, each 2.5 cm long.

(c) Nine colours are to be used: white, black, yellow, red, grey, blue, orange, green and brown.

(d) All wires used should have the same diameter, which should be in the range 0.8 to 1.1 mm. Wire of 0.89 mm diameter is preferred, if available.

## 6. Letter from Employer regarding Colour Vision

Engineers or ratings who present a letter or other evidence from a relevant employer that, within the last two years, impaired colour vision, if present, has not been found to affect their work, need not be screened using the Ishihara plates. In these cases, the Certificate of Medical Fitness should be marked "Yes" against "Colour Blind".

## 7 New entrants

8. All new deck or engine entrants to the industry shall be screened using the Ishihara plates to determine if impaired colour vision is present, and if so, its extent. New entrants to the catering department should also be screened in case they wish to later change their specialization. Impaired colour vision is a bar to entrants whose career path includes keeping a navigational watch. Other entrants are not debarred from sea service if impairment is present but, if it is, the Certificate of Medical Fitness should be marked “Yes” against “Colour Blind”.

Table: Visual standards

	Distant vision				Near vision <sup>b</sup>	Colour vision <sup>c</sup>	Visual fields <sup>d</sup>
	Basic visual acuity standard (unaided)	Better eye <sup>b</sup>	Other eye	Higher visual acuity standard (aided if necessary) <sup>a</sup>			
	Not less than	Not less than	Not less than	Not less than			
1 Seafarers required to undertake watchkeeping duties	6/60	6/60	6/6	6/12	N8 for charts, weather maps and N12 for other reading tasks with or without visual aids	Isihara or Lantern	No pathological field defect
2 Others (aided vision if necessary)	Sufficient to undertake duties efficiently						
Other departments <sup>e</sup>							
1 Engine room (includes electrician) and radio	6/60	6/60	6/18	6/18	N8 to read instruments and gauge on controls	Isihara	Sufficient to undertake duties efficiently
2 Others (aided vision if necessary)	Sufficient to undertake duties efficiently						

### Notes:

(a) In all cases where visual aids (spectacles or contact lenses) are required to meet the higher standard, a spare pair shall be carried when seafaring. When different visual aids are used for distance and near vision, a spare pair of each shall be carried.

(b) For seafarers who become monocular in service with no evidence of progressive eye disease in the remaining eye, monocular vision is permitted.

(c) Aids to colour vision, such as red-tinted x-chroma, chromas lenses and chromagen lenses, are not permitted.



Dated the 2nd October, 2012.  
AMOS KIMUNYA,  
*Minister for Transport.*

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