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STATUTORY INSTRUMENTS

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**2007 No. 3077**

**MERCHANT SHIPPING**

**The Merchant Shipping and Fishing Vessels  
(Control of Vibration at Work) Regulations 2007**

<i>Made</i>	- - - -	<i>25th October 2007</i>
<i>Laid before Parliament</i>		<i>31st October 2007</i>
<i>Coming into force</i>	- -	<i>23rd February 2008</i>

The Secretary of State is a Minister designated for the purposes of section 2(2) of the European Communities Act 1972<sup>(1)</sup> in relation to measures relating to the safety of ships and the health and safety of persons on them<sup>(2)</sup>:

The Secretary of State, in exercise of the powers conferred by section 2(2) of that Act and sections 85(1), (3), (5), (6) and (7) and 86(1) of the Merchant Shipping Act 1995<sup>(3)</sup>, and having consulted the persons referred to in section 86(4)(4) of that Act, makes the following Regulations:

**Citation and commencement**

1. These Regulations may be cited as the Merchant Shipping and Fishing Vessels (Control of Vibration at Work) Regulations 2007 and shall come into force on 23rd February 2008.

**Interpretation**

2.—(1) In these Regulations—

“the Act” means the Merchant Shipping Act 1995;

“daily exposure” means the quantity of mechanical vibration to which a worker is exposed during a working day, which takes account of the magnitude and duration of the vibration;

“employer” means a person by whom a worker is employed on a ship under a contract of employment;

“exposure action value” means the level of daily exposure for any worker which, if exceeded, requires specified action to be taken to reduce the risk;

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(1) 1972 c.68.

(2) S.I. 1993/595.

(3) 1995 c.21.

(4) Sections 85 and 86 of the Merchant Shipping Act 1995 were amended by the Merchant Shipping and Maritime Security Act 1997 (c.28), section 8.

“exposure limit value” means the level of daily exposure for any worker which must not be exceeded, save as set out in regulation 12;

“General Duties Regulations” means the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997<sup>(5)</sup>;

“Government ship” has the meaning given in section 308(4) of the Act;

“hand-arm vibration” means mechanical vibration which is transmitted into the hands during a work activity;

“health and safety” includes the occupational health and safety of persons whilst on board a ship and whilst boarding or leaving the ship;

“health surveillance” means assessment of the state of health of a worker as related to exposure to mechanical vibration which is intended to prevent and diagnose rapidly any disorder linked with exposure to mechanical vibration;

“MCA” means the Maritime and Coastguard Agency, an executive agency of the Department for Transport;

“mechanical vibration” means vibration occurring in a piece of machinery or equipment, or in a ship as a result of its operation;

“Merchant Shipping Notice” means a Notice described as such and issued by the MCA;

“the Provision and Use of Work Equipment Regulations” means the Merchant Shipping and Fishing Vessels (Provision and Use of Work Equipment) Regulations 2006<sup>(6)</sup>;

“the risk assessment” means, except where the context otherwise requires, a risk assessment carried out in compliance with regulation 6 of these Regulations;

“surveyor of ships” has the meaning given by section 256(9) of the Act;

“United Kingdom ship” means a ship which—

- (a) is a United Kingdom ship within the meaning of section 85(2) of the Act; or
- (b) is a Government ship; or
- (c) is a hovercraft registered under the Hovercraft Act 1968;

“United Kingdom waters” means the sea or other waters within the seaward limits of the territorial sea of the United Kingdom; and

“whole-body vibration” means mechanical vibration which is transmitted into the body, when seated or standing, through the supporting surface, during a work activity.

(2) In these Regulations, any reference to an ISO standard includes a reference to any document amending that publication which is considered by the Secretary of State to be relevant from time to time and is specified in a Merchant Shipping Notice.

### **Meaning of “worker”**

3.—(1) In these Regulations, “worker” means any person employed under a contract of employment, including a trainee or apprentice other than a person who is training in a vessel which is being used—

- (a) to provide instruction in the principles of responsibility, resourcefulness, loyalty and team endeavour and to advance education in the art of seamanship; or
- (b) to provide instruction in navigation and seamanship for yachtsmen,

and which is operating under a relevant code.

(5) S.I. 1997/2962, amended by S.I. 1998/2411 and S.I. 2001/54.

(6) S.I. 2006/2183.

- (2) In paragraph (1), “relevant code” means—
- (a) the Large Commercial Yacht Code as set out in Merchant Shipping Notice No. 1792(M), issued by the MCA;
  - (b) the Code of Practice for the Safety of Small Commercial Sailing Vessels(7);
  - (c) the Code of Practice for the Safety of Small Commercial Motor Vessels(8); or
  - (d) the Code of Practice for the Safety of Small Vessels in Commercial Use for Sport or Pleasure Operating from a Nominated Departure Point(9).

(3) In paragraph (2), each reference to a Code includes a reference to any document containing an amendment or replacement of that Code which is considered by the Secretary of State to be relevant from time to time.

### **Application**

4.—(1) Without prejudice to regulation 5 of the General Duties Regulations and subject to paragraphs (2) to (6), these Regulations apply in relation to United Kingdom ships.

- (2) Where—
- (a) a ship is being used in the course of public service activities or activities for the purpose of civil protection services; and
  - (b) characteristics peculiar to those activities inevitably conflict with a provision of these Regulations,

that provision does not apply in relation to that ship to the extent of that conflict.

(3) To the extent that a provision of these Regulations does not apply in relation to a ship because of paragraph (2) there is in relation to that ship a duty on the employer to ensure, so far as is reasonably practicable, the health and safety of workers who are or who are likely to be exposed to risks from mechanical vibration as a result of their work.

(4) The provisions of the General Duties Regulations and the Provision and Use of Work Equipment Regulations continue to apply to activities to which these Regulations apply; where these Regulations contain more stringent or specific provisions then such provisions apply.

(5) This regulation (other than paragraph (1)) and regulations 17 and 19 apply in relation to ships which are not United Kingdom ships, when they are in United Kingdom waters.

(6) These Regulations do not apply to activities to which the Control of Vibration at Work Regulations 2005(10) or the Control of Vibration at Work (Northern Ireland) Regulations 2005(11) apply.

- (7) In paragraph (2)—
- “civil protection services” includes the fire and rescue and ambulance services and search and rescue services provided by any other person;
  - “public service activities” includes the activities of the armed forces, HM Coastguard, HM Revenue and Customs, immigration officers, police, prison officers and the security and intelligence services.

### **Exposure limit values and exposure action values**

- 5.—(1) For hand-arm vibration—

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(7) Published by the Stationery Office in 1993 (ISBN 0-11-551184-9).

(8) Published by the Stationery Office in 1993 (ISBN 0-11-551185-7).

(9) Published by the Stationery Office in 1999 (ISBN 9-11-551812-6).

(10) S.I. 2005/1093.

(11) S.R. (NI) 2005 No. 397.

- (a) the daily exposure limit value standardised to an eight hour reference period is  $5 \text{ m/s}^2$ ; and
- (b) the daily exposure action value standardised to an eight hour reference period is  $2.5 \text{ m/s}^2$ .
- (2) For whole body vibration—
  - (a) the daily exposure limit value standardised to an eight hour reference period is  $1.15 \text{ m/s}^2$ ; and
  - (b) the daily exposure action value standardised to an eight hour reference period is  $0.5 \text{ m/s}^2$ .
- (3) Daily exposure shall be ascertained in accordance with the Schedule.

### **Assessment of risks**

6.—(1) The employer shall assess the level of mechanical vibration to which workers are exposed as part of the risk assessment required by regulation 7 of the General Duties Regulations.

(2) Where the employer concludes that the nature and extent of any risks related to mechanical vibration to which workers are exposed are such that a detailed risk assessment is not necessary, the risk assessment shall explain the reasons for such a conclusion.

- (3) The risk assessment shall be based on—
  - (a) observation of specific working practices;
  - (b) information provided by the manufacturer of the equipment and any other relevant information on the probable magnitude of vibration in the particular conditions of use; and
  - (c) if necessary, measurement of level of mechanical vibration to which workers are likely to be exposed in accordance with paragraph 5 of the Schedule.
- (4) Without prejudice to the generality of regulation 7 of the General Duties Regulations, in carrying out the risk assessment the employer shall consider—
  - (a) the level, type and duration of exposure, including any exposure to intermittent vibration or repeated shocks;
  - (b) the exposure limit values and the exposure action values in regulation 5;
  - (c) the health and safety of workers who may be particularly sensitive to mechanical vibration;
  - (d) any indirect effect on worker safety which may be caused by interaction between equipment subject to mechanical vibration and the workplace or other work equipment;
  - (e) information provided by the manufacturers of work equipment;
  - (f) the existence of replacement equipment designed to reduce exposure to vibration;
  - (g) the extension of exposure to whole body vibration beyond normal working hours;
  - (h) the effect of specific working conditions, such as low temperatures; and
  - (i) appropriate information obtained from health surveillance, including published information, so far as possible.
- (5) The employer shall ensure that the risk assessment—
  - (a) is planned and carried out by the persons appointed in accordance with regulation 14 of the General Duties Regulations;
  - (b) records—
    - (i) the significant findings of the risk assessment as soon as practicable after the risk assessment is made or changed; and
    - (ii) the measures the employer has taken or intends to take to comply with regulations 7 and 8 of these Regulations;

- so as to permit consultation as required by these Regulations;
- (c) is reviewed—
    - (i) at suitable intervals;
    - (ii) if there are any significant changes in working condition which affect its validity; or
    - (iii) if the results of a health surveillance indicate that a further risk assessment is necessary; and
  - (d) is retained by him.

### **Elimination or control of exposure to vibration in the workplace**

7.—(1) The employer shall ensure that the risks arising from exposure to mechanical vibration which are identified by the risk assessment are either—

- (a) eliminated at their source; or
- (b) reduced to a level which is as low as is reasonably practicable,

having regard to the principles in regulation 5 of the General Duties Regulations.

(2) Where it is not reasonably practicable to eliminate risk at source pursuant to paragraph (1) and an exposure action value is likely to be exceeded, the employer shall reduce exposure to as low as is reasonably practicable under paragraph (1) by establishing and implementing a programme of organisational and technical measures appropriate to the activity, which may in particular include—

- (a) implementing alternative working methods that require less exposure to vibration;
- (b) use of appropriate work equipment of appropriate ergonomic design which, taking account of the work to be done, produces the least possible vibration;
- (c) providing equipment which reduces the risk of injuries caused by vibration;
- (d) implementing appropriate maintenance programmes for work equipment, the workplace and workplace systems;
- (e) altering the design and layout of workplaces and work stations;
- (f) providing adequate information and training to workers to ensure that work equipment is used correctly and safely in order to reduce exposure to mechanical vibration to as low as is reasonably practicable.
- (g) imposing limits on the duration and intensity of exposure to mechanical vibration;
- (h) altering work schedules and rest periods;
- (i) providing clothing to protect exposed workers from cold and damp; and
- (j) providing personal protective equipment against hand-arm vibration.

(3) The employer shall take into account the results of any health surveillance required by regulation 9 in applying the organisational and technical measures required by this regulation.

(4) Subject to regulation 12, the employer shall ensure that workers are not exposed to mechanical vibration exceeding the daily exposure limit value specified in regulation 5(1)(a) or 5(2)(a).

(5) Subject to regulation 12, following implementation of the organisational and technical measures taken in accordance with paragraph (2) the employer shall assess the effectiveness of such measures and if the daily exposure limit value is exceeded shall—

- (a) identify the reasons why the limit has been exceeded;
- (b) take such action as is necessary to reduce exposure to vibration below the exposure limit value; and

- (c) amend the measures taken in accordance with paragraph (2) to ensure that the limit is not exceeded again.
- (6) Except in an emergency, vibration in accommodation and rest spaces shall be reduced to a level compatible with their purpose and use.
- (7) The employer shall adapt measures which are taken in accordance with this regulation to workers who are particularly sensitive to vibration.
- (8) Paragraphs (4) and (5) shall not apply until 6 July 2010 where work equipment is used which—
  - (a) was first provided to workers prior to 6 July 2007; and
  - (b) despite the latest technical advances and organisational measures does not permit compliance with the exposure limit values;

but in such case, the employer shall take such measures provided for in these Regulations so as to limit the exposure to mechanical vibration so far as reasonably practicable.

### **Worker information and training**

8.—(1) If—

- (a) the risk assessment indicates that there is a risk to the health of workers who are, or who are liable to be, exposed to vibration; or
- (b) workers are exposed to the risk of mechanical vibration in excess of an exposure action value;

the employer shall provide those workers and their representatives with suitable and sufficient information, instruction and training.

(2) Information, instruction and training provided in accordance with paragraph (1) shall include—

- (a) details of the measures taken in order to eliminate or reduce to as low as reasonably practicable the risks from mechanical vibration;
- (b) the exposure limit values and the exposure action values;
- (c) the results of the risk assessment carried out in accordance with regulation 6;
- (d) the circumstances in which workers are entitled to health surveillance under these Regulations;
- (e) the potential injuries which may arise from the work equipment in use;
- (f) safe working practices to minimise exposure to mechanical vibration;
- (g) how to detect and report signs of injury; and
- (h) the importance of detecting and reporting signs of injury.

### **Health surveillance**

9.—(1) If—

- (a) the risk assessment indicates that there is a risk to the health of workers who are, or are likely to be, exposed to mechanical vibration; or
- (b) workers are likely to be exposed to vibration in excess of an exposure action value,

the workers shall be entitled to health surveillance provided by the employer where such health surveillance is appropriate in accordance with paragraph (2).

(2) Health surveillance shall be appropriate where—

- (a) a link can be established between such exposure and an identifiable illness or harmful effects on health;
  - (b) it is probable that the illness or the effects occur in the worker's particular working conditions; and
  - (c) there are established techniques for detecting the illness or the harmful effects on health.
- (3) Where, as a result of health surveillance a worker is found to have an identifiable disease or adverse health effect which is considered by a doctor or an occupational health professional to be the result of exposure to mechanical vibration at work the employer shall—
- (a) ensure that the worker is informed by a doctor or other suitably qualified person of the result of the health surveillance and provided with information and advice regarding any health surveillance which he should undergo following the end of exposure;
  - (b) ensure that he is informed himself of any significant findings, taking into account any medical confidentiality;
  - (c) review the risk assessment concerned;
  - (d) review the measures taken to comply with regulation 7, taking into account any advice given by a doctor, occupational health professional or the MCA;
  - (e) consider assigning the worker to alternative work where there is no risk of further exposure to mechanical vibration, when advised to do so by a doctor or an occupational health care professional;
  - (f) arrange for the continued health surveillance of the worker;
  - (g) review the health surveillance of any other workers who have been similarly exposed, including, if recommended by a doctor or occupational health professional, arranging a medical examination for such workers.
- (4) The employer shall ensure that a health record is made and maintained in respect of each worker who undergoes health surveillance in accordance with these Regulations, the record being in a suitable form and containing a summary of the results of the health surveillance carried out.
- (5) The employer shall—
- (a) on reasonable notice being given, allow a worker access to his personal health records;
  - (b) keep the health records available in a suitable form;
  - (c) at the request of a worker, make the health records available to any person specified by the worker; and
  - (d) provide the Secretary of State with such copies of the health records as the Secretary of State may require.
- (6) The employer shall pay the costs of health surveillance carried out in order to comply with this regulation.

### **Consultation with workers**

**10.** In consulting with workers in accordance with regulation 20 of the General Duties Regulations, workers or their representatives shall be consulted on—

- (a) the assessments, measurements and findings of the risk assessment in accordance with regulation 6;
- (b) measures taken to eliminate workplace vibration in accordance with regulation 7;
- (c) the provision of worker information instruction and training in accordance with regulation 8; and
- (d) the arrangements for health surveillance in accordance with regulation 9.

### Persons on whom duties are imposed

11.—(1) Where a person on whom a duty is imposed by any of the preceding provisions of these Regulations does not have control of the matter to which that provision relates because that person does not have responsibility for the operation of the ship, that duty also extends to any other person who has control of that matter.

- (2) It is the duty of every worker performing activities to which these Regulations apply to—
- (a) make full and proper use of all clothing and equipment with which he has been provided by the employer in pursuance of these Regulations; and
  - (b) give effect to all instructions and training with which he has been provided under regulation 8.

### Exemptions

12.—(1) The Secretary of State may grant an exemption in respect of work on a particular ship from the requirement to comply with regulation 7(4) and (5) in relation to whole-body vibration where he is satisfied that the state of the art and the specific characteristics of the ship do not make it possible to comply with the whole body exposure limit value whatever technical and organisational measures are adopted.

(2) If the conditions in paragraph (3) are satisfied, the Secretary of State may grant an exemption from the requirements of regulation 7(4) and (5) where a worker is exposed to mechanical vibration which is usually below the exposure action values referred to in regulation 5 but which varies significantly from time to time and may sometimes exceed the exposure action value.

- (3) The conditions referred to in paragraph (2) are that—
- (a) the exposure value averaged over 40 hours is less than the exposure limit value;
  - (b) there is evidence to show that the risks from the pattern of exposure are lower than those from exposure at the exposure limit value;
  - (c) the worker concerned is subject to health surveillance in accordance with regulation 9; and
  - (d) the risk is reduced to as low as is reasonably practicable.

- (4) The Secretary of State may not grant an exemption under paragraphs (1) or (2) unless—
- (a) he has consulted with—
    - (i) the employer or other person having control of the matter in question; and
    - (ii) the workers concerned or their representatives;
  - (b) the resulting risks are reduced to as low as is reasonably practicable; and
  - (c) health surveillance has been increased to a level considered appropriate by the Secretary of State.
- (5) Any exemption granted under this regulation shall—
- (a) be in writing;
  - (b) be valid for a maximum period of four years; and
  - (c) be withdrawn as soon as the Secretary of State is satisfied that it is no longer justified.

### Offences and penalties

- 13.—(1) A person who fails to comply with regulation 6, 7 or 9 is guilty of an offence and liable—
- (a) on summary conviction to a fine not exceeding the statutory maximum, or
  - (b) on conviction on indictment to imprisonment for a term not exceeding two years or a fine, (or both).



(2) A person who fails to comply with regulation 10 is guilty of an offence and liable on summary conviction to a fine not exceeding level 4 on the standard scale.

(3) A person who fails to comply with regulation 8 or contravenes regulation 21 is guilty of an offence and liable on summary conviction to a fine not exceeding level 3 on the standard scale.

(4) A worker who fails to comply with regulation 11(2) is guilty of an offence and liable on summary conviction to a fine not exceeding level 2 on the standard scale.

(5) Section 146(1) of the Act (enforcement of fines) applies to any fine imposed for an offence under paragraphs (1) to (3) of this regulation, as if the reference to proceedings against the owner or master of a ship for an offence under Chapter 2 were a reference to proceedings against any person for an offence under those paragraphs.

### **Offences by body corporate**

14.—(1) Where a body corporate is guilty of an offence under these Regulations and that offence is proved to have been committed with the consent or connivance of, or to have been attributable to any neglect on the part of, any director, manager, secretary or other similar officer of the body corporate or a person who was purporting to act in such a capacity, he as well as the body corporate is guilty of that offence and shall be liable to be proceeded against and punished accordingly.

(2) Where the affairs of a body corporate are managed by its members, the preceding paragraph shall apply in relation to the acts and defaults of a member in connection with his functions of management as if he were a director of the body corporate.

(3) Where an offence under these Regulations committed by a Scottish partnership is proved to have been committed with the consent or connivance of, or to have been attributable to any neglect on the part of, a partner, that partner as well as the partnership is guilty of that offence and shall be liable to be proceeded against and punished accordingly.

### **Onus of proving what is reasonably practicable**

15. In any proceedings for an offence under these Regulations consisting of a failure to comply with a duty or requirement to do something so far as is reasonably practicable, it shall be for the defendant to prove that it was not reasonably practicable to do more than was in fact done to satisfy the duty or requirement.

### **Detention of a United Kingdom ship**

16.—(1) Where a surveyor of ships is satisfied that there is or has been a failure by an employer or other person referred to in regulation 11(1) to comply in relation to any United Kingdom ship with the preceding requirements of these Regulations, that ship is liable to be detained until a surveyor of ships is satisfied that those requirements are complied with.

(2) A surveyor of ships may permit a ship which is liable to be detained under paragraph (1) to proceed to sea for the purposes of proceeding to the nearest appropriate repair yard.

(3) A ship shall not be delayed or detained unreasonably under this regulation.

(4) Where a ship is detained because in relation to it there has been a failure to comply with the requirements of these Regulations, and that failure has ceased, a person having power to detain the ship shall, at the request of the owner or master, immediately release the ship—

- (a) if no proceedings for an offence arising from the failure in question are instituted within the period of seven days beginning with the day on which the ship is detained;
- (b) if proceedings for an offence arising from the failure in question, having been instituted within that period, are concluded without the employer or other person having control of the matter in question being convicted;

- (c) if either—
    - (i) the sum of £30,000 is paid to the Secretary of State by way of security, or
    - (ii) security which, in the opinion of the Secretary of State, is satisfactory and is for an amount not less than £30,000 is given to the Secretary of State,
      - by or on behalf of the employer or other person having control of the matter in question;
  - (d) where the employer or other person having control of the matter in question is convicted of an offence arising from the failure in question, if any costs or expenses ordered to be paid by him, and any fine imposed on him, have been paid; or
  - (e) the release is ordered by a court or tribunal referred to in article 292 of the United Nations Convention on the Law of the Sea 1982<sup>(12)</sup>, and any bond or other financial security ordered by such court or tribunal is posted.
- (5) The Secretary of State shall repay any sum paid in pursuance of paragraph (4)(c) or release any security so given—
- (a) if no proceedings for an offence arising from the failure in question are instituted within the period of seven days beginning with the day on which the sum is paid; or
  - (b) if proceedings for an offence arising from the failure in question, having been instituted within that period, are concluded without the employer or other person having control of the matter in question being convicted.
- (6) Where a sum has been paid, or security has been given, by any person in pursuance of paragraph (4)(c) and the employer or other person having control of the matter in question is convicted of an offence arising from the failure in question, the sum so paid or the amount made available under the security shall be applied as follows—
- (a) first in payment of any costs or expenses ordered by the court to be paid by the employer or other person having control of the matter in question; and
  - (b) next in payment of any fine imposed by the court;
- and any balance shall be repaid to the first-mentioned person.
- (7) Section 145 of the Act (interpretation of section 144) applies for the purposes of paragraphs (4) to (6) as if—
- (a) references to the master or owner of the ship were references to the employer or other person having control of the matter in question; and
  - (b) references to an offence under section 131 were references to an offence arising from the failure in question.

### **Inspection and other measures in respect of ships registered outside the United Kingdom**

**17.—(1)** When a ship which is not a United Kingdom ship is in United Kingdom waters, a relevant inspector may inspect that ship to ascertain whether the standards required in relation to United Kingdom ships by these Regulations are met in relation to that ship.

(2) Where a surveyor of ships is satisfied that the standards required in relation to United Kingdom ships by these Regulations are not met in relation to a ship which is not a United Kingdom ship but is in United Kingdom waters, that surveyor of ships may—

- (a) send a report to the government of the State whose flag the ship is entitled to fly, and a copy thereof to the Director General of the International Labour Office; and
- (b) where conditions on board are clearly hazardous to health or safety, take such measures as are necessary to ensure those conditions are rectified.

(3) A ship to which paragraph (2)(b) applies is liable to be detained until a surveyor of ships is satisfied that those conditions are rectified.

(4) A surveyor of ships may permit a ship which is liable to be detained under paragraph (3) to proceed to sea for the purposes of proceeding to the nearest appropriate repair yard.

(5) If any of the measures specified in paragraph (2)(b) or (3) are taken, the surveyor of ships shall immediately notify the nearest maritime, consular or diplomatic representative of the State whose flag the ship is entitled to fly.

(6) A ship shall not in the exercise of the power under this regulation be delayed or detained unreasonably.

(7) In paragraph (1), “relevant inspector” means a person mentioned in paragraph (a), (b) or (c) of section 258(1) of the Act(13).

### **Application of powers of inspectors in relation to Government ships**

**18.** Sections 258 to 266 of the Act(14) apply to these Regulations as if they were for all purposes made under section 85 of the Act and accordingly those sections apply in relation to Government ships.

### **Enforcement of detention**

**19.—(1)** Section 284 of the Act applies where a ship is liable to be detained under these Regulations as if—

- (a) references to detention of a ship under the Act were references to detention of the ship in question under these Regulations; and
- (b) subsection (7) were omitted.

(2) Where a ship is liable to be detained under these Regulations, the person detaining the ship shall serve on the master of the ship a detention notice which shall—

- (i) state that a surveyor of ships is of the opinion that in relation to that ship there is a failure to comply with the requirements of these Regulations;
- (ii) specify the matters which, in the opinion of the surveyor of ships, have the effect that in relation to that ship those requirements are not met; and
- (iii) require the terms of the notice to be complied with until the ship is released by any person mentioned in section 284(1) of the Act.

### **Right of appeal and compensation**

**20.** Regulations 11 and 12 (right of appeal and compensation) of the Merchant Shipping (Port State Control) Regulations 1995(15) (which by virtue of regulation 19 of those Regulations apply in relation to the exercise of powers of detention contained in safety regulations) apply in relation to a detention notice served on a Government ship under these Regulations as if these Regulations were for all purposes made under section 85 of the Act.

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(13) Section 258(1) was amended by the Merchant Shipping and Maritime Security Act 1997 (c.28), sections 9 and 29(2), Schedule 1 paragraph 4 and Schedule 9 Part I.

(14) These sections provide powers to inspect ships and their equipment, powers of inspectors in relation to premises and ships, for the service of improvement notices and prohibition notices and their reference to arbitration, compensation for invalid prohibition notices and offences.

(15) S.I. 1995/3128, as amended by S.I. 2003/1636 and other amendments which are not relevant to these Regulations.

**Prohibition on Levy**

**21.** No charge in respect of anything done or provided in pursuance of any specific requirement of these Regulations shall be levied or permitted to be levied on any worker.

Signed by authority of the Secretary of State for Transport

25th October 2007

*Jim Fitzpatrick*  
Parliamentary Under Secretary of State  
Department for Transport

## SCHEDULE

Regulation 5

### Definitions

**1.** In this schedule—

“acceleration” means the quantity used to represent vibration magnitude in units of metres per second per second ( $\text{m/s}^2$ );

“frequency weighted acceleration” means vibration magnitude corrected for varying human sensitivity to vibration at different frequencies;

“BS EN ISO standard 5349-1” means the British Standard publication “Mechanical vibration - Measurement and evaluation of human exposure to hand-transmitted vibration Part I: General Requirements” first edition dated 10<sup>th</sup> May 2001;

“BS EN ISO standard 5349-2” means the British Standard publication “Mechanical vibration - Measurement and evaluation of human exposure to hand-transmitted vibration - Part 2: Practical guidance for measurement at the workplace” first edition dated 23 August 2001;

“ISO 2631-1” means the International Organisation for Standardisation publication “Mechanical vibration and shock - Evaluation of human exposure to whole-body vibration - Part 1: General requirements” second edition dated 15 July 1997; and

“orthogonal axes” means the three directions of vibration which are at right angles to one another.

### Assessment of Exposure

**2.** Assessment of the level of exposure to hand-arm vibration is to be based on the calculation of the daily exposure value normalised to an eight hour reference period  $A(8)$ , expressed as the square root of the sum of the squares (rms) (total value) of the frequency weighted acceleration values, determined on the orthogonal axes  $a_{hw_x}$ ,  $a_{hw_y}$ , and  $a_{hw_z}$ , as defined in Chapters 4 and 5 and Annex A to BS EN ISO standard 5349-1.

**3.** Assessment of the level of exposure to whole body vibration is to be based on the calculation of daily exposure expressed as equivalent continuous acceleration over an eight hour period, calculated as the highest (rms) value, determined on three orthogonal axes ( $1,4a_{w_x}$ ,  $1,4a_{w_y}$ ,  $a_{w_z}$ , for a seated or standing worker) in accordance with Chapters 5, 6 and 7, Annex A and Annex B to ISO standard 2631-1.

**4.** Assessment of whole body vibration need only include vibrations of a frequency exceeding 1 hz.

**5.** If the assessment is based on measurement in accordance with regulation 6(3)(c)—

(1) the methods used—

(a) may include sampling, which must be representative of the personal exposure of a worker to the mechanical vibration in question; and

(b) must be adopted to—

(i) the particular characteristics of the mechanical vibration to be measured;

(ii) to ambient factors; and

(iii) to the characteristics of the measuring apparatus;

(c) in the case of whole body vibration, must be carried out in accordance with BS EN ISO standard 5349-2;

(2) in the case of hand-arm vibration for devices which need to be held with both hands—

*Status: This is the original version (as it was originally made).*

- (i) measurements must be made for each hand;
- (ii) the exposure is determined by reference to the higher of the two values; and
- (iii) information for the other hand must also be provided.

### **Interference and indirect risks**

6. Regulation 6(4)(d) shall apply in particular where mechanical vibration interferes with—

- (1) the proper handling of controls or reading indicators; and
- (2) the stability of structures or the security of joints.

## **EXPLANATORY NOTE**

*(This note is not part of the Regulations)*

These Regulations implement Council Directive 2002/44/EC (OJ No L 177, 6.7.2002, p.13) on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (vibration) (sixteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). They apply to United Kingdom ships wherever they may be and non-United Kingdom ships in United Kingdom waters. The Regulations impose duties on employers to protect workers who may be exposed to risk from exposure to vibration at work.

The Regulations apply to both hand-arm and whole-body vibration. They make provision for—

- (a) action values and limit values for daily exposure to vibration (*regulation 5*);
- (b) risk assessment (*regulation 6*);
- (c) elimination or, where elimination is not reasonably practicable, reduction of exposure to vibration;
- (d) measures to reduce exposure to vibration to as low a level as is reasonably practicable;
- (e) actions to be taken at action values and limit values;
- (f) prohibition on exceeding limit values (*regulation 7*);
- (g) information, instruction and training (*regulation 8*);
- (h) health surveillance (*regulation 9*);
- (i) consultation (*regulation 10*);
- (j) the grant of exemptions by the Secretary of State (*regulation 12*); and
- (k) offences, detention, inspection and penalties (*regulations 11 and 13 to 20*).

These Regulations are made under the powers in the Merchant Shipping Act 1995 except in relation to their application to Government ships where the powers are provided by section 2(2) of the European Communities Act 1972.

Copies of British Standard BS EN ISO 5349-1:2001 and BS EN ISO 5349-2:2001, relating to measurement and evaluation of human exposure to hand-transmitted mechanical vibration are obtainable from British Standards Institution, BSI House, 389 Chiswick High Road, London W4 4AL. International Standard ISO 2631-1:1997, relating to measurement and evaluation of human exposure to whole-body mechanical vibration and shock, referred to in the Schedule is obtainable

from the International Standards Organisation, 1, rue de Varembé, Case postale 56CH-1211 Geneva 20, Switzerland.

A Regulatory Impact Assessment and a Transposition Note have been prepared and a copy has been placed in the Library of each House of Parliament. Copies can be obtained from the Maritime and Coastguard Agency, Spring Place, 105 Commercial Road, Southampton, SO15 1EG (telephone number 02380 329100).

Merchant Shipping Notices can be obtained from Mail Marketing (Scotland), Unit 6, Blooms Grove Industrial Estate, Norton Street, Nottingham, NG7 3JG (telephone 0115 901 3336; fax 0115 901 3334; e-mail orders: [mca@promo-solution.com](mailto:mca@promo-solution.com)). They may also be accessed via the Maritime and Coastguard Agency's website <http://www.mcga.gov.uk>.