STATUTORY INSTRUMENTS

2010 No. 1140

HEALTH AND SAFETY

The Control of Artificial Optical Radiation at Work Regulations 2010

Made - - - -	*30th March 2010*
Laid before Parliament	*6th April 2010*
Coming into force - -	*27th April 2010*

The Secretary of State makes these Regulations—

(a) in exercise of the powers conferred by sections 15(1), (2), (4)(b) and (8), and 82(3)(a) of, and paragraphs 1(1)(a) to (c), 8(1) and (2), 9, 11, 12, 13(2) and (3), 14, 15(1) and 16 of Schedule 3 to, the Health and Safety at Work etc. Act 1974 [M1]("the 1974 Act"), as read with paragraph 1A of Schedule 2 to the European Communities Act 1972 [M2]; and

(b) for the purpose of giving effect without modifications to proposals submitted by the Health and Safety Executive under section 11(3) [M3] of the 1974 Act after carrying out consultations in accordance with section 50(3) of that Act.

These Regulations make provision for a purpose mentioned in section 2(2) of the European Communities Act 1972 and it appears to the Secretary of State that it is expedient for references in these Regulations to Annexes to Directive 2006/25/EC of the European Parliament and of the Council on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation) (19th individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) [M4] to be construed as including references to those Annexes as they may be amended from time to time.

Marginal Citations

M1 1974 c.37 as amended by S.I. 2008/960. There are other amending instruments but none is relevant.

M2 1972 c.68, **paragraph 1A** of Schedule 2 of which is amended by the Legislative and Regulatory Reform Act 2006 (c.51), **section 28**. There are other amendments but none is relevant.

M3 Section 11(3) is substituted by S.I. 2008/960.

M4 O.J. L114, 27.4.2006 p.38, as amended by Directive 2007/30/EC of 20 June 2007 (O.J. No. L165, 27.6.2007, p.21) and by Regulation (EC) No. 1137/2008 of 22 October 2008 (O.J. No. L311, 21.11.2008, p.1). Directive 89/391/EEC is to be found at O.J. No. L103, 29.6.1989, p.1).

Citation, commencement and interpretation

1.—(1) These Regulations may be cited as the Control of Artificial Optical Radiation at Work Regulations 2010 and come into force on 27 April 2010.

(2) In these Regulations—

"the 1999 Regulations" means the Management of Health and Safety at Work Regulations 1999 [M5];

"artificial optical radiation" means any electromagnetic radiation in the wavelength range between 100nm and 1mm which is emitted by non-natural sources;

"the Directive" means Directive 2006/25/EC of the European Parliament and of the Council on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation) (19th individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC), and references in these Regulations to the Annexes to the Directive are to those Annexes as amended from time to time;

[[F1]"enforcing authority" means the Health and Safety Executive, the Office for Nuclear Regulation, local authority or **[**[F2]Office of Rail and Road**]** determined in accordance with—

(a) section 18(1A) of the Health and Safety at Work etc. Act 1974;

(b) the provisions of the Health and Safety (Enforcing Authority) Regulations 1998; and

(c) the provisions of the Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006.**]**

"the exposure limit values" means— for non-coherent radiation, those exposure limit values set out in Annex I to the Directive; and for laser radiation those exposure limit values set out in Annex II to the Directive;

"health surveillance" means assessment of the state of health of an employee, as related to exposure to artificial optical radiation and its effects on the skin;

"irradiance" means the radiant power incident per unit area upon a surface expressed in watts per square metre (W m^{-2});

"laser" (light amplification by stimulated emission of radiation) means any device which can be made to produce or amplify electromagnetic radiation in the optical radiation wavelength range primarily by the process of controlled stimulated emission;

"laser radiation" means artificial optical radiation from a laser;

"non-coherent radiation" means any artificial optical radiation other than laser radiation;

"radiance" means the radiant flux or power output per unit solid angle per unit area expressed in watts per square metre per steradian (W m^{-2} sr^{-1}); and

"radiant exposure" means the time integral of the irradiance, expressed in joules per square metre (J m^{-2}).

(3) Other expressions used in these Regulations which are used in the Directive have the same meaning as they have in the Directive.

(4) A reference to an employee being exposed to artificial optical radiation is a reference to that exposure which arises while the employee is at work, or arises out of, or in connection with, the employee's work.

F1 Words in reg. 1 substituted (1.4.2014) by The Energy Act 2013 (Office for Nuclear Regulation) (Consequential Amendments, Transitional Provisions and Savings) Order 2014 (S.I. 2014/469), art. 1(2), **Sch. 3 para. 144** (with Sch. 4)

F2 Words in reg. 1(2) substituted (16.10.2015) by The Office of Rail Regulation (Change of Name) Regulations 2015 (S.I. 2015/1682), reg. 1(2), **Sch. para. 10(aa)**

Marginal Citations

M5 S.I. 1999/3242, to which there are amendments not relevant to these Regulations.

Application of these Regulations

2.—(1) Where a duty is placed by these Regulations on an employer in respect of its employees, the employer must, so far as is reasonably practicable, be under a like duty in respect of any other person at work who may be affected by the work carried out by the employer except that the duties of the employer—

(a) under regulation 5 (information and training) do not extend to persons who are not its employees, unless those persons are present in the workplace where the work is being carried out; and

(b) under regulation 6 (health surveillance) do not extend to persons who are not its employees.

(2) These Regulations do not apply to the master or a crew of a ship or to the employer of such persons in respect of the normal shipboard activities of a ship's crew which are carried out solely by the crew under the direction of the master, and for the purposes of this paragraph "ship" includes every description of vessel used in navigation, other than a ship forming part of Her Majesty's Navy.

Assessment of the risk of adverse health effects to the eyes or skin created by exposure to artificial optical radiation at the workplace

3.—(1) Where—

(a) the employer carries out work which could expose any of its employees to levels of artificial optical radiation that could create a reasonably foreseeable risk of adverse health effects to the eyes or skin of the employee; and

(b) that employer has not implemented any measures to either eliminate or, where this is not reasonably practicable, reduce to as low a level as is reasonably practicable, that risk based on the general principles of prevention set out in Schedule 1 to the 1999 Regulations,

the employer must make a suitable and sufficient assessment of that risk for the purpose of identifying the measures it needs to take to meet the requirements of these Regulations.

(2) The employer must as part of that risk assessment assess, and if necessary, measure or calculate, the levels of artificial optical radiation to which employees are likely to be exposed.

(3) In carrying out the assessment, measurement or calculation, the employer must follow the following standards or recommendations—

(a) for laser radiation, the standards of the IEC; or

(b) for non-coherent radiation, the standards of the IEC and the recommendations of the CIE and the CEN.

(4) In exposure situations which are not covered by those standards or recommendations, the assessment, measurement or calculation must follow national or international science-based guidelines.

(5) The assessment must also include consideration of—

(a) the level, wavelength and duration of exposure;

(b) the exposure limit values;

(c) the effects of exposure on employees or groups of employees whose health is at particular risk from exposure;

(d) any possible effects on the health and safety of employees resulting from interactions between artificial optical radiation and photosensitising chemical substances;

(e) any indirect effects of exposure on the health and safety of employees such as temporary blinding, explosion or fire;

(f) the availability of alternative equipment designed to reduce levels of exposure;

(g) appropriate information obtained from health surveillance, including where possible published information;

(h) multiple sources of exposure;

(i) any class 3B or 4 laser that is classified in accordance with the relevant IEC standard that is in use by the employer and any artificial optical radiation source that is capable of presenting the same level of hazard; and

(j) information provided by the manufacturers of artificial optical radiation sources and associated work equipment in accordance with the relevant European Union Directives **[**F3as they had effect immediately before IP completion day**]**.

(6) The risk assessment must be reviewed regularly if—

(a) there is reason to suspect that it is no longer valid; or

(b) there has been a significant change in the work to which the assessment relates.

(7) The employer must record—

(a) the significant findings of the risk assessment as soon as is practicable after it is made or changed; and

(b) the measures which have been taken and which the employer intends to take to meet the requirements of regulation 4 and 5.

(8) In paragraphs (3) and (4)—

(a) a reference to standards or recommendations is a reference to standards or recommendations as revised or re-issued from time to time;

(b) "CEN" means the European Committee for Standardisation;

(c) "CIE" means the International Commission for Illumination; and

(d) "IEC" means the International Electrotechnical Commission.

(9) In paragraph (5)(a) "level" means the combination of irradiance, radiant exposure and radiance to which an employee is exposed.

F3 Words in reg. 3(5)(j) inserted (31.12.2020) by The Health and Safety (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1370), regs. 1(1), **8(2)** (as amended by S.I. 2020/660, regs. 1(1), **7(1)**); 2020 c. 1, **Sch. 5 para. 1(1)**

Obligations to eliminate or reduce risks

4.—(1) An employer must ensure that any risk of adverse health effects to the eyes or skin of employees as a result of exposure to artificial optical radiation which is identified in the risk assessment is eliminated or, where this is not reasonably practicable, reduced to as low a level as is reasonably practicable.

(2) For the purposes of paragraph (1) measures to eliminate or reduce the risk must be based on the general principles of prevention set out in Schedule 1 to the 1999 Regulations.

(3) If the risk assessment indicates that employees are exposed to levels of artificial optical radiation which exceed the exposure limit values, the employer must devise and implement an action plan comprising technical and organisational measures designed to prevent exposure exceeding the exposure limit values.

(4) The action plan must take into account—

(a) other working methods;

(b) choice of appropriate work equipment emitting less artificial optical radiation;

(c) technical measures to reduce the emission of artificial optical radiation including, where necessary, the use of interlocks, shielding or similar health protection mechanisms;

(d) appropriate maintenance programmes for work equipment, workplaces and workstation systems;

(e) the design and layout of workplaces and workstations;

(f) limitation of the duration and level of the exposure;

(g) the availability of personal protective equipment;

(h) the instructions of the manufacturer of the equipment where it is covered by relevant European Union Directives **[**F4as they had effect immediately before IP completion day**]**;

(i) the requirements of employees belonging to particularly sensitive risk groups.

(5) If, despite the measures taken under paragraphs (1) and (3), employees are still exposed to levels of artificial optical radiation that exceed the exposure limit values, the employer must take immediate action to—

(a) reduce exposure to below the exposure limit values;

(b) identify the reasons why employees have been exposed to levels which exceed the exposure limit values; and

(c) modify the measures taken in accordance with paragraph (3) to prevent employees being exposed again to levels which exceed the exposure limit values.

(6) Paragraph (7) applies if the risk assessment indicates that in any of the areas of the workplace under the control of the employer, employees could be exposed to levels of artificial optical radiation which exceed the exposure limit values.

(7) The employer must ensure that the areas in question are—

(a) demarcated and access by the employees to those areas is restricted so far as is reasonably practicable; and

(b) identified by means of the appropriate signs as specified in the Health and Safety (Signs and Signals) Regulations 1996 M6.

F4 Words in reg. 4(4)(h) inserted (31.12.2020) by The Health and Safety (Amendment) (EU Exit) Regulations 2018 (S.I. 2018/1370), regs. 1(1), **8(3)** (as amended by S.I. 2020/660, regs. 1(1), **7(2)**); 2020 c. 1, **Sch. 5 para. 1(1)**

Marginal Citations

M6 S.I. 1996/341, to which there are amendments not relevant to these Regulations.

Information and training

5.—(1) If the risk assessment indicates that employees could be exposed to artificial optical radiation which could cause adverse health effects to the eyes or skin of employees, the employer

must provide its employees and representatives with suitable and sufficient information and training relating to the outcome of the risk assessment, and this must include the following—

(a) the technical and organisational measures taken in order to comply with the requirements of regulation 4;

(b) the exposure limit values;

(c) the significant findings of the risk assessment, including any measurements taken, with an explanation of those findings;

(d) why and how to detect and report adverse health effects to the eyes or skin;

(e) the circumstances in which employees are entitled to appropriate health surveillance;

(f) safe working practices to minimise the risk of adverse health effects to the eyes or skin from exposure to artificial optical radiation; and

(g) the proper use of personal protective equipment.

(2) The employer must ensure that any person, whether or not that person is an employee, who carries out work in connection with the employer's duties under these Regulations has suitable and sufficient information and training.

Health surveillance and medical examinations

6.—(1) If the risk assessment indicates that there is a risk of adverse health effects to the skin of employees as a result of exposure to artificial optical radiation, the employer must ensure that such employees are placed under suitable health surveillance.

(2) Health surveillance pursuant to paragraph (1) must be carried out by a doctor or occupational health professional and the risk assessment must be made available to that doctor or occupational health professional.

(3) The employer must ensure that a health record of each of its employees who undergoes health surveillance pursuant to paragraph (1) is made and maintained and that the record or copy of it is kept available in a suitable form.

(4) The health record must contain a summary of the results of the health surveillance carried out.

(5) The employer must—

(a) on reasonable notice being given, allow an employee access to his or her personal health record; and

(b) provide the enforcing authority with copies of such health records as it may require.

(6) An employer must ensure that a medical examination is made available to an employee if—

(a) the risk assessment indicates that the employee has been exposed to levels of artificial optical radiation which exceed the exposure limit values; or

(b) as a result of health surveillance the employee is found to have an identifiable disease or adverse health effects to the skin which is considered by a doctor or occupational health professional to be the result of exposure to artificial optical radiation.

(7) Where an examination is carried out under paragraph (6), the employer must—

(a) ensure that a doctor or suitably qualified person—

(i) informs the employee of the results of the examination which relate to the employee; and

(ii) provides advice on whether health surveillance may be appropriate;

(b) ensure that it is informed of any significant findings from any further health surveillance of the employee taking into account any medical confidentiality;

(c) review the risk assessment;

(d) review any measures taken to comply with regulation 4 taking into account any advice given by a doctor or other suitably qualified person or the enforcing authority; and

(e) provide continued health surveillance if appropriate.

Extension outside Great Britain

7. These Regulations shall apply to and in relation to any activity outside Great Britain to which sections 1 to 59 and 80 to 82 of the 1974 Act apply by virtue of the Health and Safety at Work etc. Act 1974 (Application Outside Great Britain) Order 2001 [M7] as those provisions apply within Great Britain.

Marginal Citations

M7 S.I. 2001/2127 as amended by S.I. 2009/1750.

Signed by authority of the Secretary of State for Work and Pensions

William D. McKenzie
Department for Work and Pensions — Parliamentary Under Secretary of State

EXPLANATORY NOTE

(This note is not part of the Order)

1. These Regulations implement as respects Great Britain Directive 2006/25/EC of the European Parliament and of the Council (O.J. L114, 27.4.2006, p.38) on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation) (nineteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) ("the Directive"). The Regulations impose duties on employers to protect both employees who may be exposed to risk from exposure to artificial optical radiation at work and other persons at work who might be affected by that work.

2. Regulation 1(2) defines exposure limit values as being those set out in Annexes I and II to the Directive, as amended from time to time, and these Annexes provide for exposure limit values for non-coherent radiation and laser radiation respectively.

3. The Regulations impose a duty to carry out a specific form of risk assessment where an employer carries out work which could expose its employees to levels of artificial optical radiation (i.e. artificial light) that could create a reasonably foreseeable risk of adverse health effects to the eyes or skin and where those risks have not already been eliminated or controlled (regulation 3). Where a risk assessment is necessary the Regulations also impose duties to—

(a) eliminate, or where this is not reasonably practicable, to reduce to as low a level as is reasonably practicable the risk of adverse health effects to the eyes or skin of the employee as a result of exposure to artificial optical radiation where this risk has been identified in the risk assessment (regulation 4(1));

(b) devise an action plan comprising technical and organisational measures to prevent exposure to artificial optical radiation exceeding the exposure limit values where the risk assessment indicates that employees are exposed to levels of artificial optical radiation that exceed the exposure limit values (regulation 4(3));

(c) take action in the event that the exposure limit values are exceeded despite the implementation of the action plan and measures to eliminate or reduce so far as is reasonably practicable the risk of exposure (regulation 4(5));

(d) demarcate, limit access to, and provide for appropriate signs in those areas where levels of artificial optical radiation are indicated in the risk assessment as exceeding the exposure limit values (regulation 4 (6) and (7);

(e) provide information and training if the risk assessment indicates that employees could be exposed to artificial optical radiation which could cause adverse health effects to the eyes or skin of the employee (regulation 5); and

(f) to provide health surveillance and medical examinations in certain cases (regulation 6).

4. A copy of the impact assessment in respect of these Regulations can be obtained from the Health and Safety Executive, Economic Advisers Unit, Redgrave Court, Merton Road, Bootle, Merseyside L20 7HS. A copy of the transposition note in relation to the implementation of the Directive set out in paragraph 1 can be obtained from the same address. Copies of both these documents have been placed in the Library of each House of Parliament and are annexed to the Explanatory Memorandum which is available on the Office of Public Sector Information website (http://www.opsi.gov.uk).

Changes to legislation:
There are currently no known outstanding effects for the The Control of Artificial Optical Radiation at Work Regulations 2010.