— safety function fulfilled by the safety component, if not obvious from the description,

— where appropriate, the name and address of the notified body and the number of the EC type-examination certificate,

— where appropriate, the name and address of the notified body to which the file was forwarded in accordance with the first indent of Article 8(2)(c),

— where appropriate, the name and address of the notified body which carried out the verification referred to in the second indent of Article 8(2)(c),

— where appropriate, a reference to the harmonised standards,

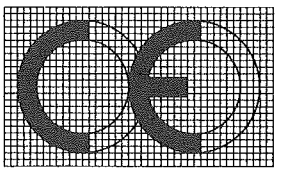
— where appropriate, the national technical standards and specifications used,

— identification of the person empowered to sign on behalf of the manufacturer or his authorised representative established in the Community.

ANNEX III

CE CONFORMITY MARKING

— The CE conformity marking shall consist of the initials 'CE' taking the following form:



— if the CE marking is reduced or enlarged the proportions given in the above drawing must be respected,

— the various components of the CE marking must have substantially the same vertical dimension, which may not be less than 5 mm. This minimum dimension may be waived for small-scale machinery.

ANNEX IV

TYPES OF MACHINERY AND SAFETY COMPONENTS FOR WHICH THE PROCEDURE REFERRED TO IN ARTICLE 8(2)(b) AND (c) MUST BE APPLIED

A. **Machinery**

1. Circular saws (single or multi-blade) for working with wood and analogous materials or for working with meat and analogous materials.

1.1. Sawing machines with fixed tool during operation, having a fixed bed with manual feed of the workpiece or with a demountable power feed.

1.2. Sawing machines with fixed tool during operation, having a manually operated reciprocating saw-bench or carriage.

1.3. Sawing machines with fixed tool during operation, having a built-in mechanical feed device for the work-pieces, with manual loading and/or unloading.

1.4. Sawing machines with movable tool during operation, with a mechanical feed device and manual loading and/or unloading.

2. Hand-fed surface planing machines for woodworking.

3. Thicknessers for one-side dressing with manual loading and/or unloading for woodworking.

4. Band-saws with a fixed or mobile bed and band-saws with a mobile carriage, with manual loading and/or unloading, for working with wood and analogous materials or for working with meat and analogous materials.

5. Combined machines of the types referred to in 1 to 4 and 7 for working with wood and analogous materials.

6. Hand-fed tenoning machines with several tool holders for woodworking.

7. Hand-fed vertical spindle moulding machines for working with wood and analogous materials.

8. Portable chainsaws for woodworking.

9. Presses, including press-brakes, for the cold working of metals, with manual loading and/or unloading, whose movable working parts may have a travel exceeding 6 mm and a speed exceeding 30 mm/s.

10. Injection or compression plastics-moulding machines with manual loading or unloading.

11. Injection or compression rubber-moulding machines with manual loading or unloading.

12. Machinery for underground working of the following types:

— machinery on rails: locomotivies and brake-vans,

— hydraulic-powered roof supports,

— internal combustion engines to be fitted to machinery for underground working.

13. Manually-loaded trucks for the collection of household refuse incorporating a compression mechanism.

14. Guards and detachable transmission shafts with universal joints as described in section 3.4.7.

15. Vehicles servicing lifts.

16. Devices for the lifting of persons involving a risk of falling from a vertical height of more than three metres.

17. Machines for the manufacture of pyrotechnics.

B. **Safety components**

1. Electro-sensitive devices designed specifically to detect persons in order to ensure their safety (non-material barriers, sensor mats, electromagnetic detectors, etc.).

2. Logic units which ensure the safety functions of bimanual controls.

3. Automatic movable screens to protect the presses referred to in 9, 10 and 11.

4. Roll-over protection structures (ROPS).

5. Falling-object protective structures (FOPS).

ANNEX V

EC DECLARATION OF CONFORMITY

For the purposes of this Annex, 'machinery' means either 'machinery' or 'safety component' as defined in Article 1(2).

1. The EC declaration of conformity is the procedure by which the manufacturer, or his authorised representative established in the Community declares that the machinery being placed on the market complies with all the essential health and safety requirements applying to it.

2. Signature of the EC declaration of conformity authorises the manufacturer, or his authorised representative in the Community, to affix the CE marking to the machinery.

3. Before drawing up the EC declaration of conformity, the manufacturer, or his authorised representative in the Community, shall have ensured and be able to guarantee that the documentation listed below is and will remain available on his premises for any inspection purposes:

   (a) a technical construction file comprising:

   — an overall drawing of the machinery together with drawings of the control circuits,

   — full detailed drawings, accompanied by any calculation notes, test results, etc., required to check the conformity of the machinery with the essential health and safety requirements,

   — a list of:

   — the essential requirements of this Directive,

   — standards, and

   — other technical specifications, which were used when the machinery was designed,

   — a description of methods adopted to eliminate hazards presented by the machinery,

   — if he so desires, any technical report or certificate obtained from a competent body or laboratory [1],

   — if he declares conformity with a harmonised standard which provides therefor, any technical report giving the results of tests carried out at his choice either by himself or by a competent body or laboratory [1],

   — a copy of the instructions for the machinery;

   (b) for series manufacture, the internal measures that will be implemented to ensure that the machinery remains in conformity with the provisions of the Directive.

   The manufacturer must carry out necessary research or tests on components, fittings or the completed machine to determine whether by its design or construction, the machine is capable of being erected and put into service safely.

   Failure to present the documentation in response to a duly substantiated request by the competent national authorities may constitute sufficient grounds for doubting the presumption of conformity with the requirements of the Directive.

4. (a) The documentation referred to in 3 above need not permanently exist in a material manner but it must be possible to assemble it and make it available within a period of time commensurate with its importance.

   It does not have to include detailed plans or any other specific information as regards the sub-assemblies used for the manufacture of the machinery unless a knowledge of them is essential for verification of conformity with the basic safety requirements.

[1] A body or laboratory is presumed competent if it meets the assessment criteria laid down in the relevant harmonised standards.

(b) The documentation referred to in 3 above shall be retained and kept available for the competent national authorities for at least 10 years following the date of manufacture of the machinery or of the last unit produced, in the case of series manufacture.

(c) The documentation referred to in 3 above shall be drawn up in one of the official languages of the Communities, with the exception of the instructions for the machinery.

ANNEX VI

EC TYPE-EXAMINATION

For the purposes of this Annex, 'machinery' means either 'machinery' or 'safety component' as defined in Article 1(2).

1. EC type-examination is the procedure by which a notified body ascertains and certifies that an example of machinery satisfies the provisions of this Directive which apply to it.

2. The application for EC type-examination shall be lodged by the manufacturer or by his authorised representative established in the Community, with a single notified body in respect of an example of the machinery.

   The application shall include:

   — the name and address of the manufacturer or his authorised representative established in the Community and the place of manufacture of the machinery,

   — a technical file comprising at least:

     — an overall drawing of the machinery together with drawings of the control circuits,

     — full detailed drawings, accompanied by any calculation notes, test results, etc., required to check the conformity of the machinery with the essential health and safety requirements,

     — a description of methods adopted to eliminate hazards presented by the machinery and a list of standards used,

     — a copy of the instructions for the machinery,

     — for series manufacture, the internal measures that will be implemented to ensure that the machinery remains in conformity with the provisions of the Directive.

   It shall be accompanied by a machine representative of the production planned or, where appropriate, a statement of where the machine may be examined.

   The documentation referred to above does not have to include detailed plans or any other specific information as regards the sub-assemblies used for the manufacture of the machinery unless a knowledge of them is essential for verification of conformity with the basic safety requirements.

3. The notified body shall carry out the EC type-examination in the manner described below:

   — it shall examine the technical construction file to verify its appropriateness and the machine supplied or made available to it,

   — during the examination of the machine, the body shall:

     (a) ensure that it has been manufactured in conformity with the technical construction file and may safely be used under its intended working conditions;

     (b) check that standards, if used, have been properly applied;

     (c) perform appropriate examinations and tests to check that the machine complies with the essential health and safety requirements applicable to it.

4. If the example complies with the provisions applicable to it the body shall draw up an EC type-examination certificate which shall be forwarded to the applicant. That certificate shall state the conclusions of the examination, indicate any conditions to which its issue may be subject and be accompanied by the descriptions and drawings necessary for identification of the approved example.

   The Commission, the Member States and the other approved bodies may obtain a copy of the certificate and, on a reasoned request, a copy of the technical construction file and of the reports on the examinations and tests carried out.

5. The manufacturer or his authorised representative established in the Community shall inform the notified body of any modifications, even of a minor nature, which he has made or plans to make to the machine to which the example relates. The notified body shall examine those modifications and inform the manufacturer or his authorised representative established in the Community whether the EC type-examination certificate remains valid.

6. A body which refuses to issue an EC type-examination certificate shall so inform the other notified bodies. A body which withdraws an EC type-examination certificate shall so inform the Member State which notified it. The latter shall inform the other Member States and the Commission thereof, giving the reasons for the decision.

7. The files and correspondence referring to the EC type-examination procedures shall be drawn up in an official language of the Member State where the notified body is established or in a language acceptable to it.

ANNEX VII

MINIMUM CRITERIA TO BE TAKEN INTO ACCOUNT BY MEMBER STATES FOR THE NOTIFICATION OF BODIES

For the purposes of this Annex, 'machinery' means either 'machinery' or 'safety component' as defined in Article 1(2).

1. The body, its director and the staff responsible for carrying out the verification tests shall not be the designer, manufacturer, supplier or installer of machinery which they inspect, nor the authorised representative of any of these parties. They shall not become either involved directly or as authorised representatives in the design, construction, marketing or maintenance of the machinery. This does not preclude the possibility of exchanges of technical information between the manufacturer and the body.

2. The body and its staff shall carry out the verification tests with the highest degree of professional integrity and technical competence and shall be free from all pressures and inducements, particularly financial, which might influence their judgement or the results of the inspection, especially from persons or groups of persons with an interest in the result of verifications.

3. The body shall have at its disposal the necessary staff and possess the necessary facilities to enable it to perform properly the administrative and technical tasks connected with verification; it shall also have access to the equipment required for special verification.

4. The staff responsible for inspection shall have:

   — sound technical and professional training,

   — satisfactory knowledge of the requirements of the tests they carry out and adequate experience of such tests,

   — the ability to draw up the certificates, records and reports required to authenticate the performance of the tests.

5. The impartiality of inspection staff shall be guaranteed. Their remuneration shall not depend on the number of tests carried out or on the results of such tests.

6. The body shall take out liability insurance unless its liability is assumed by the State in accordance with national law, or the Member State itself is directly responsible for the tests.

7. The staff of the body shall be bound to observe professional secrecy with regard to all information gained in carrying out its tasks (except *vis-à-vis* the competent administrative authorities of the State in which its activities are carried out) under this Directive or any provision of national law giving effect to it.

ANNEX VIII

Part A

Repealed Directives

(referred to by Article 14)

Directive 89/392/EEC and its following amendments:

— Directive 91/368/EEC only Article 1

— Directive 93/44/EEC

— Directive 93/68/EEC only Article 6

Part B

List of deadlines for transposition into and application in national law

(referred to by Article 14)

Directive	Deadline for transposition	Date of application
Directive 89/392/EEC (OJ L 183, 29.6.1989, p. 9)	1 January 1992	Starting from 1 January 1993; for the products referred to by Directives 86/295/EEC, 86/296/EEC and 86/663/EEC: starting from 1 July 1995 (1)
Directive 91/368/EEC (OJ L 198, 22.7.1991, p. 16)	1 January 1992	Starting from 1 January 1993
Directive 93/44/EEC (OJ L 175, 19.7.1993, p. 12)	1 July 1994	— Starting from 1 January 1995 (2) — Starting from 1 July 1994 (2) — Article 1(10), with the exception of points (a), (b) and (q) — Article 1(11)(a) and (b) — Article 1(12)(c), (d), (e) and (f)
Directive 93/68/EEC (OJ L 220, 30.8.1993, p. 1)	1 July 1994	Starting from 1 January 1995 (3)

(1) For the period ending on 31 December 1994, the Member States should have authorised, except for the products referred to by Directives 86/295/EEC, 86/296/EEC and 86/663/EEC for which this period was ending on 31 December 1995, the placing on the market and putting into service of machinery which comply with the national provisions in force in their territories on 31 December 1992.

(2) For the period ending on 31 December 1996, the Member States shall allow the placing on the market and putting into service of machinery for the lifting or moving of persons as well as safety components which comply with the national provisions in force in their territories on 14 June 1993.

(3) Until 1 January 1997 Member States shall allow the placing on the market and putting into service of products which comply with the marking arrangements in force before 1 January 1995.

ANNEX IX

CORRELATION TABLE

Directive 89/392/EEC	This Directive
Article 1(1)	Article 1(1)
Article 1(2), first subparagraph	Article 1(2), point (a), first indent
Article 1(2), second subparagraph	Article 1(2), point (a), second indent
Article 1(2), third subparagraph	Article 1(2), point (a), third indent
Article 1(2), fourth subparagraph	Article 1(2), point (b)
Article 1(3)	Article 1(3)
Article 1(4)	Article 1(4)
Article 1(5)	Article 1(5)
Article 2	Article 2
Article 3	Article 3
Article 4	Article 4
Article 5	Article 5
Article 6	Article 6
Article 7	Article 7
Article 8(1)	Article 8(1)
Article 8(2)	Article 8(2)
Article 8(3)	Article 8(3)
Article 8(4)	Article 8(4)
Article 8(4a)	Article 8(5)
Article 8(5)	Article 8(6)
Article 8(6)	Article 8(7)
Article 8(7)	Article 8(8)
Article 9	Article 9
Article 10	Article 10
Article 11	Article 11
Article 12	Article 12
Article 13(1)	—
Article 13(2)	—
Article 13(3)	Article 13(1)
Article 13(4)	Article 13(2)
—	Article 14
—	Article 15
—	Article 16
Annex I	Annex I
Annex II	Annex II
Annex III	Annex III

Directive 89/392/EEC	This Directive
Annex IV	Annex IV
Annex V	Annex V
Annex VI	Annex VI
Annex VII	Annex VII
—	Annex VIII
—	Annex IX

（資料３） EU Directive (Physical Agent Directive: Vibration)

DIRECTIVE 2002/44/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 25 June 2002

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)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 137(2) thereof,

Having regard to the proposal from the Commission [1], submitted after consultation with the Advisory Committee on Safety, Hygiene and Health Protection at Work,

Having regard to the opinion of the Economic and Social Committee [2],

Having consulted the Committee of the Regions,

Acting in accordance with the procedure laid down in Article 251 of the Treaty [3], in the light of the joint text approved by the Conciliation Committee on 8 April 2002,

Whereas:

(1) Under the Treaty the Council may, by means of directives, adopt minimum requirements for encouraging improvements, especially in the working environment, to guarantee a better level of protection of the health and safety of workers. Such directives are to avoid imposing administrative, financial and legal constraints in a way which would hold back the creation and development of small and medium-sized undertakings.

(2) The communication from the Commission concerning its action programme relating to the implementation of the Community Charter of the Fundamental Social Rights of Workers provides for the introduction of minimum health and safety requirements regarding the exposure of workers to the risks caused by physical agents. In September 1990 the European Parliament adopted a resolution concerning this action programme [4], inviting the Commission in particular to draw up a specific directive on the risks caused by noise and vibration and by any other physical agent at the workplace.

(3) As a first step, it is considered necessary to introduce measures protecting workers from the risks arising from vibrations owing to their effects on the health and safety of workers, in particular muscular/bone structure, neurological and vascular disorders. These measures are intended not only to ensure the health and safety of each worker on an individual basis, but also to create a minimum basis of protection for all Community workers in order to avoid possible distortions of competition.

(4) This Directive lays down minimum requirements, thus giving Member States the option of maintaining or adopting more favourable provisions for the protection of workers, in particular the fixing of lower values for the daily action value or the daily exposure limit value for vibrations. The implementation of this Directive should not serve to justify any regression in relation to the situation which already prevails in each Member State.

(5) A system of protection against vibration must limit itself to a definition, free of excessive detail, of the objectives to be attained, the principles to be observed and the fundamental values to be used, in order to enable Member States to apply the minimum requirements in an equivalent manner.

(6) The level of exposure to vibration can be more effectively reduced by incorporating preventive measures into the design of work stations and places of work and by selecting work equipment, procedures and methods so as to give priority to reducing the risks at source. Provisions relating to work equipment and methods thus contribute to the protection of the workers involved.

(7) Employers should make adjustments in the light of technical progress and scientific knowledge regarding risks related to exposure to vibration, with a view to improving the safety and health protection of workers.

(8) In the case of sea and air transport, given the current state of the art it is not possible to comply in all circumstances with the exposure limit values for whole-body vibration; provision should therefore be made for duly justified exemptions in some cases.

(9) Since this Directive is an individual Directive within the meaning of Article 16(1) of Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work [5], that Directive therefore applies to the exposure of workers to vibration, without prejudice to more stringent and/or specific provisions contained in this Directive.

(10) This Directive constitutes a practical step towards creating the social dimension of the internal market.

[1] OJ C 77, 18.3.1993, p. 12.
OJ C 230, 19.8.1994, p. 3.
[2] OJ C 249, 13.9.1993, p. 28.
[3] Opinion of the European Parliament of 20 April 1994 (OJ C 128, 9.5.1994, p. 146) confirmed on 16 September 1999 (OJ C 54, 25.2.2000, p. 75), Council Common Position of 25 June 2001 (OJ C 301, 26.10.2001, p. 1) and Decision of the European Parliament of 23 October 2001 (not yet published in the Official Journal). Decision of the European Parliament of 25 April 2002 and Council Decision of 21 May 2002.
[4] OJ C 260, 15.10.1990, p. 167.
[5] OJ L 183, 29.6.1989, p. 1.

(11) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission [1],

HAVE ADOPTED THIS DIRECTIVE:

SECTION I

GENERAL PROVISIONS

Article 1

Aim and scope

1. This Directive, which is the 16th individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC, lays down minimum requirements for the protection of workers from risks to their health and safety arising or likely to arise from exposure to mechanical vibration.

2. The requirements of this Directive shall apply to activities in which workers are or are likely to be exposed to risks from mechanical vibration during their work.

3. Directive 89/391/EEC shall apply fully to the whole area referred to in paragraph 1, without prejudice to more stringent and/or more specific provisions contained in this Directive.

Article 2

Definitions

For the purposes of this Directive, the following terms shall mean:

(a) 'hand-arm vibration': the mechanical vibration that, when transmitted to the human hand-arm system, entails risks to the health and safety of workers, in particular vascular, bone or joint, neurological or muscular disorders;

(b) 'whole-body vibration': the mechanical vibration that, when transmitted to the whole body, entails risks to the health and safety of workers, in particular lower-back morbidity and trauma of the spine.

Article 3

Exposure limit values and action values

1. For hand-arm vibration:

(a) the daily exposure limit value standardised to an eight-hour reference period shall be 5 m/s^2;

(b) the daily exposure action value standardised to an eight-hour reference period shall be 2,5 m/s^2.

Workers' exposure to hand-arm vibration shall be assessed or measured on the basis of the provisions of Point 1 of Part A of the Annex.

2. For whole-body vibration:

(a) the daily exposure limit value standardised to an eight-hour reference period shall be 1,15 m/s^2 or, at the choice of the Member State concerned, a vibration dose value of 21 $m/s^{1,75}$;

(b) the daily exposure action value standardised to an eight-hour reference period shall be 0,5 m/s^2 or, at the choice of the Member State concerned, a vibration dose value of 9,1 $m/s^{1,75}$.

Workers' exposure to whole-body vibration shall be assessed or measured on the basis of the provisions of Point 1 of Part B of the Annex.

SECTION II

OBLIGATION OF EMPLOYERS

Article 4

Determination and assessment of risks

1. In carrying out the obligations laid down in Article 6(3) and Article 9(1) of Directive 89/391/EEC, the employer shall assess and, if necessary, measure the levels of mechanical vibration to which workers are exposed. Measurement shall be carried out in accordance with Point 2 of Part A or Point 2 of Part B of the Annex to this Directive, as appropriate.

2. The level of exposure to mechanical vibration may be assessed by means of observation of specific working practices and reference to relevant information on the probable magnitude of the vibration corresponding to the equipment or the types of equipment used in the particular conditions of use, including such information provided by the manufacturer of the equipment. That operation shall be distinguished from measurement, which requires the use of specific apparatus and appropriate methodology.

3. The assessment and measurement referred to in paragraph 1 shall be planned and carried out by competent services at suitable intervals, taking particular account of the provisions of Article 7 of Directive 89/391/EEC concerning the necessary competent services or persons. The data obtained from the assessment and/or measurement of the level of exposure to mechanical vibration shall be preserved in a suitable form so as to permit consultation at a later stage.

4. Pursuant to Article 6(3) of Directive 89/391/EEC, the employer shall give particular attention, when carrying out the risk assessment, to the following:

(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 laid down in Article 3 of this Directive;

(c) any effects concerning the health and safety of workers at particularly sensitive risk;

(d) any indirect effects on worker safety resulting from interactions between mechanical vibration and the workplace or other work equipment;

[1] OJ L 184, 17.7.1999, p. 23.

(e) information provided by the manufacturers of work equipment in accordance with the relevant Community Directives;

(f) the existence of replacement equipment designed to reduce the levels of exposure to mechanical vibration;

(g) the extension of exposure to whole-body vibration beyond normal working hours under the employer's responsibility;

(h) specific working conditions such as low temperatures;

(i) appropriate information obtained from health surveillance, including published information, as far as possible.

5. The employer shall be in possession of an assessment of the risk in accordance with Article 9(1)(a) of Directive 89/391/EEC and shall identify which measures must be taken in accordance with Articles 5 and 6 of this Directive. The risk assessment shall be recorded on a suitable medium, according to national law and practice; it may include a justification by the employer that the nature and extent of the risks related to mechanical vibration make a further detailed risk assessment unnecessary. The risk assessment shall be kept up-to-date on a regular basis, particularly if there have been significant changes which could render it out-of-date, or when the results of health surveillance show it to be necessary.

Article 5

Provisions aimed at avoiding or reducing exposure

1. Taking account of technical progress and of the availability of measures to control the risk at source, the risks arising from exposure to mechanical vibration shall be eliminated at their source or reduced to a minimum.

The reduction of such risks shall be based on the general principles of prevention set out in Article 6(2) of Directive 89/391/EEC.

2. On the basis of the risk assessment referred to in Article 4, once the exposure action values laid down in Article 3(1)(b) and (2)(b) are exceeded, the employer shall establish and implement a programme of technical and/or organisational measures intended to reduce to a minimum exposure to mechanical vibration and the attendant risks, taking into account in particular:

(a) other working methods that require less exposure to mechanical vibration;

(b) the choice of appropriate work equipment of appropriate ergonomic design and, taking account of the work to be done, producing the least possible vibration;

(c) the provision of auxiliary equipment that reduces the risk of injuries caused by vibration, such as seats that effectively reduce whole-body vibration and handles which reduce the vibration transmitted to the hand-arm system;

(d) appropriate maintenance programmes for work equipment, the workplace and workplace systems;

(e) the design and layout of workplaces and work stations;

(f) adequate information and training to instruct workers to use work equipment correctly and safely in order to reduce their exposure to mechanical vibration to a minimum;

(g) limitation of the duration and intensity of the exposure;

(h) appropriate work schedules with adequate rest periods;

(i) the provision of clothing to protect exposed workers from cold and damp.

3. In any event, workers shall not be exposed above the exposure limit value.

If, despite the measures taken by the employer to comply with this Directive, the exposure limit value is exceeded, the employer shall take immediate action to reduce exposure below the exposure limit value. He shall identify the reasons why the exposure limit value has been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent it being exceeded again.

4. Pursuant to Article 15 of Directive 89/391/EEC, the employer shall adapt the measures referred to in this Article to the requirements of workers at particular risk.

Article 6

Worker information and training

Without prejudice to Articles 10 and 12 of Directive 89/391/EEC, the employer shall ensure that workers who are exposed to the risks from mechanical vibration at work and/or their representatives receive information and training relating to the outcome of the risk assessment provided for in Article 4(1) of this Directive, concerning in particular:

(a) the measures taken to implement this Directive in order to eliminate or reduce to a minimum the risks from mechanical vibration;

(b) the exposure limit values and the exposure action values;

(c) the results of the assessment and measurement of the mechanical vibration carried out in accordance with Article 4 of this Directive and the potential injury arising from the work equipment in use;

(d) why and how to detect and report signs of injury;

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

(f) safe working practices to minimise exposure to mechanical vibration.

Article 7

Consultation and participation of workers

Consultation and participation of workers and/or of their representatives shall take place in accordance with Article 11 of Directive 89/391/EEC on the matters covered by this Directive.

SECTION III

MISCELLANEOUS PROVISIONS

Article 8

Health surveillance

1. Without prejudice to Article 14 of Directive 89/391/EEC, Member States shall adopt provisions to ensure the appropriate health surveillance of workers with reference to the outcome of the risk assessment provided for in Article 4(1) of this Directive where it indicates a risk to their health. Those provisions, including the requirements specified for health records and their availability, shall be introduced in accordance with national laws and/or practice.

Health surveillance, the results of which are taken into account in the application of preventive measures at a specific workplace, shall be intended to prevent and diagnose rapidly any disorder linked with exposure to mechanical vibration. Such surveillance shall be appropriate where:

— the exposure of workers to vibration is such that a link can be established between that exposure and an identifiable illness or harmful effects on health,

— it is probable that the illness or the effects occur in a worker's particular working conditions, and

— there are tested techniques for the detection of the illness or the harmful effects on health.

In any event, workers exposed to mechanical vibration in excess of the values stated in Article 3(1)(b) and (2)(b) shall be entitled to appropriate health surveillance.

2. Member States shall establish arrangements to ensure that, for each worker who undergoes health surveillance in accordance with paragraph 1, individual health records are made and kept up-to-date. Health records shall contain a summary of the results of the health surveillance carried out. They shall be kept in a suitable form so as to permit any consultation at a later date, taking into account any confidentiality.

Copies of the appropriate records shall be supplied to the competent authority on request. The individual worker shall, at his request, have access to the health records relating to him personally.

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 occupational health-care professional to be the result of exposure to mechanical vibration at work:

(a) the worker shall be informed by the doctor or other suitably qualified person of the result which relates to him personally. He shall, in particular, receive information and advice regarding any health surveillance which he should undergo following the end of exposure;

(b) the employer shall be informed of any significant findings from the health surveillance, taking into account any medical confidentiality.

(c) the employer shall:

— review the risk assessment carried out pursuant to Article 4,

— review the measures provided for to eliminate or reduce risks pursuant to Article 5,

— take into account the advice of the occupational health-care professional or other suitably qualified person or the competent authority in implementing any measures required to eliminate or reduce risk in accordance with Article 5, including the possibility of assigning the worker to alternative work where there is no risk of further exposure, and

— arrange continued health surveillance and provide for a review of the health status of any other worker who has been similarly exposed. In such cases, the competent doctor or occupational health care professional or the competent authority may propose that exposed persons undergo a medical examination.

Article 9

Transitional periods

With regard to implementation of the obligations laid down in Article 5(3), Member States, after consultation of the two sides of industry in accordance with national legislation or practice, shall be entitled to make use of a maximum transitional period of five years from 6 July 2005 where work equipment is used which was given to workers before 6 July 2007 and which does not permit the exposure limit values to be respected, taking into account the latest technical advances and/or the organisational measures taken. With regard to equipment used in the agriculture and forestry sectors, Member States shall be entitled to extend the maximum transitional period by up to four years.

Article 10

Derogations

1. In compliance with the general principles of health and safety protection for workers, Member States may, in the case of sea and air transport, derogate from Article 5(3) in duly justified circumstances with respect to whole-body vibration where, given the state of the art and the specific characteristics of workplaces, it is not possible to comply with the exposure limit value despite the technical and/or organisation measures taken.

2. In a case where the exposure of a worker to mechanical vibration is usually below the exposure action values given in Article 3(1)(b) and (2)(b) but varies markedly from time to time and may occasionally exceed the exposure limit value, Member States may also grant derogations from Article 5(3). However, the exposure value averaged over 40 hours must be less than the exposure limit value and there must be evidence to show that the risks from the pattern of exposure to the work are lower than those from exposure at the exposure limit value.

3. The derogations referred to in paragraphs 1 and 2 shall be granted by Member States after consultation of the two sides of industry in accordance with national laws and practice. Such derogations must be accompanied by conditions which guarantee, taking into account the special circumstances, that the resulting risks are reduced to a minimum and that the workers concerned are subject to increased health surveillance. Such derogations shall be reviewed every four years and withdrawn as soon as the justifying circumstances no longer obtain.

4. Every four years Member States shall forward to the Commission a list of derogations as referred to in paragraphs 1 and 2, indicating the exact reasons and circumstances which made them decide to grant the derogations.

Article 11

Technical amendments

Amendments to the Annex of a strictly technical nature in line with:

(a) the adoption of Directives in the field of technical harmonisation and standardisation with regard to the design, building, manufacture or construction of work equipment and/or workplaces;

(b) technical progress, changes in the most appropriate harmonised European standards or specifications and new findings concerning mechanical vibration;

shall be adopted in accordance with the regulatory procedure laid down in Article 12(2).

Article 12

Committee

1. The Commission shall be assisted by the Committee referred to in Article 17(2) of Directive 89/391/EEC.

2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

The period referred to in Article 5(6) of Decision 1999/468/EC shall be set at three months.

3. The Committee shall adopt its rules of procedure.

SECTION IV

FINAL PROVISIONS

Article 13

Reports

Every five years Member States shall provide a report to the Commission on the practical implementation of this Directive, indicating the points of view of the two sides of industry. It shall contain a description of best practice for preventing vibrations with a harmful effect on health and of other forms of work organisation, together with the action taken by the Member States to impart knowledge of such best practice.

On the basis of those reports, the Commission shall carry out an overall assessment of the implementation of the Directive, including implementation in the light of research and scientific information, and shall inform the European Parliament, the Council, the Economic and Social Committee and the Advisory Committee on Safety, Hygiene and Health Protection at Work thereof and, if necessary, propose amendments.

Article 14

Transposition

1. The Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive no later than 6 July 2005. They shall forthwith inform the Commission thereof. They shall also include a list, giving detailed reasons, of the transitional arrangements which the Member States have adopted in accordance with Article 9.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

2. Member States shall communicate the provisions of national law which they adopt or have already adopted in the field covered by this Directive to the Commission.

Article 15

Entry into force

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

Article 16

Addressees

This Directive is addressed to the Member States.

Done at Luxembourg, 25 June 2002.

For the European Parliament	*For the Council*
The President	*The President*
P. COX	J. MATAS I PALOU

ANNEX

A. HAND-ARM VIBRATION

1. Assessment of exposure

The assessment of the level of exposure to hand-arm vibration is 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_{hwx}, a_{hwy}, a_{hwz} as defined in Chapters 4 and 5 and Annex A to ISO standard 5349-1(2001).

The assessment of the level of exposure may be carried out on the basis of an estimate based on information provided by the manufacturers concerning the level of emission from the work equipment used, and based on the observation of specific work practices or on measurement.

2. Measurement

When measurement is employed in accordance with Article 4(1):

(a) the methods used may include sampling, which must be representative of the personal exposure of a worker to the mechanical vibration in question; the methods and apparatus used must be adapted to the particular characteristics of the mechanical vibration to be measured, to ambient factors and to the characteristics of the measuring apparatus, in accordance with ISO standard 5349-2(2001);

(b) in the case of devices which need to be held with both hands, measurements must be made on each hand. The exposure is determined by reference to the higher value of the two; information for the other hand shall also be given.

3. Interference

Article 4(4)(d) will apply, in particular where the mechanical vibration interferes with the proper handling of controls or reading of indicators.

4. Indirect risks

Article 4(4)(d) will apply in particular when the mechanical vibration interferes with the stability of structures or the security of joints.

5. Individual protectors

Personal protective equipment against hand-arm vibration may contribute to the programme of measures referred to in Article 5(2).

B. WHOLE-BODY VIBRATION

1. Assessment of exposure

The assessment of the level of exposure to vibration is based on the calculation of daily exposure A(8) expressed as equivalent continuous acceleration over an eight-hour period, calculated as the highest (rms) value, or the highest vibration dose value (VDV) of the frequency-weighted accelerations, determined on three orthogonal axes ($1{,}4a_{wx}$, $1{,}4a_{wy}$, a_{wz} for a seated or standing worker) in accordance with Chapters 5, 6 and 7, Annex A and Annex B to ISO standard 2631-1(1997).

The assessment of the level of exposure may be carried out on the basis of an estimate based on information provided by the manufacturers concerning the level of emission from the work equipment used, and based on observation of specific work practices or on measurement.

In the case of maritime shipping, Member States may consider only vibrations of a frequency exceeding 1 Hz.

2. Measurement

When measurement is employed in accordance with Article 4(1), the methods used may include sampling, which must be representative of the personal exposure of a worker to the mechanical vibration in question. The methods used must be adapted to the particular characteristics of the mechanical vibration to be measured, to ambient factors and to the characteristics of the measuring apparatus.

3. Interference

Article 4(4)(d) will apply, in particular where the mechanical vibration interferes with the proper handling of controls or reading of indicators.

4. **Indirect risks**

Article 4(4)(d) will apply, in particular when the mechanical vibration interferes with the stability of structures or the security of joints.

5. **Extension of exposure**

Article 4(4)(g) will apply, in particular where, owing to the nature of the activity, a worker benefits from the use of rest facilities supervised by the employer; exposure to whole-body vibration in those facilities must be reduced to a level compatible with their purpose and conditions of use, except in cases of '*force majeure*'.

（資料４）イギリスの法律

Statutory Instrument 2005 No. 1093
The Control of Vibration at Work Regulations 2005

The text of this Internet version of the Statutory Instrument which is published by the Queen's Printer of Acts of Parliament has been prepared to reflect the text as it was Made. A print version is also available and is published by The Stationery Office Limited as the **The Control of Vibration at Work Regulations 2005**, ISBN 0110727673. The print version may be purchased by clicking here. Braille copies of this Statutory Instrument can also be purchased at the same price as the print edition by contacting TSO Customer Services on 0870 600 5522 or e-mail: customer.services@tso.co.uk.