



EUROPEAN PARLIAMENT

2009 - 2014

Committee on Employment and Social Affairs

2011/0152(COD)

16.12.2011

AMENDMENTS

19 - 233

Draft report
Elisabeth Morin-Chartier
(PE474.084v02-00)

on the proposal for a directive of the European Parliament and of the Council on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields) (XXth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)

Proposal for a directive
(COM(2011)0348 – C7-0191/2011 – 2011/0152(COD))

AM\886093EN.doc

PE478.400v01-00

EN

United in diversity

EN

Amendment 19
Sylvana Rapti, Stephen Hughes

Proposal for a directive
Recital 6

Text proposed by the Commission

(6) Directive 2004/40/EC should be repealed and more appropriate and proportionate measures protecting workers from the risks associated with electromagnetic fields should be introduced. ***However, it does not address the long-term effects, including possible carcinogenic effects of exposure to time-varying electric, magnetic and electromagnetic fields, for which there is currently no conclusive scientific evidence establishing a causal relationship.*** The present measures should be 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 Union workers, while reducing possible distortions of competition.

Amendment

(6) Directive 2004/40/EC should be repealed and more appropriate and proportionate measures protecting workers from the risks associated with electromagnetic fields should be introduced. The present measures should be 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 Union workers, while reducing possible distortions of competition. ***This Directive, by proposal of the Commission, should be revised within 5 years in order to include the protection of workers to long-term effects as well as safety effects according to the scientific evidence to such effects caused by electromagnetic field exposure.***

Or. en

Amendment 20
Paul Murphy, Georgios Toussas

Proposal for a directive
Recital 6

Text proposed by the Commission

(6) Directive 2004/40/EC should be repealed and more appropriate and proportionate measures protecting workers from the risks associated with electromagnetic fields should be introduced. However, it does not address the long-term effects, including possible carcinogenic effects of exposure to time-varying electric, magnetic and

Amendment

(6) Directive 2004/40/EC should be repealed and more appropriate and proportionate measures protecting workers from the risks associated with electromagnetic fields should be introduced. However, ***presently*** it does not address the long-term effects, including possible carcinogenic effects of exposure to time-varying electric, magnetic and

electromagnetic fields, for which there is currently no conclusive scientific evidence establishing a causal relationship. The present measures should be 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 Union workers, while reducing possible distortions of competition.

electromagnetic fields, for which there is currently no conclusive scientific evidence establishing a causal relationship. The present measures should be 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 Union workers, while reducing possible distortions of competition. ***The Commission and the Member States should step up research and the collection of data on the long-term effects of exposure to time-varying electric, magnetic and electromagnetic fields. The Commission should assess the scientific evidence for long-term effects within 5 years after publication of this Directive in the Official Journal of the European Union and present a proposal for its review in order to include the protection of workers health and safety against such long-term effects.***

Or. en

Amendment 21
Ole Christensen

Proposal for a directive
Recital 6 a (new)

Text proposed by the Commission

Amendment

(6 a) The Commission shall, every 5 years, assess the scientific evidence for long-term effects caused by electromagnetic field exposure, and put forward a proposal for revising the Directive in order to put long-term effects in to the scope of the Directive.

Or. en

Justification

The amendment intends to motivate the Commission every 5 years to draw up an assessment

on possible long-term effects caused by EMF and to extend the scope of the Directive to all risks arising from EMF.

Amendment 22

Evelyn Regner

Proposal for a directive

Recital 7

Text proposed by the Commission

(7) 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 orientation values and action values or the exposure limit values for electromagnetic fields. However, the implementation of this Directive **should** not serve to justify any regression in relation to the situation already prevailing in each Member State.

Amendment

(7) 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 orientation values and action values or the exposure limit values for electromagnetic fields. However, the implementation of this Directive **must** not serve to justify any regression in relation to the situation already prevailing in each Member State.

Or. de

Amendment 23

Ole Christensen

Proposal for a directive

Recital 8 a (new)

Text proposed by the Commission

Amendment

(8 a) The Commission shall, not later than 5 years after adoption of the Directive, put forward a proposal for removing the derogation mentioned in Article 3 (4).

Or. en

Justification

Due to Article 3.4 workers exposed to MRI are not covered by the exposure limit values and action values of the Directive. The amendment intends to make the derogation limited in time.

Amendment 24

Karima Delli

Proposal for a directive

Recital 10

Text proposed by the Commission

Amendment

(10) The undesired effects on the human body are dependent on the frequency of the electromagnetic field or radiation to which it is exposed, from 0 Hz until 100 kHz and above 100 kHz, therefore two different exposure limitation systems need to be considered to protect workers exposed to electromagnetic fields.

deleted

Or. en

Justification

The distinction between high and low frequency is not relevant since in most professional environments, these different types of electromagnetic fields are mixed. We therefore propose to remove this distinction.

Amendment 25

Karima Delli

Proposal for a directive

Recital 13

Text proposed by the Commission

Amendment

(13) 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, that Directive therefore applies to the

(13) 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, that Directive therefore applies to the

exposure of workers to electromagnetic fields, without prejudice to more stringent and/or specific provisions contained in this Directive.

exposure of workers to electromagnetic fields, ***including regarding the effects of long-term exposure***, without prejudice to more stringent and/or specific provisions contained in this Directive.

Or. en

Amendment 26

Karima Delli

Proposal for a directive

Recital 14

Text proposed by the Commission

(14) The power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in order to empower it to make purely technical amendments of the Annexes to this Directive, in line with the adoption of directives in the field of technical harmonisation and standardisation and as a result of the technical progress, changes in the most relevant harmonised European standards or specifications and new scientific findings concerning electromagnetic fields, as well as to adjust ***the orientation and action values and*** the related lists of activities, workplaces and types of equipments. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing-up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and Council.

Amendment

(14) The power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in order to empower it to make purely technical amendments of the Annexes to this Directive, in line with the adoption of directives in the field of technical harmonisation and standardisation and as a result of the technical progress, changes in the most relevant harmonised European standards or specifications and new scientific findings concerning electromagnetic fields, as well as to adjust the related lists of activities, workplaces and types of equipments. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing-up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and Council.

Or. en

Justification

For reasons of simplification and to better protect the workers, we propose to remove the distinction between orientation values and action values.

Amendment 27

Karima Delli

Proposal for a directive

Recital 16

Text proposed by the Commission

(16) A system including exposure limit values, ***orientation values*** and action values, wherever applicable, should be seen as a means to facilitate the provision of a high level of protection against the established adverse health effects that may result from exposure to electromagnetic fields. But such a system may conflict with specific conditions in certain activities, such as medical procedures using magnetic resonance techniques or military operations where interoperability is required and where internationally accepted standards providing an equivalent protection of workers subject to specific exposure situations are already in place. It is therefore necessary to take these particular conditions into account.

Amendment

(16) A system including exposure limit values and action values, wherever applicable, should be seen as a means to facilitate the provision of a high level of protection against the established adverse health ***and safety*** effects that may result from exposure to electromagnetic fields. But such a system may conflict with specific conditions in certain activities, such as ***specific*** medical procedures using magnetic resonance techniques or military operations where interoperability is required and where internationally accepted standards providing an equivalent protection of workers subject to specific exposure situations are already in place. It is therefore necessary to take these particular conditions into account.

Or. en

Justification

For reasons of simplification and to better protect the workers, we propose to remove the distinction between orientation values and action values. We also believe that all MRI should not be treated the same way in this Directive.

Amendment 28

Paul Murphy, Georgios Toussas

Proposal for a directive

Recital 16

Text proposed by the Commission

(16) A system including exposure limit values, orientation values and action values, wherever applicable, should be seen as a means to facilitate the provision of a high level of protection against the established adverse health effects that may result from exposure to electromagnetic fields. But such a system may conflict with specific conditions in certain activities, such as **medical procedures using magnetic resonance techniques or** military operations where interoperability is required and where internationally accepted standards providing an equivalent protection of workers subject to specific exposure situations are already in place. It is therefore necessary to take these particular conditions into account.

Amendment

(16) A system including exposure limit values, orientation values and action values, wherever applicable, should be seen as a means to facilitate the provision of a high level of protection against the established adverse health effects that may result from exposure to electromagnetic fields. But such a system may conflict with specific conditions in certain activities, such as military operations where interoperability is required and where internationally accepted standards providing an equivalent protection of workers subject to specific exposure situations are already in place. It is therefore necessary to take these particular conditions into account.

Or. en

Amendment 29
Karima Delli

Proposal for a directive
Recital 17

Text proposed by the Commission

(17) A system ensuring a high level of protection as regards the adverse health effects that may result from exposure to electromagnetic fields should take due account of specific groups of workers and avoid interference problems with, or effects on the functioning of, medical devices such as metallic prostheses, cardiac pacemakers and defibrillators, cochlear implants and other implants. Interference problems especially with pacemakers may occur at levels below the orientation and action values and should therefore be the object of appropriate precautions and

Amendment

(17) A system ensuring a high level of protection as regards the adverse health **and safety** effects that may result from exposure to electromagnetic fields should take due account of specific groups of workers and avoid interference problems with, or effects on the functioning of, medical devices such as metallic prostheses, cardiac pacemakers and defibrillators, cochlear implants and other implants. Interference problems especially with pacemakers may occur at levels below the orientation and action values and should therefore be the object of

protective measures.

appropriate precautions and protective measures.

Or. en

Amendment 30
Karima Delli

Proposal for a directive
Recital 17 a (new)

Text proposed by the Commission

Amendment

(17 a) The Commission shall, within 5 years, assess the scientific evidence for long-term effects caused by electromagnetic field exposure, and present a proposal for revising the directive in order to include the protection of workers to such long-term effects.

Or. en

Amendment 31
Karima Delli

Proposal for a directive
Article 1 – paragraph 1

Text proposed by the Commission

Amendment

1. This Directive, which is the 20th 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 electromagnetic fields ***(0 Hz to 300 GHz)*** during their work.

1. This Directive, which is the 20th 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 electromagnetic fields during their work.

Or. en

Justification

This definition is referred to in Article 2 (a).

Amendment 32

Karima Delli

Proposal for a directive

Article 1 – paragraph 2

Text proposed by the Commission

Amendment

2. This Directive relates to the direct risks to the health and safety of workers due to known short-term adverse effects in the human body caused by induced electric or magnetic fields, by energy absorption and by contact currents. It also covers indirect health and safety effects. *deleted*

Or. en

Justification

These elements are specified in Articles 2 and 4.

Amendment 33

Sylvana Rapti, Stephen Hughes

Proposal for a directive

Article 1 – paragraph 3

Text proposed by the Commission

Amendment

3. This Directive does not address long-term effects. *deleted*

Or. en

Amendment 34

Paul Murphy, Georgios Toussas

Proposal for a directive
Article 1 – paragraph 3

Text proposed by the Commission

Amendment

3. This Directive does not address long-term effects.

deleted

Or. en

Amendment 35
Liisa Jaakonsaari

Proposal for a directive
Article 1 – paragraph 3

Text proposed by the Commission

Amendment

3. This Directive does not address long-term effects.

deleted

Or. fi

Justification

It is unnecessary to mention this, as there is no scientific research into long-term effects at present. From the point of view of workers, long-term effects are just as essential as – if not even more essential than – their short-term counterparts.

Amendment 36
Karima Delli

Proposal for a directive
Article 1 – paragraph 3

Text proposed by the Commission

Amendment

3. This Directive does not address long-term effects.

3. Regarding long-term effects, the obligations specified by the 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 shall apply.

Amendment 37
Julie Girling

Proposal for a directive
Article 1 – paragraph 3

Text proposed by the Commission

3. This Directive **does not address long-term** effects.

Amendment

3. This Directive **addresses risks due to known short-term adverse effects based on robust scientific evidence.**

Amendment 38
Karima Delli

Proposal for a directive
Article 2 – paragraph 1 – point b

Text proposed by the Commission

(b) ‘adverse health effects’: biological effects that have a detrimental effect on mental, physical and/or general well-being of exposed workers. In this Directive, only short-term effects are considered;

Amendment

deleted

Justification

The distinction between adverse health effects and adverse safety effects being unclear, this definition should be dealt with in Article 4.5.

Amendment 39
Jutta Steinruck, Stephen Hughes

Proposal for a directive
Article 2 – paragraph 1 – point b

Text proposed by the Commission

(b) ‘adverse health effects’: biological effects that have a detrimental effect on mental, physical and/or general well-being of exposed workers. ***In this Directive, only short-term effects are considered;***

Amendment

(b) ‘adverse health effects’: biological effects that have a detrimental effect on mental, physical and/or general well-being of exposed workers;

Or. de

Amendment 40
Heinz K. Becker

Proposal for a directive
Article 2 – paragraph 1 – point b

Text proposed by the Commission

(b) ‘adverse health effects’: biological effects that have a detrimental effect on mental, physical ***and/or general*** well-being of exposed workers. In this Directive, only short-term effects are considered;

Amendment

(b) ‘adverse health effects’: biological effects that have a detrimental effect on mental ***and*** physical well-being of exposed workers. In this Directive, only short-term effects are considered;

Or. de

Amendment 41
Heinz K. Becker

Proposal for a directive
Article 2 – paragraph 1 – point b

Text proposed by the Commission

(b) ‘adverse health effects’: biological effects that have a detrimental effect on mental, physical ***and/or general*** well-being of exposed workers. In this Directive, only short-term effects are considered;

Amendment

(b) ‘adverse health effects’: biological effects that have a detrimental effect on mental ***and*** physical well-being of exposed workers. In this Directive, only short-term effects are considered;

Or. de

Amendment 42
Karima Delli

Proposal for a directive
Article 2 – paragraph 1 – point c

Text proposed by the Commission

Amendment

**(c) ‘adverse safety effects’: effects
creating temporary annoyance or
affecting cognition or other brain or
muscle functions and may thereby affect
the ability of a worker to work safely;** **deleted**

Or. en

Justification

The distinction between adverse health effects and adverse safety effects being unclear, this definition should be dealt with in Article 4.5.

Amendment 43
Karima Delli

Proposal for a directive
Article 2 – paragraph 1 – point d

Text proposed by the Commission

Amendment

**(d) ‘direct effect’: effect on the human
body directly provoked by the presence of
a strong magnetic or electric field, for
example the stimulation of muscles,
nerves or sensory organs, tissue heating,
vertigo or headaches;** **deleted**

Or. en

Justification

This definition should be dealt with in Article 4.5.

Amendment 44
Elisabeth Morin-Chartier

Proposal for a directive
Article 2 – paragraph 1 – point d

Text proposed by the Commission

(d) ‘direct effect’: effect on the human body directly provoked by the presence of a strong magnetic or electric field, for example the stimulation of muscles, nerves or sensory organs, tissue heating, vertigo or **headaches**;

Amendment

(d) ‘direct effect’: effect on the human body directly provoked by the presence of a strong magnetic or electric field, for example, **at certain frequency levels**, the stimulation of muscles, nerves or sensory organs, tissue heating, vertigo or **nausea**;

Or. fr

Justification

The fact that direct effects only occur with certain frequency levels should be made clear. It would be better to mention nausea rather than headaches: the association of nausea with high static magnetic fields is recognised, whereas headaches are not mentioned in any of the ICNIRP’s three documents containing recommendations.

Amendment 45
Sari Essayah

Proposal for a directive
Article 2 – paragraph 1 – point d

Text proposed by the Commission

(d) ‘direct effect’: effect on the human body directly provoked by the presence of a strong magnetic or electric field, for example the stimulation of muscles, nerves or sensory organs, tissue heating, vertigo **or headaches**;

Amendment

(d) ‘direct effect’: effect on the human body directly provoked by the presence of a strong magnetic or electric field, for example the stimulation of muscles, nerves or sensory organs, tissue heating **or** vertigo;

Or. en

Justification

There is no scientific proof on the relationship between magnetic or electric field and headaches. Headache can be caused various of reasons within the workplace and outside the workplace.

Amendment 46
Karima Delli

Proposal for a directive
Article 2 – paragraph 1 – point e

Text proposed by the Commission

Amendment

(e) ‘indirect effect’: effect on an object, due to the presence of a strong electric or magnetic field, which may become the cause of a safety or health hazard, for example contact currents, ferromagnetic projectiles or interference with active implantable medical devices;

deleted

Or. en

Justification

This definition should be dealt with in Article 4.5.

Amendment 47
Karima Delli

Proposal for a directive
Article 2 – paragraph 1 – point f

Text proposed by the Commission

Amendment

(f) ‘exposure limit values’: limits on exposure to electromagnetic fields which have been established on the basis of known health effects and biological considerations. Compliance with the exposure limits values for health effects will ensure that workers exposed to electromagnetic fields are protected against all known adverse health effects. Compliance with the exposure limits values for safety effects will ensure that workers exposed to electromagnetic fields are protected against all known adverse health and safety effects;

(f) ‘exposure limit values’: limits on exposure to electromagnetic fields which have been established on the basis of known health effects and biological considerations, in particular thermal effects and electrical stimulation of tissues;

Or. en

Amendment 48
Julie Girling

Proposal for a directive
Article 2 – paragraph 1 – point f

Text proposed by the Commission

(f) ‘exposure limit values’: limits on exposure to electromagnetic fields which have been established on the basis of known health effects and biological considerations. Compliance with the exposure **limits** values for health effects will ensure that workers exposed to electromagnetic fields are protected against all known adverse health effects. Compliance with the exposure **limits** values for safety effects will ensure that workers exposed to electromagnetic fields are protected against all known adverse health and safety effects;

Amendment

(f) ‘exposure limit values’: limits on exposure to electromagnetic fields which have been established on the basis of known health effects and biological considerations. Compliance with the exposure **limit** values for health effects will ensure that workers exposed to electromagnetic fields are protected against all known adverse health effects. Compliance with the exposure **limit** values for safety effects will ensure that workers exposed to electromagnetic fields are protected against all known adverse health and safety effects;

Or. en

Amendment 49
Karima Delli

Proposal for a directive
Article 2 – paragraph 1 – point g

Text proposed by the Commission

(g) ‘**orientation value**’ and ‘action value’: directly measurable – frequency-dependent – parameters, the magnitude of which is established in terms of electric field strength (E), magnetic field strength (H), magnetic flux density (B) and power density (S), and at which one or more of the measures specified in this Directive must be taken,

Amendment

(g) ‘action value’: directly measurable – frequency-dependent – parameters **of electromagnetic field exposure**, the magnitude of which is established **to ensure by simplified assessment the compliance with relevant exposure limit values or** in terms of electric field strength (E), magnetic field strength (H), magnetic flux density (B) and power density (S), and at which one or more of the measures specified in this Directive must be taken,

Justification

For reasons of simplification and to better protect the workers, we propose to remove the distinction between orientation values and action values.

Amendment 50
Julie Girling

Proposal for a directive
Article 2 – paragraph 1 – point g

Text proposed by the Commission

(g) ‘orientation value’ and ‘action value’: directly measurable – frequency-dependent – parameters, the magnitude of which is established in terms of electric field strength (E), magnetic field strength (H), magnetic flux density (B) and power density (S), and at which one or more of the measures specified in this Directive must be taken,

Amendment

(g) ‘orientation value’ and ‘action value’: directly measurable – frequency-dependent – parameters, the magnitude of which is established in terms of electric field strength (E), magnetic field strength (H), magnetic flux density (B) and power density (S), and at which one or more of the measures specified in this Directive must be taken. ***Compliance with the action value will ensure compliance with the exposure limit value for health effects. Compliance with the orientation value will ensure compliance with the exposure limit values for both adverse health and safety effects.***

Or. en

Amendment 51
Karima Delli

Proposal for a directive
Article 2 – paragraph 2

Text proposed by the Commission

2. The ‘orientation value’ referred to in point (f) of paragraph 1 corresponds to a field level where no adverse health effect should be noticed under normal working

Amendment

deleted

conditions and for persons not being part of a group at particular risk. As a consequence, the depth of the risk assessment procedure can be reduced to a minimum. Compliance with the orientation value will ensure compliance with the relevant exposure limit values for safety and health effects.

The 'action value' referred to in point (f) of paragraph 1 corresponds to the maximum directly measurable field for which automatic compliance with the exposure limit value is guaranteed. Any exposure level between the 'orientation value' and the 'action value' requires more extensive evaluations and preventive measures. Compliance with the action value will ensure compliance with the relevant exposure limit values for health effects.

Or. en

Justification

For reasons of simplification and to better protect the workers, we propose to remove the distinction between orientation values and action values. The definition of action values should be specified in Article 2.1 (g).

Amendment 52
Heinz K. Becker

Proposal for a directive
Article 2 – paragraph 2 – subparagraph 1

Text proposed by the Commission

The 'orientation value' referred to in point (f) of paragraph 1 corresponds to a field level where no adverse health effect should be noticed under normal working conditions and for persons not being part of a group at particular risk. As a consequence, the depth of the risk assessment procedure can be reduced to a minimum. Compliance with the orientation

Amendment

2. The "orientation value" referred to in point (f) of paragraph 1 corresponds to a field level where no adverse health effect ***or effect that may pose a safety risk*** should be noticed under normal working conditions and for persons not being part of a group at particular risk. As a consequence, the depth of the risk assessment procedure can be reduced to a

value will ensure compliance with the relevant exposure limit values for safety and health effects.

minimum. Compliance with the orientation value will ensure compliance with the relevant exposure limit values for safety and health effects.

Or. de

Amendment 53
Sari Essayah

Proposal for a directive
Article 2 – paragraph 2 – subparagraph 2

Text proposed by the Commission

The ‘action value’ referred to in point (f) of paragraph 1 corresponds to the maximum directly measurable field for which automatic compliance with the exposure limit value is guaranteed. Any exposure level between the ‘orientation value’ and the ‘action value’ requires more extensive evaluations **and** preventive measures. Compliance with the action value will ensure compliance with the relevant exposure limit values for health effects.

Amendment

The ‘action value’ referred to in point (f) of paragraph 1 corresponds to the maximum directly measurable field for which automatic compliance with the exposure limit value is guaranteed. Any exposure level between the ‘orientation value’ and the ‘action value’ requires more extensive evaluations **or** preventive measures. Compliance with the action value will ensure compliance with the relevant exposure limit values for health effects.

Or. en

Justification

As long as the exposure is below the action value the verification of compliance with exposure limits is optional and not required. This amendment is in line with the Annex II section D. prevention methods and other conditions.

Amendment 54
Heinz K. Becker

Proposal for a directive
Article 2 – paragraph 2 – subparagraph 2

Text proposed by the Commission

The ‘action value’ referred to in point (f) of

Amendment

The "action value" referred to in point (f)

paragraph 1 corresponds to the maximum directly measurable field for which automatic compliance with the exposure limit value is guaranteed. Any exposure level between the 'orientation value' and the 'action value' requires more extensive evaluations and preventive measures. Compliance with the action value will ensure compliance with the relevant exposure limit values for health effects.

of paragraph 1 corresponds to the maximum directly measurable field for which automatic compliance with the exposure limit value is guaranteed. Any exposure level between the "orientation value" and the "action value" ***with possible health effects*** requires more extensive evaluations and preventive measures. Compliance with the action value will ensure compliance with the relevant exposure limit values for health effects.

Or. de

Amendment 55
Karima Delli

Proposal for a directive
Article 3 – title

Text proposed by the Commission

Amendment

Exposure limit ***values, orientation*** values and action values

Exposure limit values and action values

Or. en

Justification

For reasons of simplification and to better protect the workers, we propose to remove the distinction between orientation values and action values.

Amendment 56
Karima Delli

Proposal for a directive
Article 3 – paragraph 1 – subparagraph 1

Text proposed by the Commission

Amendment

1. Exposure limit ***values as well as orientation and action*** values for ***both electric and magnetic*** fields ***in the frequency range from 0 to 100 kHz*** shall

1. Exposure limit values for ***electromagnetic*** fields shall be as set out in Annex II.

be as set out in Annex II.

Or. en

Justification

The distinction between high and low frequency is not relevant since in most professional environments, these different types of electromagnetic fields are mixed. For reasons of simplification and to better protect the workers, we propose to remove the distinction between orientation values and action values. Therefore, we propose to merge Annexes II and III.

Amendment 57
Thomas Mann

Proposal for a directive
Article 3 – paragraph 1 – subparagraph 1

Text proposed by the Commission

1. Exposure limit values as well as orientation and action values for both electric and magnetic fields in the frequency range from 0 to 100 kHz shall be as set out in Annex II.

Amendment

1. Exposure limit values as well as orientation and action values for both electric and magnetic fields in the frequency range from 0 to 100 kHz shall be as set out in Annex II. ***The limit values shall apply whether the applications are technical or medical in nature.***

Or. de

Amendment 58
Elizabeth Lynne

Proposal for a directive
Article 3 – paragraph 1 – subparagraph 1

Text proposed by the Commission

1. Exposure limit values as well as orientation and action values for both electric and magnetic fields in the frequency range from 0 to 100 kHz shall be as set out in Annex II.

Amendment

1. Exposure limit values as well as orientation ***values*** and action values for both electric and magnetic fields in the frequency range from 0 to 100 kHz shall be as set out in Annex II.

Or. en

Amendment 59
Heinz K. Becker

Proposal for a directive
Article 3 – paragraph 1 – subparagraph 1

Text proposed by the Commission

1. Exposure limit values as well as orientation and action values for both electric and magnetic fields in the frequency range from 0 to 100 kHz shall be as set out in Annex II.

Amendment

Exposure limit values as well as orientation and action values for both electric and magnetic fields in the frequency range from 0 to 100 kHz shall be as set out in Annex II ***and shall apply to all technical and medical applications.***

Or. de

Amendment 60
Karima Delli

Proposal for a directive
Article 3 – paragraph 1 – subparagraph 2

Text proposed by the Commission

For exposure levels above the action value, appropriate verifications shall demonstrate that the exposure level is not exceeding the relevant exposure limit value for health effects. For exposure levels above the orientation value, appropriate verifications shall demonstrate that the exposure is not exceeding the relevant exposure limit values for safety and health effects or by demonstrating that the exposure level is below the action value. In the latter case, preventive measures and information to workers shall be adapted.

Amendment

deleted

Or. en

Justification

The assessment of risks and the determination of exposure should be dealt with in Article 4.

Amendment 61

Sari Essayah

Proposal for a directive

Article 3 – paragraph 1 – subparagraph 2

Text proposed by the Commission

For exposure levels above the action value, appropriate verifications shall demonstrate that the exposure level is not exceeding the relevant exposure limit value for health effects. For exposure levels above the orientation value, appropriate verifications shall demonstrate that the exposure is not exceeding the relevant exposure limit values for safety *and health* effects or *by demonstrating that the exposure level is below the action value*. In the latter case, preventive measures and information to workers shall be adapted.

Amendment

For exposure levels above the action value, appropriate verifications shall demonstrate that the exposure level is not exceeding the relevant exposure limit value for health effects. For exposure levels above the orientation value, appropriate verifications shall demonstrate that the exposure is not exceeding the relevant exposure limit values for safety effects or the *employer shall minimize safety effects by preventive measures and training*. In the latter case, preventive measures and information to workers shall be adapted.

Or. en

Justification

The Orientation value is related to the safety effects, which have lower exposure limit values than health effects. Also “lighter” preventive means are then necessary.

Amendment 62

Elizabeth Lynne

Proposal for a directive

Article 3 – paragraph 1 – subparagraph 2

Text proposed by the Commission

For exposure levels above the action value, appropriate verifications shall demonstrate that the exposure level is not exceeding the relevant exposure limit value for health

Amendment

For exposure levels above the action value, appropriate verifications shall demonstrate that the exposure level is not exceeding the relevant exposure limit value

effects. For exposure levels above the orientation value, appropriate verifications **shall** demonstrate that the exposure **is not exceeding** the relevant exposure limit values for safety **and health** effects **or by demonstrating that the exposure level is below the action value. In the latter case, preventive measures and information to workers shall be adapted.**

for health effects. For exposure levels above the orientation value, **procedures and training for workers shall be put in place to prevent safety consequences of any occurrence of adverse safety effects, unless** appropriate verifications demonstrate that the exposure **does not exceed** the relevant exposure limit values for safety effects.

Or. en

Amendment 63
Karima Delli

Proposal for a directive
Article 3 – paragraph 2 – subparagraph 1

Text proposed by the Commission

2. **Exposure limit values and action values for both electric and magnetic fields in the frequency range from 100 kHz to 300 GHz shall be as set out in Annex III.**

Amendment

2. **Action values for electromagnetic fields shall be as set out in Annex II.**

Or. en

Justification

The distinction between high and low frequency is not relevant since in most professional environments, these different types of electromagnetic fields are mixed. For reasons of simplification and to better protect the workers, we propose to remove the distinction between orientation values and action values. Therefore, we propose to merge Annexes II and III.

Amendment 64
Julie Girling

Proposal for a directive
Article 3 – paragraph 2 – subparagraph 1

Text proposed by the Commission

2. Exposure limit values and action values for both electric and magnetic fields in the

Amendment

2. Exposure limit values **for health effects** and action values for both electric and

frequency range from 100 kHz to 300 GHz shall be as set out in Annex III.

magnetic fields in the frequency range from 100 kHz to 300 GHz shall be as set out in Annex III.

Or. en

Amendment 65
Karima Delli

Proposal for a directive
Article 3 – paragraph 2 – subparagraph 2

Text proposed by the Commission

Amendment

For exposure of levels above the action level, appropriate verifications shall demonstrate that the exposure is not exceeding the relevant exposure limit value for health effects.

deleted

Or. en

Justification

The assessment of risks and the determination of exposure should be dealt with in Article 4.

Amendment 66
Karima Delli

Proposal for a directive
Article 3 – paragraph 3

Text proposed by the Commission

Amendment

3. For the assessment, measurement and/or calculation of workers' exposure levels to electromagnetic fields likely to be significantly below the action value, simple methods may be used. For the other cases where the exposure level is likely to be close or above the action value, Member States shall give guidance based on available harmonised European standards established by the European

deleted

***Committee for Electrotechnical
Standardisation (CENELEC) or on other
scientifically-based standards or
guidelines.***

Or. en

Justification

The assessment of risks and the determination of exposure should be dealt with in Article 4.

Amendment 67

Jutta Steinruck, Sylvana Rapti, Stephen Hughes

**Proposal for a directive
Article 3 – paragraph 3**

Text proposed by the Commission

3. For the assessment, measurement and/or calculation of workers' exposure levels to electromagnetic fields likely to be significantly below the action value, simple methods may be used. For the other cases where the exposure level is likely to be close or above the action value, Member States shall give guidance based on available harmonised European standards established by the European Committee for Electrotechnical Standardisation (CENELEC) or on other scientifically-based standards or guidelines.

Amendment

3. Where the exposure level is likely to be close or above the action value, Member States shall give guidance based on available harmonised European standards established by the European Committee for Electrotechnical Standardisation (CENELEC) or on other scientifically-based standards or guidelines.

Or. en

Amendment 68

Julie Girling

**Proposal for a directive
Article 3 – paragraph 3**

Text proposed by the Commission

3. For the assessment, measurement and/or calculation of workers' exposure levels to electromagnetic fields likely to be significantly below the action value, simple methods may be used. For the other cases where the exposure level is likely to be close or above the action value, **Member States shall give guidance based on** available harmonised European standards established by the European Committee for Electrotechnical Standardisation (CENELEC) or on other scientifically-based standards or guidelines.

Amendment

3. For the assessment, measurement and/or calculation of workers' exposure levels to electromagnetic fields likely to be significantly below the action value, simple methods may be used. For the other cases where the exposure level is likely to be close **to** or above the action value, **employers may make an assessment using, where** available, harmonised European standards established by the European Committee for Electrotechnical Standardisation (CENELEC) or on other scientifically-based standards or guidelines.

Or. en

Amendment 69
Elizabeth Lynne

Proposal for a directive
Article 3 – paragraph 3 a (new)

Text proposed by the Commission

Amendment

3 a. The demonstration that the exposure is not exceeding the relevant exposure limit value is presumed if a machine or an installation of machines in combination meets technical files and /or instruction handbook based on harmonised European standards and establishes safe exposure levels.

Or. en

Amendment 70
Paul Murphy, Georgios Toussas

Proposal for a directive
Article 3 – paragraph 4

Text proposed by the Commission

Amendment

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV. *deleted*

Or. en

**Amendment 71
Thomas Mann**

**Proposal for a directive
Article 3 – paragraph 4**

Text proposed by the Commission

Amendment

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV. *deleted*

Or. de

Amendment 72
Heinz K. Becker

Proposal for a directive
Article 3 – paragraph 4

Text proposed by the Commission

Amendment

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV.

deleted

Or. de

Amendment 73
Jutta Steinruck

Proposal for a directive
Article 3 – paragraph 4

Text proposed by the Commission

Amendment

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and *the following* related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. *In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV.*

4. *Specific protection measures shall be put in place for* medical applications using the magnetic resonance effect and related activities *involving* integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. *In order to guarantee protection for this group of workers, the following protection measures shall apply:*

- *time limit for the maximum permissible daily duration of exposure*
- *interruption in the time of exposure through regulations on breaks or changes in activity*
- *compliance with minimum distances from sources of electromagnetic fields*
- *suitable preventive health monitoring through occupational health examinations*

Or. de

Amendment 74
Karima Delli

Proposal for a directive
Article 3 – paragraph 4

Text proposed by the Commission

4. *By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV.*

Amendment

4. *Without prejudice to paragraph 5, workers may not be exposed above the exposure limit values. For specific situations where the exposure of a worker may occasionally exceed the exposure limit values and where, in duly justified circumstances, given the state of the art and the specific characteristics of workplaces, it is not possible to comply with the exposure limit values despite the technical and/or organization measures taken, Member States may put in place a system authorizing work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annex II. Such system shall guarantee that the resulting risks are reduced to a minimum and that the workers concerned are subject to increased health surveillance. An authorization shall be withdrawn as soon as the justifying circumstances no*

longer obtain. Member States shall forward to the Commission a list of such authorizations in the report referred to in Article 17a of Directive 89/391/EEC indicating the exact reasons and circumstances which made them decide to grant them.

In the particular case of medical applications using the magnetic resonance effect where the exposure of a worker may occasionally exceed the exposure limit values, additional protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV.

Or. en

Justification

Derogations shall apply only for MRI applications that exceed the exposure limit values, but within the framework of the general derogation including the authorization system and the reinforced controls.

Amendment 75 **Ria Oomen-Ruijten**

Proposal for a directive **Article 3 – paragraph 4**

Text proposed by the Commission

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In **these** particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex

Amendment

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. **Persons working with this equipment must be adequately protected. To this end, the Commission must submit measures by 31 December 2012.** In particular cases, specific protection measures shall be put in place. For this purpose the Commission

IV.

shall consult the existing working groups and proceed according to the measures set out in Annex IV.

Or. nl

Amendment 76
Ole Christensen

Proposal for a directive
Article 3 – paragraph 4

Text proposed by the Commission

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV.

Amendment

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV. ***No later than 5 years after adoption of the Directive the Commission shall table a proposal for removing the derogation mentioned in Article 3 (4).***

Or. en

Justification

All workers shall be fully protected by the Directive. Due to Article 3.4 workers exposed to MRI are not protected by the exposure limit values and action values of the Directive. The amendment intends to make the derogation limited in time.

Amendment 77
Sari Essayah

Proposal for a directive
Article 3 – paragraph 4

Text proposed by the Commission

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV.

Amendment

4. By way of derogation, paragraphs 1 and 2 shall not apply to medical applications using the magnetic resonance effect and the following related activities: integral system testing before release for shipment, installation, cleaning, maintenance, research and development activities. In these particular cases, specific protection measures shall be put in place. For this purpose the Commission shall consult the existing working groups and proceed according to the measures set out in Annex IV. ***Concerning medical applications using the magnetic resonance effect, no stronger electromagnetic fields may be created by new equipment than are created by the present commercially available equipment.***

Or. en

Amendment 78
Elisabeth Morin-Chartier

Proposal for a directive
Article 3 – paragraph 4 – subparagraph 1a (new)

Text proposed by the Commission

Amendment

In order to develop a sound applicable methodology, to provide adequate protection for people working with and/or in proximity to magnetic resonance imaging (MRI) equipment with time-varying electromagnetic fields (the gradients and RF) in operation, and to take due account of existing precautionary and protection measures against exposure to electromagnetic fields, employers shall perform risk assessments and take appropriate technical and organisational measures to protect workers against potential risks

arising directly or indirectly from exposure to electromagnetic fields. Workers shall only be permitted to be in proximity to MRI equipment with time-varying electromagnetic fields (gradients and RF) in operation when performing actions which strictly necessitate their presence. Employers shall define a controlled access zone around the machinery. This zone shall be fully contained within the 0.5 mT contour and shall be defined in such a way that it is possible to use physical and/or administrative means to control access thereto. Employers shall establish technical, organisational, information and training measures for workers who can enter the controlled access zone without surveillance, so as to reduce the risks of direct and indirect exposure and prevent risks.

Or. fr

Amendment 79
Elizabeth Lynne

Proposal for a directive
Article 3 – paragraph 4 a (new)

Text proposed by the Commission

Amendment

4 a. In order to provide adequate protection for people working within the zone of exposure of magnetic resonance imaging (MRI) equipment, with the switched magnetic field gradients in operation, and to take due account of existing precautionary and protective measures against exposure to electromagnetic fields, employers shall perform risk assessments and take appropriate technical and organisational measures to protect workers against potential risks arising from exposure to electromagnetic fields. The only workers

permitted to be in the zone of exposure of MRI equipment while it is in operation are those performing medical procedures, research, maintenance and cleaning which strictly necessitate their presence. Employers shall define a controlled access zone around the static magnetic field and take technical, organisational, information and training measures for workers who can enter the controlled access zone so as to reduce exposure and prevent risks.

Or. en

Amendment 80
Thomas Mann

Proposal for a directive
Article 3 – paragraph 5

Text proposed by the Commission

Amendment

5. By way of derogation, paragraphs 1 and 2 shall not apply to the armed forces in Member States where an equivalent and more specific protection system such as NATO standard STANAG 2345 is already in place and implemented. Member States shall inform the Commission of the existence and effective implementation of such protection systems when notifying the transposition of the provisions of this Directive into national legislation in accordance with Article 14.

deleted

Or. de

Amendment 81
Paul Murphy, Georgios Toussas

Proposal for a directive
Article 3 – paragraph 5

Text proposed by the Commission

5. By way of derogation, paragraphs 1 and 2 shall not apply to the armed forces in Member States where an equivalent and more specific protection system such as NATO standard STANAG 2345 is already in place and implemented. Member States shall inform the Commission of the existence and effective implementation of such protection systems when notifying the transposition of the provisions of this Directive into national legislation in accordance with Article 14.

Amendment

5. By way of derogation, paragraphs 1 and 2 shall not apply to the armed forces in Member States where an equivalent and more specific protection system such as NATO standard STANAG 2345 is already in place and implemented. **However, Member States shall ensure that health surveillance in accordance with Article 14 of Directive 89/391/EEC and Article 8 of this Directive is effectively implemented. Member States shall** inform the Commission of the existence and effective implementation of such protection systems when notifying the transposition of the provisions of this Directive into national legislation in accordance with Article 14.

Or. en

Amendment 82

Sylvana Rapti, Stephen Hughes

Proposal for a directive

Article 3 – paragraph 5 – subparagraph 1a (new)

Text proposed by the Commission

Amendment

In order to provide adequate protection equally for people working in the armed forces and to take due account of existing precautionary and protective measures against exposure to electromagnetic fields, the competent authorities of the states shall perform risk assessments and take appropriate technical and organisational measures to protect these people against potential risks arising from exposure to electromagnetic fields. The armed forces shall define a controlled access zone around the static magnetic field and take technical, organisational, information and training measures for people who can enter the controlled

access zone so as to reduce exposure and prevent risks.

Or. en

Amendment 83
Sylvana Rapti, Stephen Hughes

Proposal for a directive
Article 3 – paragraph 5 a (new)

Text proposed by the Commission

Amendment

5 a. In the light of eventual new scientific elements, the Commission shall, within five years reevaluate whether the derogations of paragraphs 4 and 5 should be maintained or adapt the relevant protection measures accordingly.

Or. en

Amendment 84
Karima Delli

Proposal for a directive
Article 3 – paragraph 6

Text proposed by the Commission

Amendment

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to in Article 17a of

deleted

Directive 89/391/EEC.

Or. en

Justification

General derogation should be moved to paragraph 4.

Amendment 85
Ole Christensen

Proposal for a directive
Article 3 – paragraph 6

Text proposed by the Commission

Amendment

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to in Article 17a of Directive 89/391/EEC. **deleted**

Or. en

Justification

The text proposed by the Commission opens for the Member States to authorize work to exceed the exposure limit values. The proposed amendment proposes to delete the paragraph, as it undermines the basic idea of establishing an equal level of protection for the workers in the European Union.

Amendment 86
Paul Murphy, Georgios Toussas

**Proposal for a directive
Article 3 – paragraph 6**

Text proposed by the Commission

6. ***Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to in Article 17a of Directive 89/391/EEC.***

Amendment

6. ***Workers*** may not be exposed above the exposure limit values for health effects.

Or. en

**Amendment 87
Jutta Steinruck, Sylvana Rapti, Stephen Hughes**

**Proposal for a directive
Article 3 – paragraph 6**

Text proposed by the Commission

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. ***For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall***

Amendment

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects.

be reported to the Commission in the report referred to in Article 17a of Directive 89/391/EEC.

Or. en

Amendment 88
Evelyn Regner

Proposal for a directive
Article 3 – paragraph 6

Text proposed by the Commission

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. *For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to in Article 17a of Directive 89/391/EEC.*

Amendment

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects.

Or. de

Justification

No subsequent specific derogations should be made, since this can lead to distortions of competition. The EU has a primary law obligation to improve the working environment in order to protect workers' health and safety (Article 153(1) TFEU).

Amendment 89
Julie Girling

Proposal for a directive
Article 3 – paragraph 6

Text proposed by the Commission

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may **temporarily** be exceeded, Member States may put in place a system **authorising** work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to in Article 17a of Directive 89/391/EEC.

Amendment

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may be exceeded, Member States may put in place a system **allowing** work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to in Article 17a of Directive 89/391/EEC.

Or. en

Amendment 90

Sari Essayah

Proposal for a directive

Article 3 – paragraph 6

Text proposed by the Commission

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to **in** Article 17a of Directive 89/391/EEC.

Amendment

6. Without prejudice to paragraphs 4 and 5, workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to **in** Article 17a of Directive 89/391/EEC.

Or. en

Amendment 91
Thomas Mann

Proposal for a directive
Article 3 – paragraph 6

Text proposed by the Commission

6. ***Without prejudice to paragraphs 4 and 5***, workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to in Article 17a of Directive 89/391/EEC.

Amendment

6. Workers may not be exposed above the exposure limit values for health effects. For specific situations where these values may temporarily be exceeded, Member States may put in place a system authorising work under controlled conditions and on the basis of a comprehensive risk assessment setting out the actual exposure levels and their likelihood and comparing them to the exposure limit values defined in Annexes II and III. Such specific situations shall be reported to the Commission in the report referred to in Article 17a of Directive 89/391/EEC.

Or. de

Justification

Derogations imply the inadmissible unequal treatment of workers and represent a serious breach of the framework directive on health and safety at work (89/391/EEC). Manufacturers must ensure, through innovation, that the number of applications can be kept constant or can be further increased in spite of the limit values. Derogations or less stringent limit values significantly reduce the necessary pressure on manufacturers to innovate, at the expense of workers health.

Amendment 92
Karima Delli

Proposal for a directive
Article 4 – title

Text proposed by the Commission

Determination of exposure and

Amendment

Assessment of risks and ***determination*** of

Amendment 93
Karima Delli

Proposal for a directive
Article 4 – paragraph 1

Text proposed by the Commission

1. ***In carrying out the obligations laid down in Articles 6(3) and 9(1) of Directive 89/391/EEC, the employer shall assess and, if necessary, measure and/or calculate the levels of electromagnetic fields to which workers are exposed. Assessment, measurement and calculation may be carried out using the guidance provided in Annexes II and III. For specific cases not referred to in these Annexes, the employer may use harmonised European standards established by CENELEC for relevant assessment, measurement and calculation situations. The employer shall also be entitled to use other scientifically based standards or guidelines if required by the Member State concerned. When relevant, the employer shall also take into account the emission levels and other safety-related data provided by the manufacturers of equipment in accordance with relevant Union legislation.***

Amendment

1. ***The employer shall be in possession of an assessment of the risks in accordance with the Directive 89/391/EEC and shall identify which measures must be taken in accordance with 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 the extent of the risks related to electromagnetic fields make a further detailed risk assessment unnecessary. The risk assessment shall be updated 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 this to be necessary.***

Justification

As CENELEC standards are not open standards, they should not be mentioned in this Directive.

Amendment 94
Sari Essayah

Proposal for a directive
Article 4 – paragraph 1

Text proposed by the Commission

1. In carrying out the obligations laid down in Articles 6(3) and 9(1) of Directive 89/391/EEC, the employer shall assess and, if necessary, measure and/or calculate the levels of electromagnetic fields to which workers are exposed. Assessment, measurement and calculation may be carried out using the guidance provided in Annexes II and III. For specific cases not referred to in these Annexes, the employer may use harmonised European standards established by CENELEC for relevant assessment, measurement and calculation situations. The employer shall also be entitled to use other scientifically based standards or guidelines ***if required by the Member State concerned***. When relevant, the employer shall also take into account the emission levels and other safety-related data provided by the manufacturers of equipment in accordance with relevant Union legislation.

Amendment

1. In carrying out the obligations laid down in Articles 6(3) and 9(1) of Directive 89/391/EEC, the employer shall assess and, if necessary, measure and/or calculate the levels of electromagnetic fields to which workers are exposed. Assessment, measurement and calculation may be carried out using the guidance provided in Annexes II and III. For specific cases not referred to in these Annexes, the employer may use harmonised European standards established by CENELEC for relevant assessment, measurement and calculation situations. The employer shall also be entitled to use other scientifically based standards or guidelines. When relevant, the employer shall also take into account the emission levels and other safety-related data provided by the manufacturers of equipment in accordance with relevant Union legislation.

Or. en

Justification

The employer should have the right to use scientifically based standards or guidelines even if the Member State concerned does not require it.

Amendment 95
Julie Girling

Proposal for a directive
Article 4 – paragraph 1

Text proposed by the Commission

1. In carrying out the obligations laid down in Articles 6(3) and 9(1) of Directive 89/391/EEC, the employer shall assess and, if necessary, measure and/or calculate the levels of electromagnetic fields to which workers are exposed. Assessment, measurement and calculation may be carried out using the guidance provided in Annexes II and III. For specific cases not referred to in these Annexes, the employer may use harmonised European standards established by CENELEC for relevant assessment, measurement and calculation situations. The employer shall also be entitled to use other scientifically based standards or guidelines ***if required by the Member State concerned***. When relevant, the employer shall also take into account the emission levels and other safety-related data provided by the manufacturers of equipment in accordance with relevant Union legislation.

Amendment

1. In carrying out the obligations laid down in Articles 6(3) and 9(1) of Directive 89/391/EEC, the employer shall assess and, if necessary, measure and/or calculate the levels of electromagnetic fields to which workers are exposed. Assessment, measurement and calculation may be carried out using the guidance provided in Annexes II and III. For specific cases not referred to in these Annexes, the employer may use harmonised European standards established by CENELEC for relevant assessment, measurement and calculation situations. The employer shall also be entitled to use other scientifically based standards or guidelines. When relevant, the employer shall also take into account the emission levels and other safety-related data provided by the manufacturers of equipment in accordance with relevant Union legislation.

Or. en

Amendment 96

Karima Delli

Proposal for a directive

Article 4 – paragraph 1 a (new)

Text proposed by the Commission

Amendment

1 a. Except in cases of justified reasons related to data protection, this assessment shall be made public on request.

Or. en

Amendment 97

Karima Delli

Proposal for a directive
Article 4 – paragraph 2

Text proposed by the Commission

Amendment

2. On the basis of the assessment of the levels of electromagnetic fields undertaken in accordance with paragraph 1, if any of the action values referred to in Annexes II or III is exceeded, the employer shall further assess and, if necessary, calculate whether the exposure limit values for health effects are exceeded.

deleted

Or. en

Justification

This paragraph should be moved after paragraph 6.

Amendment 98
Julie Girling

Proposal for a directive
Article 4 – paragraph 2

Text proposed by the Commission

Amendment

2. On the basis of the assessment of the levels of electromagnetic fields undertaken in accordance with paragraph 1, if any of the **action** values referred to in **Annexes II or III** is exceeded, the employer shall further assess and, if necessary, calculate whether the exposure limit values for **health** effects are exceeded.

2. On the basis of the assessment of the levels of electromagnetic fields undertaken in accordance with paragraph 1, if any of the **orientation** values referred to in **Annex II** is exceeded, the employer shall further assess and, if necessary, calculate whether the exposure limit values for **safety** effects are exceeded.

Or. en

Amendment 99
Elizabeth Lynne

Proposal for a directive
Article 4 – paragraph 2

Text proposed by the Commission

2. On the basis of the assessment of the levels of electromagnetic fields undertaken in accordance with paragraph 1, if any of the **action** values referred to in **Annexes II or III** is exceeded, the employer shall further assess and, if necessary, calculate whether the exposure limit values for **health** effects are exceeded.

Amendment

2. On the basis of the assessment of the levels of electromagnetic fields undertaken in accordance with paragraph 1, if any of the **orientation** values referred to in **Annex II** is exceeded, the employer shall further assess and, if necessary calculate whether the exposure limit value for **safety** effects are exceeded.

Or. en

Amendment 100
Karima Delli

Proposal for a directive
Article 4 – paragraph 3

Text proposed by the Commission

3. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 need not be carried out in workplaces open to the public provided that an evaluation has already been undertaken in accordance with the provisions of Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)⁹, and the restrictions as specified therein are respected for workers and safety risks are excluded. Where equipment, intended for the public and complying with EU product legislation and especially Directives 1999/5/EC and 2006/95/EC are being used as intended these conditions are met.

Amendment

deleted

Or. en

Amendment 101
Paul Murphy, Georgios Toussas

Proposal for a directive
Article 4 – paragraph 3

Text proposed by the Commission

Amendment

3. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 need not be carried out in workplaces open to the public provided that an evaluation has already been undertaken in accordance with the provisions of Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)⁹, and the restrictions as specified therein are respected for workers and safety risks are excluded. Where equipment, intended for the public and complying with EU product legislation and especially Directives 1999/5/EC and 2006/95/EC are being used as intended these conditions are met.

deleted

Or. en

Amendment 102
Julie Girling

Proposal for a directive
Article 4 – paragraph 3

Text proposed by the Commission

Amendment

3. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 need not be carried out in workplaces open to the public provided that an evaluation has already been undertaken in accordance with the provisions of Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic

3. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 **and 2 a** need not be carried out in workplaces open to the public provided that an evaluation has already been undertaken in accordance with the provisions of Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public

fields (0 Hz to 300 GHz)⁹, and the restrictions as specified therein are respected for workers and safety risks are excluded. Where equipment, intended for the public and complying with EU product legislation and especially Directives 1999/5/EC and 2006/95/EC are being used as intended these conditions are met.

to electromagnetic fields (0 Hz to 300 GHz)⁹, and the restrictions as specified therein are respected for workers and safety risks are excluded. Where equipment, intended for the public and complying with EU product legislation and especially Directives 1999/5/EC and 2006/95/EC are being used as intended these conditions are met.

Or. en

Amendment 103
Elizabeth Lynne

Proposal for a directive
Article 4 – paragraph 3

Text proposed by the Commission

3. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 need not be carried out in workplaces open to the public provided that an evaluation has already been undertaken in accordance with the provisions of Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)⁹, and the restrictions as specified therein are respected for workers and safety risks are excluded. Where equipment, intended for the public and complying with EU product legislation and especially Directives 1999/5/EC and 2006/95/EC are being used as intended these conditions are met.

Amendment

3. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 **and 2a** need not be carried out in workplaces open to the public provided that an evaluation has already been undertaken in accordance with the provisions of Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)⁹, and the restrictions as specified therein are respected for workers and safety risks are excluded. Where equipment, intended for the public and complying with EU product legislation and especially Directives 1999/5/EC and 2006/95/EC are being used as intended these conditions are met.

Or. en

Amendment 104
Karima Delli

Proposal for a directive
Article 4 – paragraph 4

Text proposed by the Commission

Amendment

4. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 shall be planned and carried out by competent services or persons at suitable intervals, taking into account the guidance given in Annexes II and III and taking particular account of Articles 7 and 11 of Directive 89/391/EEC concerning the necessary competent services or persons and the consultation and participation of workers. The data obtained from the assessment, measurement and/or calculation of the level of exposure shall be preserved in a suitable form so as to permit consultation at a later stage.

deleted

Or. en

Justification

This paragraph should be moved after paragraph 6.

Amendment 105
Heinz K. Becker

Proposal for a directive
Article 4 – paragraph 4

Text proposed by the Commission

Amendment

4. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 shall be planned and carried out by competent services or persons at suitable intervals, taking into account the guidance given in Annexes II and III and taking particular account of Articles 7 and 11 of Directive 89/391/EEC concerning the necessary competent services or persons and the consultation and participation of

4. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 shall be planned and carried out by competent services or persons at suitable intervals **and in the case of significant changes**, taking into account the guidance given in Annexes II and III and taking particular account of Articles 7 and 11 of Directive 89/391/EEC concerning the necessary competent services or persons

workers. The data obtained from the assessment, measurement and/or calculation of the level of exposure shall be preserved in a suitable form so as to permit consultation at a later stage.

and the consultation and participation of workers. The data obtained from the assessment, measurement and/or calculation of the level of exposure shall be preserved in a suitable form so as to permit consultation at a later stage.

Or. de

Amendment 106
Elizabeth Lynne

Proposal for a directive
Article 4 – paragraph 4

Text proposed by the Commission

4. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 shall be planned and carried out by competent services or persons at suitable intervals, taking into account the guidance given in Annexes II and III and taking particular account of Articles 7 and 11 of Directive 89/391/EEC concerning the necessary competent services or persons and the consultation and participation of workers. The data obtained from the assessment, measurement and/or calculation of the level of exposure shall be preserved in a suitable form so as to permit consultation at a later stage.

Amendment

4. The assessment, measurement and/or calculations referred to in paragraphs 1 and 2 **and 2a** shall be planned and carried out by competent services or persons at suitable intervals, taking into account the guidance given in Annexes II and III and taking particular account of Articles 7 and 11 of Directive 89/391/EEC concerning the necessary competent services or persons and the consultation and participation of workers. The data obtained from the assessment, measurement and/or calculation of the level of exposure shall be preserved in a suitable form so as to permit consultation at a later stage.

Or. en

Amendment 107
Julie Girling

Proposal for a directive
Article 4 – paragraph 5 – introductory part

Text proposed by the Commission

5. 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:

Amendment

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

Or. en

Amendment 108
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point a

Text proposed by the Commission

(a) the frequency **spectrum** and the level, duration and type of exposure;

Amendment

(a) the frequency **composition** and the level, duration and type of exposure;

Or. en

Amendment 109
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point b

Text proposed by the Commission

(b) the exposure limit values and action values referred to in Article 3 and Annexes II and III to this Directive;

Amendment

deleted

Or. en

Justification

This reference should be moved after the definitions.

Amendment 110
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point b a (new)

Text proposed by the Commission

Amendment

(b a) any direct physical effects, in particular: effect on the human body directly provoked by the presence in electromagnetic field, for example tissue heating, the stimulation of muscles, nerves or sensory organs, vertigo or phosphenes.

Or. en

Amendment 111
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point b b (new)

Text proposed by the Commission

Amendment

(b b) any adverse health effects, in particular: biological effects that have a detrimental effect on mental, physical and/or general well-being of exposed workers;

Or. en

Amendment 112
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point b c (new)

Text proposed by the Commission

Amendment

(b c) any adverse safety effects, in particular: effects creating temporary

annoyance or affecting cognition or other brain or muscle functions and may thereby affect the ability of a worker to work safely;

Or. en

Amendment 113
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point b d (new)

Text proposed by the Commission

Amendment

(b d) the exposure limit values and action values referred to in Article 3 and Annex II of this Directive;

Or. en

Amendment 114
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point c

Text proposed by the Commission

Amendment

(c) any effects concerning the health and safety of workers at particular risk such as workers who *have declared to the employer that they wear an Active Implanted Medical Device* and women who *have declared that they* are pregnant;

(c) any effects concerning the health and safety of workers at particular risk, *in particular workers who wear an active or passive implanted medical device (such as cardiac pacemakers), workers who wear body worn medical devices (such as insulin pumps), workers with poor immune systems (such as persons with cancer)* and women who are pregnant;

Or. en

Amendment 115
Elisabeth Morin-Chartier

Proposal for a directive
Article 4 – paragraph 5 – point c

Text proposed by the Commission

(c) any effects concerning the health and safety of workers at particular risk such as workers who have declared to the employer that they wear an Active Implanted Medical Device and women who have declared that they are pregnant;

Amendment

(c) any effects concerning the health and safety of workers at particular risk such as workers who have declared to the employer that they wear an Active **or Passive** Implanted Medical Device (**e.g. a pacemaker**), **that they are equipped with portable medical devices (such as insulin pumps)** and women who have declared that they are pregnant;

Or. fr

Justification

If they are to comply with Article 5(2)(c), employers need to be notified by their employees of the health conditions listed in the amendment; this is only possible if their employees have informed them of the fact.

Amendment 116
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point d – introductory part

Text proposed by the Commission

(d) any indirect effects, such as:

Amendment

(d) any indirect effects **on an object, due to the presence in electromagnetic field, which may become the cause of a safety or health hazard**, such as:

Or. en

Amendment 117
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point d – point i

Text proposed by the Commission

(i) interference with medical electronic equipment and devices (including cardiac pacemakers and other implanted devices as referred to in point (c));

Amendment

(i) interference with medical electronic equipment and devices (including cardiac pacemakers and other implanted **or body worn** devices as referred to in point (f));

Or. en

Amendment 118
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point d – point ii

Text proposed by the Commission

(ii) the projectile risk from ferromagnetic objects in static magnetic fields with a magnetic flux density greater than **30** mT;

Amendment

(ii) the projectile risk from ferromagnetic objects in static magnetic fields with a magnetic flux density greater than **3** mT;

Or. en

Amendment 119
Karima Delli

Proposal for a directive
Article 4 – paragraph 5 – point d – point iv a (new)

Text proposed by the Commission

Amendment

(iv a) contact or limb currents;

Or. en

Amendment 120
Julie Girling

Proposal for a directive
Article 4 – paragraph 5 – point f

Text proposed by the Commission

Amendment

(f) appropriate information obtained from health surveillance, including published information;

deleted

Or. en

Amendment 121
Karima Delli

Proposal for a directive
Article 4 – paragraph 6

Text proposed by the Commission

Amendment

6. The employer shall be in possession of an assessment of the risks 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 the extent of the risks related to electromagnetic fields make a further detailed risk assessment unnecessary. The risk assessment shall be updated 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 this to be necessary.

6. In carrying out the obligations laid down in Articles 6(3) and 9(1) of Directive 89/391/EEC, the employer shall assess and, if necessary, measure and/or calculate the levels of electromagnetic fields to which workers are exposed. Assessment, measurement and calculation may be carried out using the scientifically based guidance specified in Article 14.

If further exposure assessment is necessary the employer may use relevant standards on assessment, measurement and calculation provided by European Standardization Bodies.

The employer shall also be entitled to use other scientifically based standards or

guidelines if required by the Member State concerned. When relevant, the employer may also take into account the emission levels and other safety-related data provided by the manufacturers of equipment in accordance with relevant Union legislation. When provided safety-related data is insufficient to assess electromagnetic fields exposure level at particular workplace the assessment shall be undertaken in particular in case technologies applied in the devices or installations affecting work place of interest involve in particular: microwave heating, inductors, antennas emitting power exceeding 5 watt, voltage expressed in volts exceeding action values of relevant frequency expressed in volts per meter, currents expressed in amperes exceeding action values of relevant frequency expressed in microteslas.

Or. en

Amendment 122
Karima Delli

Proposal for a directive
Article 4 – paragraph 6 a (new)

Text proposed by the Commission

Amendment

6 a. On the basis of the assessment of the levels of electromagnetic fields undertaken in accordance with paragraph 4, if any of the action values referred to in Annex II is exceeded, the employer shall further assess or calculate whether the exposure limit values are exceeded.

Or. en

Amendment 123
Karima Delli

Proposal for a directive
Article 4 – paragraph 6 b (new)

Text proposed by the Commission

Amendment

6 b. The assessment, measurement and/or calculations referred to in paragraphs 4 and 5 shall be planned and carried out by competent services or persons at suitable intervals, taking into account the guidance and taking particular account of Articles 7 and 11 of Directive 89/391/EEC concerning the necessary competent services or persons and the consultation and participation of workers. The data obtained from the assessment, measurement and/or calculation of the level of exposure shall be preserved in a suitable form so as to permit consultation at a later stage.

Or. en

Amendment 124
Julie Girling

Proposal for a directive
Article 5 – paragraph 1 – subparagraph 1

Text proposed by the Commission

Amendment

1. Taking account of technical progress and the availability of measures to control the production of electromagnetic fields at the source, the exposure to electromagnetic fields shall be eliminated or reduced to a minimum.

deleted

Or. en

Amendment 125
Elisabeth Morin-Chartier

Proposal for a directive
Article 5 – paragraph 1 – subparagraph 1

Text proposed by the Commission

1. Taking account of technical progress and the availability of measures to control the production of electromagnetic fields at the source, **the** exposure to electromagnetic fields shall be eliminated or reduced to a minimum.

Amendment

1. Taking account of technical progress and the availability of measures to control the production of electromagnetic fields at the source, **risks linked to** exposure to electromagnetic fields shall be eliminated or reduced to a minimum.

Or. fr

Justification

The aim of this directive is to reduce the risks linked to exposure. These are therefore the risks that must be eliminated or reduced to a minimum. Exposure in itself cannot be eliminated given the nature of electromagnetic fields which occur when electricity is used.

Amendment 126
Sari Essayah

Proposal for a directive
Article 5 – paragraph 1 – subparagraph 1

Text proposed by the Commission

1. Taking account of technical progress and the availability of measures to control the production of electromagnetic fields at the source, the exposure to electromagnetic fields shall be eliminated or reduced to a minimum.

Amendment

1. Taking account of technical progress and the availability of measures to control the production of electromagnetic fields at the source, the **risks related to** exposure to electromagnetic fields shall be eliminated or reduced to a minimum.

Or. en

Amendment 127
David Casa

Proposal for a directive
Article 5 – paragraph 1 – subparagraph 1

Text proposed by the Commission

1. Taking account of technical progress and the availability of measures to control the production of electromagnetic fields at the source, the exposure to electromagnetic fields shall be eliminated or reduced to a minimum.

Amendment

1. Taking account of technical progress and the availability of measures to control the production of electromagnetic fields at the source, the exposure to ***harmful*** electromagnetic fields shall be eliminated or reduced to a minimum.

Or. en

Amendment 128

Julie Girling

Proposal for a directive

Article 5 – paragraph 1 – subparagraph 2

Text proposed by the Commission

The ***reduction of*** risks arising from exposure to electromagnetic fields shall be ***based on*** the general principles of prevention set out in Directive 89/391/EEC.

Amendment

The risks arising from exposure to electromagnetic fields shall be ***reduced or eliminated in accordance with*** the general principles of prevention set out in Directive 89/391/EEC.

Or. en

Amendment 129

Karima Delli

Proposal for a directive

Article 5 – paragraph 1 – subparagraph 2 a (new)

Text proposed by the Commission

Amendment

Workers shall not be exposed above the exposure limit values unless the conditions under Article 4(3) are fulfilled. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values are exceeded, the employer shall take immediate action to reduce exposure below these exposure

limit values. The employer shall identify the reasons why the exposure limit values have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Or. en

Amendment 130
Rovana Plumb

Proposal for a directive
Article 5 – paragraph 1 a (new)

Text proposed by the Commission

Amendment

1a. In the light of scientific and technical progress and the increasingly widespread use of equipment generating electromagnetic fields in various areas, with a well-defined purpose providing benefits to society, Member States shall allocate the necessary funding to research aimed at identifying the negative effects of human exposure to electromagnetic fields as accurately as possible.

Or. ro

Amendment 131
Karima Delli

Proposal for a directive
Article 5 – paragraph 2 - introductory part

Text proposed by the Commission

Amendment

2. On the basis of the risk assessment referred to in Article 4, once **the** action values referred to in Article 3 and **Annexes II and III** are exceeded, the employer, **unless the assessment carried out in**

2. On the basis of the risk assessment referred to in Article 4, once **any** action values referred to in Article 3 and **Annex II** are exceeded, the employer shall devise and implement an action plan comprising

accordance with Article 4(2) demonstrates that the exposure limit values are not exceeded and that safety risks can be excluded, shall devise and implement an action plan comprising technical and/or organisational measures to prevent exposure exceeding the exposure limit values, taking into account in particular:

technical and/or organisational measures to prevent exposure exceeding the exposure limit values, taking into account in particular:

Or. en

Amendment 132
Julie Girling

Proposal for a directive
Article 5 – paragraph 2 - introductory part

Text proposed by the Commission

2. On the basis of the risk assessment referred to in Article 4, once the action values referred to in Article 3 and Annexes II and III are exceeded, the employer, unless the assessment carried out in accordance with Article 4(2) demonstrates that the exposure limit values are not exceeded and that safety risks can be excluded, shall devise and implement an action plan comprising technical and/or organisational measures to prevent exposure exceeding the exposure limit values, taking into account in particular:

Amendment

2. On the basis of the risk assessment referred to in Article 4, once the action values referred to in Article 3 and Annexes II and III are exceeded, the employer, unless the assessment carried out in accordance with Article 4(2) demonstrates that the exposure limit values ***for health effects*** are not exceeded and that safety risks can be excluded, shall devise and implement an action plan comprising technical and/or organisational measures to prevent exposure exceeding the exposure limit values, taking into account in particular:

Or. en

Amendment 133
Elisabeth Morin-Chartier

Proposal for a directive
Article 5 – paragraph 2 – point c a (new)

Text proposed by the Commission

Amendment

(ca) appropriate delimitation and access measures (such as signals, labels, floor markings, fences) to notify workers and to limit or control access;

Or. fr

Amendment 134
Karima Delli

Proposal for a directive
Article 5 – paragraph 2 – point c a (new)

Text proposed by the Commission

Amendment

(c a) appropriate delimitation and access measures (such as signals, labels, floor markings, fences) in order to limit or control access;

Or. en

Amendment 135
Elisabeth Morin-Chartier

Proposal for a directive
Article 5 – paragraph 2 – point c b (new)

Text proposed by the Commission

Amendment

c b) measures and procedures to manage spark discharges through technical means and the training of workers (applies in electric field exposures);

Or. en

Amendment 136
Karima Delli

Proposal for a directive
Article 5 – paragraph 2 – point c b (new)

Text proposed by the Commission

Amendment

(c b) measures and procedures to manage spark discharges through technical means and the training of workers. (applies in electric field exposures);

Or. en

Amendment 137
Karima Delli

Proposal for a directive
Article 5 – paragraph 2 a (new)

Text proposed by the Commission

Amendment

2 a. On the basis of the risk assessment referred to in Article 4, once action values referred to in Article 3 and Annexes II are not exceeded, the employer, shall devise and implement an action plan comprising technical and/or organisational measures to prevent any risks to workers at particular risk and any risks due to indirect effects referred to in this Article.

Or. en

Amendment 138
Karima Delli

Proposal for a directive
Article 5 – paragraph 3

Text proposed by the Commission

Amendment

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers ***could*** be exposed to

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers ***are likely to*** be exposed to

electromagnetic fields exceeding the **orientation or** action values shall be indicated by appropriate signs in accordance with **Annexes II and III and** with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons then signs and access restrictions specific to **electromagnetic** fields are not required.

electromagnetic fields exceeding the action values shall be indicated by appropriate signs in accordance with **Annex II** and with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons **and workers informed on the electromagnetic risks** then signs and access restrictions specific to **electromagnetic** fields are not required.

Or. en

Amendment 139
Elizabeth Lynne

Proposal for a directive
Article 5 – paragraph 3

Text proposed by the Commission

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers could be exposed to electromagnetic fields exceeding the **orientation or** action values shall be indicated by appropriate signs in accordance with **Annexes II and III and with** Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons then signs and access restrictions specific to electromagnetic fields are not

Amendment

3. On the basis of the risk assessment referred to in Article 4(2), workplaces where workers could be exposed to electromagnetic fields exceeding the action values shall be indicated **where appropriate by signs unless the risk assessment demonstrates that exposure limit values for health effects are not exceeded so that adverse health effects can be excluded. In the same way, on the basis of the risk assessment referred to in Article 4(2a), workplaces where workers could be exposed to electromagnetic fields exceeding the orientation values shall be indicated where appropriate by signs unless the risk assessment demonstrates that exposure limit values for safety effects is not exceeded so that adverse safety effects can be excluded. Such signs**

required.

shall be in accordance with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons then signs and access restrictions specific to electromagnetic fields are not required.

Or. en

Amendment 140
Julie Girling

Proposal for a directive
Article 5 – paragraph 3

Text proposed by the Commission

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers could be exposed to electromagnetic fields exceeding the orientation or action values shall be indicated by appropriate *signs in* accordance with Annexes II and III and with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons then signs and access restrictions specific to electromagnetic fields are not required.

Amendment

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers could be exposed to electromagnetic fields exceeding the orientation or action values shall be indicated by appropriate *signage where* accordance with Annexes II and III and with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons then signs and access restrictions specific to electromagnetic fields are not required.

Or. en

Amendment 141
Sari Essayah

Proposal for a directive
Article 5 – paragraph 3

Text proposed by the Commission

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers could be exposed to electromagnetic fields exceeding the orientation or action values shall be indicated by appropriate signs in accordance with Annexes II and III and with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons then signs and access restrictions specific to *electromagnetic* fields are not required.

Amendment

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers could be exposed to electromagnetic fields exceeding the orientation or action values shall be indicated by appropriate signs in accordance with Annexes II and III and with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons, *or in case of right of ways of overhead lines*, then signs and access restrictions specific to *electromagnetic* fields are not required.

Or. en

Justification

The line owner cannot set warning marks on the right of ways because he is normally not the owner of the land. Also workers visiting the overhead lines visit them usually seldom and of short time only.

Amendment 142
Liisa Jaakonsaari

Proposal for a directive
Article 5 – paragraph 3

Text proposed by the Commission

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers could be exposed to electromagnetic fields exceeding the orientation or action values shall be indicated by appropriate signs in accordance with Annexes II and III and with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons then signs and access restrictions specific to electromagnetic fields are not required.

Amendment

3. On the basis of the risk assessment referred to in Article 4, workplaces where workers could be exposed to electromagnetic fields exceeding the orientation or action values shall be indicated by appropriate signs in accordance with Annexes II and III and with Council Directive 92/58/EEC of 24 June 1992 on the minimum requirements for the provision of safety and/or health signs at work (ninth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC). The areas in question shall be identified and access to them limited as appropriate. Where access to these areas is suitably restricted for other reasons ***or other solutions are found according to the national law and practices***, then signs and access restrictions specific to electromagnetic fields are not required.

Or. en

Justification

In case of right of ways of overhead lines lots of practical problems may relate to the signs and access restrictions e.g. who owns the land where the signs should be places, the geographical area and the amount of signs needed. This requirement needs to take into consideration the national law and practices and other circumstances.

Amendment 143

Karima Delli

Proposal for a directive

Article 5 – paragraph 4

Text proposed by the Commission

4. In any event, workers shall not be exposed above the exposure limit values for health effects unless the conditions under Article 3(6) are fulfilled. If, despite

Amendment

deleted

the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Or. en

Amendment 144
Jutta Steinruck

Proposal for a directive
Article 5 – paragraph 4

Text proposed by the Commission

4. In any event, workers shall not be exposed above the exposure limit values for health effects ***unless the conditions under Article 3(6) are fulfilled***. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall ***take immediate action*** to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Amendment

4. In any event, workers shall not be exposed above the exposure limit values for health effects. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall ***have a direct obligation*** to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Or. de

Amendment 145
Julie Girling

**Proposal for a directive
Article 5 – paragraph 4**

Text proposed by the Commission

4. In any event, workers shall not be exposed above the exposure limit values for health effects unless the conditions under Article 3(6) are fulfilled. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Amendment

4. Workers shall not be exposed above the exposure limit values for safety effects unless management controls are in place and workers are trained to ensure that the consequences of adverse safety effects are prevented.

In any event, workers shall not be exposed above the exposure limit values for health effects unless the conditions under Article 3(6) are fulfilled. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Or. en

**Amendment 146
Elizabeth Lynne**

**Proposal for a directive
Article 5 – paragraph 4**

Text proposed by the Commission

4. In any event, workers shall not be exposed above the exposure limit values for health effects unless the conditions under Article 3(6) are fulfilled. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Amendment

4. In ***situations where workers are exposed above the exposure limit values for safety effects, procedures need to be in place and workers trained to ensure that any consequences of adverse safety effects are prevented.*** In any event, workers shall not be exposed above the exposure limit values for health effects unless the conditions under Article 3(6) are fulfilled. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Or. en

Amendment 147
Elisabeth Morin-Chartier

Proposal for a directive
Article 5 – paragraph 4

Text proposed by the Commission

4. In any event, workers shall not be exposed above the exposure limit values for health effects unless the conditions under Article 3(6) are fulfilled. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and

Amendment

4. In any event, workers shall not be exposed above the exposure limit values for health effects unless the conditions under Article 3(6) are fulfilled. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and

shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

shall amend the protection and prevention measures accordingly, ***taking care to ensure the changes are traceable***, in order to prevent them being exceeded again.

Or. fr

Amendment 148
Ole Christensen

Proposal for a directive
Article 5 – paragraph 4

Text proposed by the Commission

4. In any event, workers shall not be exposed above the exposure limit values for health effects ***unless the conditions under Article 3(6) are fulfilled***. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Amendment

4. In any event, workers shall not be exposed above the exposure limit values for health effects. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Or. en

Justification

This amendment is a consequence of the amending (deleting) of Art. 3.6.

Amendment 149
Paul Murphy, Georgios Toussas

Proposal for a directive
Article 5 – paragraph 4

Text proposed by the Commission

4. In any event, workers shall not be exposed above the exposure limit values for health effects ***unless the conditions under Article 3(6) are fulfilled***. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Amendment

4. In any event, workers shall not be exposed above the exposure limit values for health effects. If, despite the measures taken by the employer to comply with this Directive, the exposure limit values for health effects are exceeded, the employer shall take immediate action to reduce exposure below these exposure limit values. The employer shall identify the reasons why the exposure limit values for health effects have been exceeded, and shall amend the protection and prevention measures accordingly in order to prevent them being exceeded again.

Or. en

Amendment 150
Elisabeth Morin-Chartier

Proposal for a directive
Article 5 – paragraph 5

Text proposed by the Commission

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

Amendment

5. Pursuant to Article 15 of Directive 89/391/EEC, the employer shall adapt the measures referred to in this Article and in Annexes II and III to the requirements of workers at particular risk, ***particularly workers who have declared to the employer that they wear an implantable or portable medical device and women who have declared that they are pregnant***.

Or. fr

Amendment 151
Elizabeth Lynne

**Proposal for a directive
Article 5 – paragraph 5**

Text proposed by the Commission

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

Amendment

5. Pursuant to Article 15 of Directive 89/391/EEC, the employer shall adapt the measures referred to in this Article and in Annexes II and III to the requirements of workers at particular risk, ***particularly workers who have declared they are equipped with implantable or portable medical devices and women who have declared they are pregnant.***

Or. en

**Amendment 152
Karima Delli**

**Proposal for a directive
Article 5 – paragraph 5**

Text proposed by the Commission

5. Pursuant to Article 15 of Directive 89/391/EEC, the employer shall adapt the measures referred to in this Article ***and in Annexes II and III*** to the requirements of workers at particular risk.

Amendment

5. 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 ***and individual risks assessments as appropriate.***

Or. en

**Amendment 153
Jutta Steinruck**

**Proposal for a directive
Article 6 – paragraph 1 – introductory part**

Text proposed by the Commission

Without prejudice to Articles 10 and 12 of Directive 89/391/EEC, the employer shall

Amendment

Without prejudice to Articles 10 and 12 of Directive 89/391/EEC, the employer shall

ensure that workers who are exposed to risks from electromagnetic fields at work and/or their representatives *receive* any necessary information and training relating to the outcome of the risk assessment provided for in Article 4(1) of this Directive, concerning in particular:

have an obligation to provide workers who are exposed to risks from electromagnetic fields at work and/or their representatives *with* any necessary information and training relating to the outcome of the risk assessment provided for in Article 4 of this Directive, concerning in particular:

Or. de

Amendment 154
Karima Delli

Proposal for a directive
Article 6 – paragraph 1 – introductory part

Text proposed by the Commission

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

Amendment

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

Or. en

Amendment 155
Thomas Mann

Proposal for a directive
Article 6 – paragraph 1 – introductory part

Text proposed by the Commission

Without prejudice to Articles 10 and 12 of Directive 89/391/EEC, the employer shall ensure that workers who are exposed to risks from electromagnetic fields at work and/or their representatives receive any necessary information and training relating

Amendment

Without prejudice to Articles 10 and 12 of Directive 89/391/EEC, the employer shall ensure that workers who are exposed to risks from electromagnetic fields at work and their representatives receive any necessary information and training relating

to the outcome of the risk assessment provided for in Article 4(1) of this Directive, concerning in particular:

to the outcome of the risk assessment provided for in Article 4 of this Directive, concerning in particular:

Or. de

Amendment 156
Karima Delli

Proposal for a directive
Article 6 – point b

Text proposed by the Commission

(b) the values and concepts of the exposure limit **values, orientation** values and action values, the associated **potential** risks and the preventive measures taken;

Amendment

(b) the values and concepts of the exposure limit values and action values, the associated **possible** risks and the preventive measures taken;

Or. en

Amendment 157
Elisabeth Morin-Chartier

Proposal for a directive
Article 6 – point b a (new)

Text proposed by the Commission

Amendment

(ba) possible indirect effects of exposure;

Or. fr

Amendment 158
Sari Essayah

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 1

Text proposed by the Commission

Amendment

1. With the objective of prevention and

1. With the objective of prevention and

early diagnosis of any adverse health effects due to exposure to electromagnetic fields, appropriate health surveillance shall be carried out in accordance with Article 14 of Directive 89/391/EEC.

early diagnosis of any adverse health effects due to exposure to electromagnetic fields, appropriate health surveillance shall be carried out in accordance with Article 14 of Directive 89/391/EEC. ***Those provisions, including the requirements specified for health records and their availability shall be introduced with national law and/or practice.***

Or. en

Justification

See 'Detailed explanation of the proposal by chapter or by article', Article 8, page 9 of the Commission's proposal. The text says: 'Effects induced by low frequency fields cannot be observed once the worker has left the area of undesired exposure. Any health damage resulting from such exposure therefore cannot be determined by a medical examination.'

Amendment 159 **Karima Delli**

Proposal for a directive **Article 8 – paragraph 1 – subparagraph 1**

Text proposed by the Commission

1. With the objective of prevention and early diagnosis of any adverse health effects due to exposure to electromagnetic fields, appropriate health surveillance shall be carried out in accordance with Article 14 of Directive 89/391/EEC.

Amendment

1. With the objective of prevention and early diagnosis of any adverse health effects due to exposure to electromagnetic fields, appropriate health surveillance shall be carried out in accordance with Article 14 of Directive 89/391/EEC. ***Those provisions, including the requirements specified for health records and their availability, shall be introduced with national law and/or practice.***

Or. en

Amendment 160 **Elizabeth Lynne**

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 1

Text proposed by the Commission

1. With the objective of prevention and early diagnosis of any adverse health effects due to exposure to electromagnetic fields, appropriate health surveillance shall be carried out in accordance with Article 14 of Directive 89/391/EEC.

Amendment

1. With the objective of prevention and early diagnosis of any adverse health effects due to exposure to electromagnetic fields, appropriate health surveillance shall be carried out in accordance with Article 14 of Directive 89/391/EEC. ***Those provisions shall be introduced according to national law and/or practices.***

Or. en

Amendment 161
Liisa Jaakonsaari

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 1

Text proposed by the Commission

1. With the objective of prevention and early diagnosis of any adverse health effects due to exposure to electromagnetic fields, appropriate health surveillance shall be carried out in accordance with Article 14 of Directive 89/391/EEC.

Amendment

1. With the objective of prevention and early diagnosis of any adverse health effects due to exposure to electromagnetic fields, appropriate health surveillance shall be carried out in accordance with Article 14 of Directive 89/391/EEC. ***In addition, Member States' guidelines on health checks and regulations on health monitoring should be brought up to date in the light of updated limits for the exposure of workers to electromagnetic fields.***

Or. fi

Amendment 162
Sari Essayah

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 2

Text proposed by the Commission

Amendment

For exposures in the frequency range up to 100 kHz, any undesired or unexpected health effect reported by a worker shall be transmitted to the person in charge of the medical surveillance who will take appropriate action in accordance with national law and practice.

deleted

Or. en

Amendment 163

Karima Delli

Proposal for a directive

Article 8 – paragraph 1 – subparagraph 2

Text proposed by the Commission

Amendment

For exposures in the frequency range up to 100 kHz, any undesired or unexpected health effect reported by a worker shall be transmitted to the person in charge of the medical surveillance who will take appropriate action in accordance with national law and practice.

deleted

Or. en

Amendment 164

Julie Girling

Proposal for a directive

Article 8 – paragraph 1 – subparagraph 2

Text proposed by the Commission

Amendment

For exposures in the frequency range up to 100 kHz, any undesired or unexpected health effect reported by a worker shall be transmitted to the person in charge of the medical surveillance who will take

For exposures in the frequency range up to 100 kHz, ***where exposure above the exposure limit value for health effects has been detected***, any undesired or unexpected health effect reported by a

appropriate action in accordance with national law and practice.

worker shall be transmitted to the person in charge of the medical surveillance who will take appropriate action in accordance with national law and practice.

Or. en

Amendment 165
Elizabeth Lynne

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 2

Text proposed by the Commission

For exposures in the frequency range up to 100 kHz, any undesired or unexpected health effect reported by a worker shall be transmitted to the person in charge of the medical surveillance who will take appropriate action in accordance with national law and practice.

Amendment

For exposures in the frequency range up to 100 kHz, ***where exposure above the exposure limit value for health effects has been detected***, any undesired or unexpected health effect reported by a worker shall be transmitted to the person in charge of the medical surveillance who will take appropriate action in accordance with national law and practice.

Or. en

Amendment 166
Heinz K. Becker

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 2

Text proposed by the Commission

For exposures in the frequency range up to 100 kHz, any undesired or ***unexpected*** health ***effect*** reported by a worker shall be transmitted to the person in charge of the medical surveillance who will take appropriate action in accordance with national law and practice.

Amendment

For exposures in the frequency range up to 100 kHz, any undesired or ***adverse physical*** health ***effects*** reported by a worker shall be transmitted to the person in charge of the medical surveillance who will take appropriate action in accordance with national law and practice.

Or. de

Amendment 167
Sari Essayah

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 3

Text proposed by the Commission

Amendment

For exposure in the range from 100 kHz up to 300 GHz, and in any event where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) concerned in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4.

deleted

Or. en

Amendment 168
Karima Delli

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 3

Text proposed by the Commission

Amendment

For exposure in the range from 100 kHz up to 300 GHz, and in any event where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) concerned in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4.

deleted

Or. en

Amendment 169
Julie Girling

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 3

Text proposed by the Commission

For exposure in the range from 100 kHz up to 300 GHz, **and in any event** where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) concerned in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4.

Amendment

For exposure in the range from 100 kHz up to 300 GHz, where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) concerned in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4.

Or. en

Amendment 170
Elizabeth Lynne

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 3

Text proposed by the Commission

For exposure in the range from 100 kHz up to 300 GHz, **and in any event** where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) **concerned** in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4.

Amendment

For exposure in the range from 100 kHz up to 300 GHz, where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) **during working hours. The cost shall be met** in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4.

Or. en

Amendment 171
David Casa

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 3

Text proposed by the Commission

For exposure in the range from 100 kHz up to 300 GHz, and in any event where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) concerned in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4.

Amendment

For exposure in the range from 100 kHz up to 300 GHz, and in any event where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) concerned in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks **and protection and prevention measures** shall be carried out by the employer in accordance with Article 4.

Or. en

Amendment 172
Thomas Mann

Proposal for a directive
Article 8 – paragraph 1 – subparagraph 3

Text proposed by the Commission

For exposure in the range from 100 kHz up to 300 GHz, and in any event where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) concerned in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4.

Amendment

For exposure in the range from 100 kHz up to 300 GHz, and in any event where exposure above the exposure limit values is detected, a medical examination shall be made available to the worker(s) concerned in accordance with national law and practice. If health damage resulting from such exposure is detected, a reassessment of the risks shall be carried out by the employer in accordance with Article 4 **and the employer shall provide compensation in accordance with national law and practice.**

Or. de

Amendment 173
Sari Essayah

Proposal for a directive
Article 8 – paragraph 2

Text proposed by the Commission

Amendment

2. The employer shall take appropriate measures to ensure that the doctor and/or the medical authority responsible for health surveillance have access to the results of the risk assessment referred to in Article 4. *deleted*

Or. en

Amendment 174
Sari Essayah

Proposal for a directive
Article 8 – paragraph 3

Text proposed by the Commission

Amendment

3. The results of health surveillance shall be preserved in a suitable form so as to permit consultation at a later date, taking account of confidentiality requirements. Individual workers shall, at their request, have access to their own personal health records. *deleted*

Or. en

Amendment 175
Heinz K. Becker

Proposal for a directive
Article 8 – paragraph 3

Text proposed by the Commission

3. The results of health surveillance shall be preserved in a suitable form so as to permit consultation at ***a later date***, taking account of confidentiality requirements. Individual workers shall, at their request, have access to their own personal health records.

Amendment

3. The results of health surveillance shall be preserved in a suitable form so as to permit consultation at ***any time***, taking account of confidentiality requirements. Individual workers shall, at their request, have access to their own personal health records.

Or. de

Amendment 176

Thomas Mann

Proposal for a directive

Article 8 – paragraph 3

Text proposed by the Commission

3. The results of health surveillance shall be preserved in a suitable form so as to permit consultation at a later date, taking account of confidentiality requirements. Individual workers shall, at their request, have access to their own personal health records.

Amendment

3. The results of health surveillance shall be preserved in a suitable form so as to permit consultation at a later date, taking account of confidentiality requirements. Individual workers shall, at their request, have ***unlimited*** access to their own personal health records.

Or. de

Amendment 177

Karima Delli

Proposal for a directive

Article 8 a (new)

Text proposed by the Commission

Amendment

Article 8a

Monitoring of long-term effects

A committee of independent experts is settled in order to review the scientific

knowledge on the long-term effects of electromagnetic exposure, and in accordance with Article 17 of Directive 89/391/EEC, the Commission shall propose a revision of this Directive to take into account these probable effects.

Or. en

Amendment 178
Thomas Mann

Proposal for a directive
Article 9

Text proposed by the Commission

Member States shall provide for adequate sanctions to be applicable in the event of infringements of national legislation adopted pursuant to this Directive. These sanctions must be effective, proportionate and dissuasive.

Amendment

Member States shall provide for adequate sanctions to be applicable in the event of infringements of national legislation adopted pursuant to this Directive. These sanctions must be effective, proportionate and dissuasive. ***Member States shall lay down what suitable compensation is to be provided in the event of an adverse health effect caused by exposures regulated in this Directive.***

Or. de

Amendment 179
Ole Christensen

Proposal for a directive
Article 9 a (new)

Text proposed by the Commission

Amendment

Article 9a

On the basis of the latest scientific data, the Commission shall within 5 years from the date of the adoption of this Directive submit a proposal for the adoption of a

revised Directive in order to provide exposure limit values and action values for MRI (as defined in Article 3 (4)) in the Directive.

Or. en

Justification

Due to Article 3.4 workers exposed to MRI are not protected by the exposure limit values and action values of the Directive. The amendment urges the Commission to present a proposal which limits the MRI derogation limited in time. (Amendment to Article 3.4.)

Amendment 180
Karima Delli

Proposal for a directive
Article 10 – point b

Text proposed by the Commission

(b) take into account the technical progress, changes in the most relevant ***harmonised European*** standards or specifications, and new scientific findings concerning electromagnetic fields;

Amendment

(b) take into account the technical progress, changes in the most relevant standards or specifications, and new scientific findings concerning electromagnetic fields;

Or. en

Amendment 181
Karima Delli

Proposal for a directive
Article 10 – point c

Text proposed by the Commission

(c) make adjustments to the ***orientation and*** action values provided that compliance with the existing exposure limit values is maintained, ***and of the related lists of activities, workplaces and types of equipments*** mentioned in ***Annexes II and III***.

Amendment

(c) make adjustments to the action values provided that compliance with the existing exposure limit values is maintained, mentioned in ***Annex II***.

Amendment 182
Liisa Jaakonsaari

Proposal for a directive
Article 13

Text proposed by the Commission

In order to facilitate implementation of this Directive, in particular the conduct of the risk assessment, the Commission shall draw up practical guides to the provisions of Articles 4 and 5 and Annexes II to IV. The Commission shall work in close cooperation with the Advisory Committee for Safety and Health at Work.

Amendment

In order to facilitate implementation of this Directive, in particular the conduct of the risk assessment, the Commission shall draw up practical guides to the provisions of Articles 4 and 5 and Annexes II to IV. The Commission shall work in close cooperation with the Advisory Committee for Safety and Health at Work. ***The practical guides should be updated regularly and take into consideration among the others future technical developments. This follow up shall also influence Commission's work under Article 10.***

Justification

In some paragraphs of the annexes the lists are examples and valid at the time of approving the directive but they do not take into consideration the future technological developments. It is crucial that there are practical guides and they are regularly updated according to the among the others technological developments. The Commission should do the follow up closely together with the Advisory Committee for Safety and Health at Work and this work should be reflected also in Commissions work under article 10.

Amendment 183
Karima Delli

Proposal for a directive
Article 14

Text proposed by the Commission

The report to be established in accordance

Amendment

The report shall be established in

to Article 17(a) of Directive 89/391/EEC
***shall notably report on the effectiveness of
the Directive in reducing exposure to
electromagnetic fields and the percentage
of workplaces that required corrective
action.***

accordance to Article 17(a) of Directive
89/391/EEC.

Or. en

Amendment 184
Elisabeth Morin-Chartier

Proposal for a directive
Article 14

Text proposed by the Commission

The report to be established in accordance
to Article 17(a) of Directive 89/391/EEC
shall notably report on the effectiveness of
the Directive in reducing exposure to
electromagnetic fields and the percentage
of workplaces that required corrective
action.

Amendment

Without prejudice to the report to be
established in accordance *with* Article
17(a) of Directive 89/391/EEC, ***the
Commission shall draft a specific report
within five years from ... [the date of
entry into force of this Directive]. This
specific report*** shall notably report on the
effectiveness of the ***Exposure*** Directive in
reducing exposure to electromagnetic
fields and the percentage of workplaces
that required corrective action.

Or. fr

Amendment 185
Paul Murphy, Georgios Toussas

Proposal for a directive
Article 14

Text proposed by the Commission

The report to be established in accordance
to Article 17(a) of Directive 89/391/EEC
shall notably report on the effectiveness of
the Directive in reducing exposure to
electromagnetic fields and the percentage

Amendment

The report to be established in accordance
to Article 17(a) of Directive 89/391/EEC
shall notably report on the effectiveness of
the Directive in reducing exposure to
electromagnetic fields and the percentage

of workplaces that required corrective action.

of workplaces that required corrective action. ***The Commission shall assess the scientific evidence for long-term effects of exposure to electromagnetic fields within 5 years after the publication of this Directive in the Official Journal of the European Union and submit a proposal for its review in order to include the protection of workers health and safety against such long-term effects.***

Or. en

Amendment 186
Karima Delli

Proposal for a directive
Annex I – paragraph 1 - subparagraph 1

Text proposed by the Commission

Contact current (IC) between a person and an object is expressed in amperes (A). A steady state contact current occurs when a person is in contact with a conductive object in an ***electric*** field. In the process of making such a contact, a spark discharge may occur with associated transient currents.

Amendment

Contact current (IC) between a person and an object is expressed in amperes (A). A steady state contact current occurs when a person is in contact with a conductive object in an ***electromagnetic*** field. In the process of making such a contact, a spark discharge may occur with associated transient currents.

Or. en

Amendment 187
Karima Delli

Proposal for a directive
Annex I – paragraph 1 - subparagraph 2

Text proposed by the Commission

Electric field strength is a vector quantity (E) that corresponds to the force exerted on a charged particle regardless of its motion in space. It is expressed in volts per metre

Amendment

Electric field strength is a vector quantity (E) that corresponds to the force exerted on a charged particle regardless of its motion in space. It is expressed in volts per metre

(V/m).

(V/m). *It has to be distinguished between the external and internal electric field.*

Or. en

Amendment 188
Karima Delli

Proposal for a directive
Annex I – paragraph 1 - subparagraph 6

Text proposed by the Commission

Specific energy absorption (SA) is the energy absorbed per unit mass of biological tissue, expressed in joules per kilogram (J/kg). In this Directive, it is used for establishing limits for *non-thermal* effects from pulsed microwave radiation.

Amendment

Specific energy absorption (SA) is the energy absorbed per unit mass of biological tissue, expressed in joules per kilogram (J/kg). In this Directive, it is used for establishing limits for effects from pulsed microwave radiation.

Or. en

Amendment 189
Karima Delli

Proposal for a directive
Annex I – paragraph 2

Text proposed by the Commission

Of these quantities, magnetic flux density, contact current, electric and magnetic field strengths and power density can be measured directly.

Amendment

Of these quantities, magnetic flux density (***B***), contact current (***IL***), electric and magnetic field strengths (***E***) and power density (***S***) can be measured directly.

Or. en

Amendment 190
Karima Delli

Proposal for a directive
Annex II – heading

Text proposed by the Commission

Amendment

Exposure to electromagnetic fields in the frequency range from 0 Hz to 100 kHz

Exposure limit values and action values

Or. en

Amendment 191
Karima Delli

Proposal for a directive
Annex II – Part A

Text proposed by the Commission

Amendment

A. EXPOSURE *LIMITATION SYSTEM*

The main principles underlying the protection system adopted for the range of frequencies up to 100 kHz (100 thousand cycles per second) are as follows:

- taking due account of the latest international recommendations published by the specialised organisations recognised worldwide*
- introducing appropriate and ‘limited to purpose’ simplifications in order to facilitate the understanding and ‘in field’ implementation of the protection system*
- introducing in practice a ‘zoning system’ in which each activity can be classified, whereby the location of an activity in a determined zone has a direct impact on the extent of the risk assessment to be carried out by the employer and on the recommended preventive measures*
- limiting the number of cases where compliance with the actual exposure limits must be ensured because the*

A. EXPOSURE *LIMIT VALUES*

Depending on the frequency and distribution of the electromagnetic fields to which the worker is exposed, the following physical quantities and values are used to specify the exposure limit values:

measured exposure level is higher than the upper limit of the highest permitted zone (action level).

1. Exposure limit values for health and safety effects due to electrical stimulation of tissues (expressed in RMS values)

(a) the exposure limit value for whole body exposure is derived from the effect threshold for effects on the peripheral nervous system in the whole body and it also prevents stimulation of nerve fibres in the central nervous system and is expressed as electric fields generated in nervous tissue in the body (in V/m):

$f < 3 \text{ kHz} - 0.8 \text{ V/m};$

from 3 kHz up to 10 MHz - $2.7 \times 10^{-4f} \text{ V/m};$

where f is the frequency expressed in Hertz (Hz);

(b) the exposure limit value for head exposure is derived from the effect threshold for effects on the central nervous system in the head and is expressed as electric fields generated in nervous tissue in the body (in V/m):

$f < 10 \text{ Hz} - 0.5/f \text{ V/m};$

from 10 Hz up to 25 Hz - 0.05 V/m;

from 25 Hz up to 400 Hz - $0.002f \text{ V/m};$

from 400 Hz up to 3 kHz - 0.8 V/m;

from 3 kHz up to 10 MHz - $2.7 \times 10^{-4f} \text{ V/m};$

where f is the frequency expressed in Hertz (Hz);

2. Exposure limit values for health and safety effects due to thermal effects in tissues to prevent whole-body heat stress and excessive localised heating of tissues

(a) the exposure limit value for whole body exposure is derived from the effects threshold for whole body heat stress and is expressed as averaged SAR in the body (in W/kg):

from 9 kHz up to 10 GHz - 0.4 W/kg

(b) the exposure limit value for head and trunk exposure is derived from the effects threshold for whole body localised heat stress and is expressed as localised SAR in the body (in W/kg):

from 9 kHz up to 10 GHz - 10 W/kg

(c) the exposure limit value for limbs exposure is derived from the effects threshold for limbs localised heat stress and is expressed as localised SAR in the limbs (in W/kg):

from 9 kHz up to 10 GHz - 20 W/kg

where:

- all SAR values are to be averaged over any six-minute period;

- localised SAR averaging mass is any 10 g of contiguous tissue; the maximum SAR so obtained should be the value used for estimating exposure. These 10 g of tissue are intended to be a mass of contiguous tissue with nearly homogeneous electrical properties. In specifying a contiguous mass of tissue, it is recognised that this concept can be used in computational dosimetry but may present difficulties for direct physical measurements. A simple geometry such as cubic tissue mass can be used provided that the calculated dosimetric quantities have conservative values relative to the exposure guidelines;

- for pulsed exposures in the frequency range 0.3 to 10 GHz and for localised exposure of the head in order to limit and avoid auditory effects caused by thermo elastic expansion, an additional exposure limit value is recommended. This is that the SA should not exceed 10 mJ/kg averaged over 10 g of tissue.

3. Exposure limit values for health and safety effects due to thermal effects in tissue to prevent excessive tissue heating at or near the body surface

- the exposure limit values for the surface heating is derived from the effects

threshold for the surface heating and is expressed as power density (in W/m²):

from 10 GHz up to 300 GHz - 50 W/m²

where power densities are to be averaged over any 20 cm² of exposed area and any 68/f^{1,05}-minute period (where f is in GHz) to compensate for progressively shorter penetration depth as the frequency increases. Spatial maximum power densities averaged over 1 cm² should not exceed 20 times the value of 50 W/m²;

4. Exposure limit values for health and safety effects due to exposure to static electric and magnetic field

(a) the exposure limit value for whole body exposure to static magnetic field - 2 T

(b) the exposure limit value for hands exposure to static magnetic field - 8 T

Above 8 T Article 4(3) shall apply.

Or. en

Amendment 192

Karima Delli

Proposal for a directive

Annex II – Part B - heading

Text proposed by the Commission

Amendment

B. EXPOSURE LEVELS AND EXPOSURE LIMITS

B. ACTION VALUES

Or. en

Amendment 193

Karima Delli

Proposal for a directive

Annex II – Part B – paragraph 1

Text proposed by the Commission

Amendment

In line with the most recent recommendations the following options have been taken:

Depending on the frequency and distribution of the electromagnetic fields to which the worker is exposed, the following physical quantities and values are used to specify the action values, the magnitude of which is established to ensure by simplified assessment the compliance with relevant exposure limit values or at which one or more of the measures specified in this Directive must be taken. Action values correspond to estimated or measured field values at the workplace in absence of the worker, as maximum value at the worker position. When applying, the assessment of the measurement results shall take into account the measurement uncertainties determined in accordance with metrological practice.

The main frequency(or frequencies) to which the worker may be exposed must be determined. Manufacturer's or installer's data must be used whenever available. It is also necessary to assess whether the fields are sinusoidal or pulsed.

Or. en

**Amendment 194
Karima Delli**

**Proposal for a directive
Annex II – Part B – paragraph 1 – indent 1**

Text proposed by the Commission

Amendment

- Actions values and Orientation values correspond to estimated or measured field values at the workplace in absence of the worker.

deleted

Or. en

Amendment 195
Thomas Mann

Proposal for a directive
Annex II – Part B – paragraph 1 – indent 1

Text proposed by the Commission

– Actions values and Orientation values correspond to ***estimated or*** measured field values at the workplace in absence of the worker.

Amendment

– Actions values and Orientation values correspond to measured field values at the workplace in absence of the worker.

Or. de

Amendment 196
Karima Delli

Proposal for a directive
Annex II – Part B – paragraph 1 – indent 2

Text proposed by the Commission

- Exposure limit values for health effects and exposure limit values for safety effects are expressed as electric fields generated in nervous tissue in the body (in V/m)

deleted

Amendment

Or. en

Amendment 197
Karima Delli

Proposal for a directive
Annex II – Part B – paragraph 1 – indent 3

Text proposed by the Commission

- For a worker at particular risk, as defined in Article 4 (5c), an individual assessment must be made in accordance

deleted

Amendment

with Annex II point E.

Or. en

Amendment 198

Karima Delli

Proposal for a directive

Annex II – Part B – paragraph 2 - Note 1

Text proposed by the Commission

Amendment

Note 1: any situation where the measured value is higher than the action value, a thorough verification must be made according to Article 4(2). *deleted*

Or. en

Amendment 199

Elizabeth Lynne

Proposal for a directive

Annex II – Part B – paragraph 1 - Note 1

Text proposed by the Commission

Amendment

Note 1: any situation where the measured value is higher than the action value, a thorough verification must be made according to Article 4(2).

Note 1: any situation where the measured value is higher than the ***orientation value or the*** action value, a thorough verification must be made according to Article 4(***2a***) ***or Article 4(2) respectively.***

Or. en

Amendment 200

Julie Girling

Proposal for a directive

Annex II – Part B – paragraph 1 - Note 1

Text proposed by the Commission

Note 1: any situation where the measured value is higher than the **action** value, **a thorough verification** must be made according to **Article 4(2)**.

Amendment

Note 1: any situation where the measured value is higher than the **orientation** value, **an assessment** must be made according to **Article 4(2a)**.

Or. en

Amendment 201

Sari Essayah

Proposal for a directive

Annex II – Part B – paragraph 1 - Note 2

Text proposed by the Commission

Note 2: *for any situation where the shape of the signal differs sufficiently from a sinusoid to affect the outcome, then peak values should be used as follows. For exposure limit values the peak value should be compared with the peak value of the induced electric field obtained by multiplying the values of table 2.1 by 1.41. For magnetic and electric field levels outside the body, peak values of their rate of change with time should be compared with the values of table 2.2 or 2.3 multiplied by 8.9f (which is $\sqrt{2} 2\pi f$).*

Amendment

Note 2: **In case of non-sinusoidal electric and magnetic fields the exposure shall be assessed according to ICNIRP Guidelines, another relevant scientific standards or guidelines or the guidance given by the Commission for the application of the Directive.**

Or. en

Justification

By measuring electric and magnetic fields by commercially available meters it is not always clear whether the shape of the signal differs from sinusoid or not. ICNIRP has given some guidelines for the measurement methods of sinusoidal fields. Also all fields containing harmonics are not caused by pulsed signals.

Amendment 202

Karima Delli

Proposal for a directive
Annex II – Part B – paragraph 1 - Note 2

Text proposed by the Commission

Note 2: *for* any situation where the shape of the signal differs sufficiently from a sinusoid to affect the outcome, then peak values should be used as follows. For exposure limit values the peak value should be compared with the peak value of the induced electric field obtained by multiplying the values *of table 2.1* by 1.41. For magnetic and electric field levels outside the body, peak values of their rate of change with time should be compared with the values *of table 2.2 or 2.3* multiplied by 8.9f (which is $\sqrt{2} 2\pi f$).

Amendment

For any situation where the shape of the signal differs sufficiently from a sinusoid to affect the outcome, then peak values should be used as follows. For exposure limit values the peak value should be compared with the peak value of the induced electric field obtained by multiplying the values *in expressed in RMS values* by 1.41.

For magnetic and electric field levels outside the body, peak values of their rate of change with time should be compared with the *exposure limit* values or *action values derived to prevent electrical stimulation of tissues* multiplied by 8.9f (which is $\sqrt{2} 2\pi f$).

Or. en

Amendment 203
Karima Delli

Proposal for a directive
Annex II – Part B – paragraph 2

Text proposed by the Commission

For complex pulsed signals a thorough verification must be made according to Article 3(3).

Amendment

deleted

Or. en

Amendment 204
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.1

Text proposed by the Commission

Amendment

Table 2.1 Exposure Limit Values *deleted*
(expressed in RMS values)

Or. en

Amendment 205
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.1 - paragraph 1

Text proposed by the Commission

Amendment

f is the frequency expressed in Hertz (Hz) *deleted*

Or. en

Amendment 206
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.1 - paragraph 2

Text proposed by the Commission

Amendment

The exposure limit value for safety effects is derived from the effect threshold for effects on the central nervous system in the head (CNS). *deleted*

Or. en

Amendment 207
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.1 - paragraph 3

Text proposed by the Commission

Amendment

The exposure limit value for health effects is derived from the effect threshold for effects on the peripheral nervous system (PNS) and it also prevents stimulation of nerve fibres in the central nervous system. *deleted*

Or. en

Amendment 208
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.1 - paragraph 4

Text proposed by the Commission

Amendment

Exposure limit values for static magnetic fields are given in table 2.3 *deleted*

Or. en

Amendment 209
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.2.

Text proposed by the Commission

Table 2.2 *Orientation and action* values for exposure to *an* electric field (*RMS values*)

Frequency	<i>Orientation value</i>	<i>Action value</i>
(Hz)	(V/m)	(V/m)
1 – 25	20×10^3	20×10^3
25 – 90	$500 \times 10^3/f$	20×10^3
90 – 3000	$500 \times 10^3/f$	$1800 \times 10^3/f$

3000 - 100000

170

600

*Amendment*Table 1. **Action** values for exposure to electric field

Frequency (Hz)	Head exposure (V/m)	Whole body exposure (V/m)
1 – 25	20×10^3	20×10^3
25 – 90	$500 \times 10^3/f$	20×10^3
90 – 3000	$500 \times 10^3/f$	$1800 \times 10^3/f$
$3000 - 10^5$	170	600
$10^5 - 10^6$	---	600
$10^6 - 10^7$	---	$600 \times 10^6/f$
$10^7 - 4 \times 10^8$	---	60
$4 \times 10^8 - 2 \times 10^9$	---	$3 \times 10^{-3} \times f^{0.5}$
$2 \times 10^9 - 10^{10}$	---	137
$10^{10} - 3 \times 10^{11}$	---	137

Or. en

Amendment 210**Karima Delli****Proposal for a directive****Annex II – Part B – Table 2.2 - Note 1***Text proposed by the Commission*

Note 1: The action value for electric fields for the frequency range 1-90 Hz is limited to 20 kV/m to limit the risk of indirect effects which are spark discharges which may occur when a worker comes into contact with a conducting object at a different electrical potential. Where the risk of spark discharges is managed using technical means and the training of workers, exposures in excess of action

Amendment

Note 1: The action value for electric fields for the frequency range 1-90 Hz is limited to 20 kV/m to limit the risk of indirect effects which are spark discharges which may occur when a worker comes into contact with a conducting object at a different electrical potential. Where the risk of spark discharges is managed using technical means and the training of workers, exposures in excess of action

values can be accepted provided that the exposure limit values are not exceeded, in accordance with Article 4(2).

values can be accepted provided that the exposure limit values are not exceeded, in accordance with Article 5(5).

Or. en

Amendment 211
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.3

Text proposed by the Commission

Table 2.3 **Orientation and action** values for exposure to **a** magnetic field (RMS)

Frequency	Orientation value	Action value
(Hz)	(μT)	(μT)
0	2×10^6	8×10^6
>0 – 1	$(2-1.8 f) \times 10^6$	$(5.67 - 5f) \times 10^6$
1 – 8	$2 \times 10^5 / f^2$	$0.666 \times 10^6 / f$
8 – 25	$25000 / f$	$0.666 \times 10^6 / f$
25 – 300	1000	$0.666 \times 10^6 / f$
300 - 3000	$3 \times 10^5 / f$	$0.666 \times 10^6 / f$
3000 - 9000	100	222
9000 - 20000	100	$2 \times 10^6 / f$
20000 – 100000	$2 \times 10^6 / f$	$2 \times 10^6 / f$

Amendment

Table 2. **Action** values for exposure to magnetic field (RMS **values**)

Frequency	Head exposure	Whole body exposure
(Hz)	(μT)	(μT)
0	2×10^6	8×10^6

>0 – 1	$(2-1.8 f) \times 10^6$	$(5.67 - 5f) \times 10^6$
1 – 8	$2 \times 10^5 / f^2$	$0.666 \times 10^6 / f$
8 – 25	$25000 / f$	$0.666 \times 10^6 / f$
25 – 300	1000	$0.666 \times 10^6 / f$
300 - 3000	$3 \times 10^5 / f$	$0.666 \times 10^6 / f$
3000 - 9000	100	222
9000 - 20000	100	$2 \times 10^6 / f$
20000 – 100000	$2 \times 10^6 / f$	$2 \times 10^6 / f$
$10^5 - 10^7$	---	$2 \times 10^6 / f$
$10^7 - 4 \times 10^8$	---	0.2
$4 \times 10^8 - 2 \times 10^9$	---	$10^{-5} \times f^{0.5}$
$2 \times 10^9 - 10^{10}$	---	0.45
$10^{10} - 3 \times 10^{11}$	---	0.45

Or. en

Amendment 212
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.3 - Note 1

Text proposed by the Commission

Note 1: *Values for 0 Hz in this table are exposure limit values.* Above 8 T Article 3(6) shall apply.

Amendment

Note 1: *f is the frequency expressed in Hertz (Hz)*

Or. en

Amendment 213
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.3 - Note 1a (new)

Text proposed by the Commission

Amendment

Note 1a:

Above 8 T Article 4(3) shall apply.

Or. en

Amendment 214
Karima Delli

Proposal for a directive
Annex II – Part B – Table 2.3. - Note 2

Text proposed by the Commission

Amendment

Note 2: The action value above 9 kHz and the **orientation** value above 20 kHz result from the exposure limit values for whole-body average SAR as defined in Annex **III**.

Note 2: The action value **for whole body exposure** above 9 kHz and the **action** value **for head exposure** above 20 kHz result from the exposure limit values for whole-body average SAR as defined in Annex **II**.

Or. en

Amendment 215
Sari Essayah

Proposal for a directive
Annex II – Part C

Text proposed by the Commission

Amendment

C. [...]

deleted

Or. en

Justification

The list in paragraph C does not take into account the technological development, it also gives examples that may not be valid in the future and contains inaccurate information. It should be revised and a better place for it is in the Practical Guide that will be given by the Commission according to article 13 of the proposal.

Amendment 216
Karima Delli

Proposal for a directive
Annex II – Part C

Text proposed by the Commission

Amendment

C. [...]

deleted

Or. en

Amendment 217
Ole Christensen

Proposal for a directive
Annex II – part C

Text proposed by the Commission

Amendment

C. [...]

deleted

Or. en

Justification

The inclusion and ranking of the specific items at the list of work equipment and activities is not scientifically based. The regulatory implications of Annex II C are unclear. Instead the Annex may be turned into a non-binding guide based on scientific principles.

Amendment 218
Elisabeth Morin-Chartier

Proposal for a directive
Annex II – Part C – point 1 – point 10 – point 1

Text proposed by the Commission

Amendment

· rail transport powered by alternating current (50 Hz)

· rail transport powered by alternating current (50 Hz, **16.7 Hz**)

Or. fr

Justification

For historical reasons, railways in Europe operate using different frequencies: 50 Hz (the frequency the mains network operates on Europe, while in the United States the mains network operates on 60 Hz), and 16.7 Hz in Austria, Germany, Norway, Sweden and Switzerland. Most likely, the authors of the text were not aware of this specific frequency for electric railways.

Amendment 219

Heinz K. Becker

Proposal for a directive

Annex II – Part C – point 1 – point 10 – point 1

Text proposed by the Commission

· rail transport powered by alternating current (50 Hz)

Amendment

· rail transport powered by alternating current (50 Hz, **16.7 Hz**)

Or. de

Amendment 220

Sylvana Rapti, Stephen Hughes

Proposal for a directive

Annex II – Part C – point 1 – point 10 – point 1

Text proposed by the Commission

· rail transport powered by alternating current (50 Hz)

Amendment

· rail transport powered by alternating current (50 Hz, **16,7 Hz**)

Or. en

Amendment 221

Karima Delli

Proposal for a directive

Annex II – Part D

D. PREVENTION MEASURES and other conditions

deleted

1) For persons at particular risk referred to in Article 4(5)(c), individual assessments must be made in accordance to point E.

2) Zone of exposures under the orientation value:

- Signage as appropriate

3) Zone of exposures above the orientation value but under the action value

- Signage as appropriate

- Delimitation measures (e.g. floor markings, fences) in order to limit or control access, as appropriate

- Information and specific training of relevant workers

- Verification of compliance with exposure limit values for safety effects or alternatively procedures to ensure adverse safety effects are managed.

4) Exposures above the action value:

- Signage as appropriate

- Delimitation measures (e.g. floor markings, fences) in order to limit or control access, as appropriate

- Verification of compliance with exposure limit values for health effects.

- Procedure to manage spark discharges through technical means and the training of workers. (Applies only where electric field exposures are in this zone.)

- Appropriate delimitation and access measures

- Information and specific training of relevant workers.

Amendment 222
Ole Christensen

Proposal for a directive
Annex II – Part D

Text proposed by the Commission

Amendment

D. PREVENTION MEASURES and other conditions ***deleted***

1) For persons at particular risk referred to in Article 4(5)(c), individual assessments must be made in accordance to point E.

2) Zone of exposures under the orientation value:

- Signage as appropriate

3) Zone of exposures above the orientation value but under the action value

- Signage as appropriate

- Delimitation measures (e.g. floor markings, fences) in order to limit or control access, as appropriate

- Information and specific training of relevant workers

- Verification of compliance with exposure limit values for safety effects or alternatively procedures to ensure adverse safety effects are managed.

4) Exposures above the action value:

- Signage as appropriate

- Delimitation measures (e.g. floor markings, fences) in order to limit or control access, as appropriate

- Verification of compliance with exposure limit values for health effects.

- Procedure to manage spark discharges through technical means and the training

of workers. (Applies only where electric field exposures are in this zone.)

- Appropriate delimitation and access measures

- Information and specific training of relevant workers.

Or. en

Justification

Seen from a legal and protective perspective, section D of annex 2 challenges other parts of the Directive, including the general prevention principles which are presented in Article 5 (provisions aimed at avoiding or reducing risks; founded in the general prevention principles of the Framework Directive). The Article should be deleted and put into a non-binding guide.

Amendment 223

Heinz K. Becker

Proposal for a directive

Annex II – Part D – point 2

Text proposed by the Commission

Amendment

2) Zone of exposures under the orientation value:

deleted

– Signage as appropriate

Or. de

Amendment 224

Elizabeth Lynne

Proposal for a directive

Annex II – Part D – point 2

Text proposed by the Commission

Amendment

2) Zone of exposures under the orientation value:

deleted

- Signage as appropriate

Amendment 225
Karima Delli

Proposal for a directive
Annex II – Part E

Text proposed by the Commission

Amendment

E. PERSONS AT PARTICULAR RISK

deleted

Workers having declared themselves as wearing an Active Implantable Medical Device (AIMD) and women having declared themselves to be pregnant are considered to be persons at particular risk, as stated in Article 4(5)(c).

Where a worker has declared to their employer that he or she wears an AIMD the employer shall carry out an assessment to determine what restriction on where they can work is needed to avoid interference to their implanted device. Advice on how to do this is provided by CENELEC (see EN 50527 and associate parts). It may be noted that principle underlying the CENELEC guidance is that interference will not occur when the fields is below the Reference Levels given in Council Recommendation 1999/519/EC on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)¹¹.

Where a worker has declared to her employer that she is pregnant then the requirements of Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding¹² apply. The employer shall enable the worker to avoid having to enter areas where exposures exceeding the exposure limits for the general public given in

*Council Recommendation 1999/519/EC,
or its subsequent revisions.*

Or. en

Amendment 226
Liisa Jaakonsaari

Proposal for a directive
Annex II – Part E – paragraph 3

Text proposed by the Commission

Where a worker has declared to her employer that she is pregnant then the requirements of Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding apply. **The employer shall enable the worker to avoid having** to enter areas where exposures exceeding the exposure limits for the general public given in Council Recommendation 1999/519/EC, or its subsequent revisions.

Amendment

Where a worker has declared to her employer that she is pregnant then the requirements of Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding apply. The worker **shall have the right to refuse** to enter areas where exposures exceeding the exposure limits for the general public given in Council Recommendation 1999/519/EC, or its subsequent revisions.

Or. fi

Amendment 227
Karima Delli

Proposal for a directive
Annex III

Text proposed by the Commission

Amendment

deleted

Or. en

Text proposed by the Commission

Amendment

**C. CATEGORIES OF WORK
EQUIPMENT OR ACTIVITIES**

deleted

1) The following activities are, in normal conditions, considered to expose the worker under the action value.

Workplaces in which only equipment complying with Directives 1999/5/EC and 2006/95/EC is used as intended and notably:

transmitters (small, at GSM base stations, < 1 W)

Telephones and hand portables

Radar systems (speed checks, weather radars)

RFID above 100 kHz

Microwave drying

TETRA transmitters in masts

TETRA transmitters on vehicles, power max. 10 W

Tape erasers

Base stations for mobile telephony (GSM, UMTS)

2) The following activities are, in normal conditions, considered to expose the worker above the action value.

Equipment that is being installed or maintained (trouble shooting on)

Non-automated induction heating working in this frequency range

Radiofrequency and microwave lighting

Non destructive magnetic testing

Activities within the exclusion zone for

the public around:

Large broadcasting transmitters

Radar systems (navigational)

Other EMF producing equipment

Or. en

Justification

The list in paragraph C does not take into account the technological development. It should be revised and a better place for it is in the Practical Guide that will be given by the Commission according to article 13 of the proposal.

Amendment 229

Ole Christensen

Proposal for a directive

Annex III – Part C

Text proposed by the Commission

Amendment

**C. CATEGORIES OF WORK
EQUIPMENT OR ACTIVITIES**

deleted

1) The following activities are, in normal conditions, considered to expose the worker under the action value.

Workplaces in which only equipment complying with Directives 1999/5/EC and 2006/95/EC is used as intended and notably:

transmitters (small, at GSM base stations, < 1 W)

Telephones and hand portables

Radar systems (speed checks, weather radars)

RFID above 100 kHz

Microwave drying

TETRA transmitters in masts

TETRA transmitters on vehicles, power max. 10 W

Tape erasers

*Base stations for mobile telephony
(GSM, UMTS)*

2) The following activities are, in normal conditions, considered to expose the worker above the action value.

Equipment that is being installed or maintained (trouble shooting on)

Non-automated induction heating working in this frequency range

Radiofrequency and microwave lighting

Non destructive magnetic testing

Activities within the exclusion zone for the public around:

Large broadcasting transmitters

Radar systems (navigational)

Other EMF producing equipment

Or. en

Justification

The inclusion and ranking of the specific items at the list of work equipment and activities is not scientifically based. The regulatory implications of Annex III C are unclear. Instead the Annex may be turned in to a non-binding guide based on scientific principles.

Amendment 230
Ole Christensen

Proposal for a directive
Annex III – Part D

Text proposed by the Commission

Amendment

D. PREVENTION MEASURES

deleted

1) For persons at particular risk, referred to in Article 4.5(c), individual assessments must be made in accordance with Annex III point E.

2) Zone of exposure under the action value:

- *Signage as appropriate*
- *Information of workers*
- 3) *Exposures above the action value:*
 - *Verify compliance with exposure limit values*
 - *Appropriate delimitation and access measures*
 - *Information and specific training of relevant workers.*

Or. en

Justification

Seen from a legal and protective perspective, section D of annex III challenges other parts of the Directive, including the general prevention principles which are presented in Article 5 (provisions aimed at avoiding or reducing risks; founded in the general prevention principles of the Framework Directive). The Article may be deleted and put into a non-binding guide.

Amendment 231
Heinz K. Becker

Proposal for a directive
Annex III – Part D – point 2

Text proposed by the Commission

Amendment

- | | |
|---|-----------------------|
| <p>2) <i>Zone of exposure under the action value:</i></p> <ul style="list-style-type: none"> - <i>Signage as appropriate</i> - <i>Informing workers</i> | <p><i>deleted</i></p> |
|---|-----------------------|

Or. de

Amendment 232
Thomas Mann

Proposal for a directive
Annex III – Part E – paragraph 1

Text proposed by the Commission

Workers having declared themselves as wearing an AIMD and women having declared themselves to be pregnant are considered to be persons at particular risk, as stated in Article 4(5)(c).

Amendment

Workers having declared themselves as wearing an AIMD, **young persons** and women having declared themselves to be pregnant are considered to be persons at particular risk, as stated in Article 4(5)(c).

Or. de

Amendment 233

Sari Essayah

Proposal for a directive

Annex III – Part E – paragraph 3

Text proposed by the Commission

Where a worker has declared to her employer that she is pregnant then the requirements of the Directive 92/85/EEC apply. The **employer** shall **enable to worker to avoid having** to enter areas where exposures exceeding the exposure limits for the general public given in Recommendation 1999/519/EC, or its subsequent revisions.

Amendment

Where a worker has declared to her employer that she is pregnant then the requirements of the Directive 92/85/EEC apply. The **worker** shall **have the right not** to enter areas where **there are** exposures exceeding the exposure limits for the general public given in Recommendation 1999/519/EC, or its subsequent revisions.

Or. en

Justification

As a safety measure, since there is knowledge about effects on unborn children is restricted or non-existent, workers should be allowed to refuse going to areas where exposure could potentially be harmful to the unborn child.