

IMPACT: „Acquis communautaire” audits

Checklist – EU laws for health and safety at work

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LIST OF SUBJECTS

- **I. General provisions**
- **II. Equipments, signs and loads**
- **III. Protection of specific groups of workers**
- **IV. The workplace**
- **V. Chemical, physical and biological agents**

I. GENERAL PROVISIONS

I.1. Framework – Directive 89/391/EEC – improvements in the safety and health conditions of workers at work

- **Objective:** To ensure a higher degree of protection of workers at work through the implementation of preventive measures to guard against accidents at work and occupational diseases and through the information, consultation, balanced participation and training of workers and their representatives.
- The framework Directive serves as a basis for individual Directives covering, inter alia, the areas listed (7 areas) in the Annex.
- All sectors (public and private), with the exception of certain specific activities in the public and civil protection services.

I. GENERAL PROVISIONS

I.1. Framework – Directive 89/391/EEC -

Continued

- **Employers' obligations:** To ensure the safety and health of workers in every aspect related to the work, primarily on the basis of the specified general principles of *prevention*, without involving the workers in any financial cost
- to *evaluate the occupational risks*, inter alia in the choice of work equipment and the fitting-out of workplaces, and to make provisions for adequate protective and preventive services
- to *keep a list of, and draw up reports on, occupational accidents*
- to take the necessary measures for first aid, fire-fighting, evacuation of workers and *action required* in the event of serious and imminent danger
- to *inform and consult workers* and allow them to take part in discussions on all questions relating to safety and health at work
- to ensure that each worker receives adequate *safety and health training* throughout the period of employment

II. EQUIPMENTS, SIGNS AND LOADS

II.1. Use of work equipment – Directive 89/655/EEC –

2nd individual Directive

- **Objective:** Implementation of the minimum requirements for concrete measures concerning the use of work equipment
- **Definitions:** „work equipment”, „use of”, „danger zone”, „exposed worker”, „operator”
- **Employers’ obligations:** to base the choice of work equipment on the specific working conditions and hazards existing for workers in order to *eliminate or at least minimize* those hazards.
- Minimum requirements in the Annex – if no other Directive is applicable. Use, maintenance, repair of work equipment involving a specific risk may only be carried out by workers who have been *specifically designated* to the task
- To provide adequate *information* and written *instructions* on work equipment, containing at least adequate safety and health information

II. EQUIPMENTS, SIGNS AND LOADS

II.1. Use of work equipment – Directive 89/655/EEC –

Continued

- **Employers' obligations:** To provide adequate training including training on any risk which such use might entail
- to ensure that where the safety depends on the installation it will be subject to an initial inspection and inspection after each time it is reassembled
- to ensure that the work equipment is subject to periodic inspections and special inspections after any occurrence liable to jeopardize its safety
- to take fully into account the work situation and position of workers while using work equipment, as well as the ergonomic principles, when applying the minimum safety requirements
- to ensure that workers are aware of the potential dangers to which they are exposed in their immediate working environment
- to provide for the consultation and participation of workers on matters covered by the Directive

II. EQUIPMENTS, SIGNS AND LOADS

II.2. Use of personal protective equipment (PPE) – Directive 89/656/EEC – 3rd individual Directive

- **Objective:** minimum requirements for the assessment, selection and correct use of personal protective equipment (PPE). Priority must be given to collective safety measures.
- **Definition:** „PPE – designed to be worn or held by the worker to *protect him against hazards* encountered at work.” Such equipment must be used when the existing risks cannot be sufficiently limited by technical means of collective protection or work organization.
- **Excluded:** PPE used by emergency and rescue services, self-defence or deterrent equipment.
- **Employers’ obligations:** PPE must comply with the relevant Community provisions on design and manufacture with respect to safety and health (Dir. 89/686/EEC) and with the conditions set out in the Directive. *Appropriate equipment* must be provided free of charge and ensure that it is in good working order and hygienic condition.

II. EQUIPMENTS, SIGNS AND LOADS

II.2. Use of personal protective equipment (PPE) – Directive 89/656/EEC — 3rd individual Directive- Continued

- Before choosing PPE the employer is required to assess the extent to which it complies with the conditions set out in the Directive. This includes *analysis of risks* which cannot be avoided by other means and definitions and comparison or the requisite characteristics of the equipment.
- Member States shall ensure that *general rules* are established for the use of PPE and/or covering cases and situations where the employer must provide such equipment (after prior consultations with employers' and workers' organizations).
- **Annexes:** specimen risk survey table, non-exhaustive list of items of PPE (*industrial helmets, goggles and visors, ear protectors, respirators, gloves, boots and shoes, protective clothing, lifejackets for industrial use and protection against falls*), non-exhaustive list of activities which may require the provision of PPE
- Workers shall be *informed* of all measures to be taken. Consultation and participation shall take place.

II. EQUIPMENTS, SIGNS AND LOADS

II.3. Work with display screen equipment – Directive 90/270/EEC — 5th individual Directive-

- **Objective:** min. requirements to guarantee the safety of workstations
- **Definition:** alphanumeric or graphic display screen, regardless of the display process employed; exempted are 6 cases, e.g. computer systems on board a means of transport.
- **Employers' obligations:** to *analyse* workstations, *evaluate* the safety and health conditions and remedy any risk to eyesight, physical problems and problems of mental stress.
- **Annex:** minimum requirements for equipment, environment (space, lighting, noise, heat, etc.) and operator/computer interface. Workers' activities must be *planned* that daily work on a display screen is periodically interrupted by *breaks or changes of activity*.
- Workers are entitled to an appropriate *eye and eyesight test* before commencing display screen work, at regular intervals thereafter, and if they experience visual difficulties; ophthalmological examinations, if necessary and special corrective appliances at no additional costs to them.

II. EQUIPMENTS, SIGNS AND LOADS

II.4. Provision of health and safety signs at work – Directive 92/58/EEC — 9th individual Directive-

- **Objective:** Community system of safety signs designed to reduce the risk of accidents at work and occupational diseases.
- It provides for the obligatory addition of other signboards and introduces several other forms of *marking and signaling*, e.g. *location and identification* of containers and pipes and of fire-fighting equipment, marking of certain traffic routes, illuminated and acoustic signs, appropriate verbal communication, and hand signals.
- Not applicable to signs for the placing on the market of dangerous substances and preparations, products and/or equipment, nor to signs used for regulating traffic.
- **Employers' obligations:** *Signs must be provided* where hazards cannot be avoided or adequately reduced by preventive measures. Wherever appropriate, signs used for road, rail, inland waterway, sea and air transport must be installed inside undertakings.
- Workers must be *informed and given training*.

II. EQUIPMENTS, SIGNS AND LOADS

II.4. Provision of health and safety signs at work – Directive 92/58/EEC — 9th individual Directive - Continued

- Annex I: general min. requ. (types, interchanging and combining signs)
- Annex II: requirements concerning signboards (intrinsic features, conditions of use, list of signboards to be used)
- Annex III: signs on containers and pipes (labelling and colouring)
- Annex IV: identification and location of fire-fighting equipment
- Annex V: min. requ. governing signs used for obstacles and dangerous locations and for marking traffic routes
- Annex VI: illuminated signs (intrinsic features and specific rules to be used)
- Annex VII: acoustic signs (intrinsic features and codes to be used)
- Annex VIII: direct and indirect communication (intrinsic features and specific rules governing use)
- Annex IX: hand signals (list of coded signals to be used)
- Member States may specify certain exemptions within certain precise limits

II. EQUIPMENTS, SIGNS AND LOADS

II.5. Manual handling of loads involving risk – Directive 90/269/EEC – 4th individual Directive-

- **Objective:** Protection of workers against the risks involved in the manual handling of heavy loads. Consultation and participation of workers
- **Definition:** any transporting or supporting of a load which, by reason of its characteristics or of unfavourable ergonomic conditions, involves a risk to workers
- **Employers' obligations:** to use the appropriate means to *avoid* the need for manual handling of loads by workers, or, where this cannot be avoided, to take the appropriate organizational measures to *reduce* the risk involved (Annex I)
- to ensure that workers receive *adequate information* on the weight of a load and the centre of gravity or the heaviest side when a package is eccentrically loaded, proper training and precise information on how to handle loads correctly, and the risks involved in incorrect handling (Annex I,II).
- **Annexes:** reference information on the characteristics of the load and the working environment, physical effort required, requirement of the activity and the individual risk factors.

III. PROTECTION OF SPECIFIC GROUPS OF WORKERS

III.1. Protection of self-employed workers – Council Rec. 2003/134/EC

- **Definition:** Workers who exercise their occupational activity in a manner which does not involve an employment relationship with an employer; no subordination to a third person.
- **Objective:** To achieve the improvement of the protection of the health and safety at work of self-employed workers. *Typical „high-risk” sectors:* agriculture, fishing, construction and transport
- *Member States* are recommended to *prevent* occupational accidents and diseases. To *promote* health and safety for self-employed workers by legislation, incentives, information campaigns. To *implement* awareness-raising campaigns so that these workers can access to sufficient training to acquire appropriate safety and health skills. *Easy access to information and training* without excessive expenses. To have access to *health surveillance*, appropriate to the risks to which they are exposed.

III. PROTECTION OF SPECIFIC GROUPS OF WORKERS

III.2. Protection of temporary workers – Directive 91/383/EEC

- **Objective:** to improve protection of the safety and health of temporary workers, who are more exposed to the risk of accidents at work and occupational diseases than other workers.
- **Contents:** *no difference in treatment* under the employment relationship with respect the health and safety aspects of working conditions, particularly regarding access to PPE.
- A temporary worker *must be informed* beforehand of any risk he faces in any activity he takes up. He must be informed of any special occupational qualifications or skills or special medical surveillance required, and whether the job falls within the category of major risks as defined in national legislation.
- A temporary worker must receive *sufficient training* appropriate for the job
- Temporary workers must not be used for work requiring *special medical surveillance* over a long period. Where exceptions are made, medical surveillance must continue beyond the term of the temporary employment contract.

III. PROTECTION OF SPECIFIC GROUPS OF WORKERS

III.2. Protection of temporary workers – Directive 91/383/EEC - Continued

- Member States may ban the use of temporary workers for work that is particularly dangerous, especially work requiring special medical surveillance. Where Member States do not avail themselves of this option, they must adopt the necessary measures to ensure that the temporary workers and those who are called on to perform work requiring special medical surveillance are given it. They may provide that such surveillance should continue beyond the end of the employment relationship.
- For the duration of the assignment, the user undertaking is responsible for the safety, health and hygiene conditions under which the worker has to work without prejudice to the responsibility of the temporary employment business.
- The persons or departments responsible for ensuring that the preventive health rules are complied with must be notified of any assignment of temporary workers.
- National or Community provisions could be more favourable to workers.

III. PROTECTION OF SPECIFIC GROUPS OF WORKERS

III.3. Protection of young people at work – Directive 94/33/EC

- **Objective:** Minimum requirements aimed in particular at improving working conditions, guaranteeing workers better health and safety protection.
- **Contents:** Applicable to young people under 18 who have an employment contract or an employment relationship defined by/subject to the law in force in a Member State. Member States may stipulate that the Directive may not be applicable to occasional work carried out for a limited period in domestic service in a private household or to work in a family business which is not considered likely to harm, injure or endanger young people.
- Member States shall take the necessary measures to *prohibit* the employment of children (under 15 or who are still in full-time compulsory education according to national legislation) and shall ensure that the employment of adolescents (15-18) is *strictly controlled and protected*.
- Member States may stipulate that the ban of employment of children is not applicable for the purposes of cultural, artistic, sporting or advertising activities, subject to prior authorization by the competent authority in each specific case.

III. PROTECTION OF SPECIFIC GROUPS OF WORKERS

III.3. Protection of young people at work – Directive 94/33/EC - Continued

- Children aged 14 years or over who work in an undertaking as part of a work/training scheme or traineeship, provided that this work is carried out in accordance with the requirements laid down by the competent authority
- Children over 13 may perform light work for a limited number of hours per week in categories of employment defined in national legislation.
- Employer's general obligations, such as protection of the health and safety of young people, assessment of the risks to young people associated with their work, assessment and monitoring of the health of young people, information about young people and children's legal representatives on the possible risks
- Types of employment which must not be carried out by young people such as work which exceeds the mental or physical capacities, work involving harmful exposure to dangerous substances
- Provisions relating to working hours, night work, rest periods, annual leave, rest breaks
- Member States must implement measures in the event of infringement.

III. PROTECTION OF SPECIFIC GROUPS OF WORKERS

III.4. Protection of pregnant women,... – Directive 92/85/EEC – 10th indiv. Dir.

- **Objective:** Minimum measures to protect the health and safety of pregnant workers, women workers who have recently given birth and women who are breastfeeding, considering them to be a specific risk group.
- **Contents:** Definitions „pregnant workers” etc.
- For all activities liable to involve a risk, the employer or the health and safety service must determine the nature, degree and duration of exposure in order to *evaluate* the risks and decide what measures should be taken. Workers are to be *notified* of the results and measures.
- Exposure of the workers in question to the above risks to be avoided by *provisionally adjusting* their working conditions or their working hours. Where this is technically and/or objectively not feasible, or cannot reasonably be required on duly substantiated grounds, the employer shall take the necessary measures to *move the worker concerned to another job*. Where transfer is not feasible, the workers must be *granted leave* for the whole of the period.

III. PROTECTION OF SPECIFIC GROUPS OF WORKERS

III.4. Protection of pregnant women,... – Directive 92/85/EEC – 10th indiv. Dir., Continued

- Pregnant workers may not be obliged to perform duties for which the assessment has revealed a *risk of exposure* to agents and conditions listed in Annex II, Section A, and, in case of workers who are breastfeeding, to the agents and working conditions listed in Annex II, Section B.
- Member States shall take measures that workers are not obliged to perform night work during their pregnancy and a period following child birth, subject to submission of a medical certificate, by transferring them to *daytime work where possible*, otherwise by excusing them from work or extending maternity leave.
- **Maternity leave:** uninterrupted period of at least 14 weeks before and/or after delivery, two of which must occur before. Pregnant workers have the right to take leave from work without loss of pay to attend *ante-natal examinations*.
- Women *may not be dismissed* for reasons related to their condition from the beginning of their pregnancy to the end of the period of leave from work. For a dismissal employer must give good grounds in writing.
- Employment rights must be *ensured*.

IV. THE WORKPLACE

IV.1. Minimum health and safety requirements for the workplace – Directive 89/654/EEC – 1st indiv. Directive

- **Objective:** Minimum measures designed to improve the working environment, in order to guarantee a better standard of the health and safety protection.
- **Contents:** „workplace”: a place which houses workstations and any other place within the area of the undertaking to which the worker has access in the course of his/her employment.
- Not applicable to *means of transport outside the undertaking, temporary or mobile work sites, extractive industries, fishing boats, fields, woods and other land situated away from the buildings of an agricultural or forestry undertaking*
- **Employers' obligations:** Besides being obliged to inform, consult and seek the participation of workers on the matters covered by the Directive, employers must comply with other *general requirements such as the regular cleaning of workplaces.*

IV. THE WORKPLACE

IV.2. Temporary and mobile work sites – Directive 92/57/EEC – 8th individual Directive

- **Objective:** improvement, where workers exposed to particularly high risk, by taking account of safety and health at the project design and organizational stages. To prevent risks by establishing a chain of responsibilities linking all the parties involved. Excluded: extractive industries.
- **Definition:** any construction site at which building and civil engineering works are carried out (non-exhaustive list in Annex I.).
- **Contents:** The client (for whom the project is carried out) or project supervisor (person responsible for the design and/or execution and/or supervision) *indicates the name(s) of the person(s) responsible for the coordination of safety and health* at sites where several firms are present. Before work starts, a *safety and health plan* is drawn up. Where the site is expected to remain open for longer than 30 working days and it employs more than 20 workers at the same time – or involves a volume of work in excess of 500 man-days – the client/project supervisor must give *prior notice* (content in Annex III).

IV. THE WORKPLACE

IV.2. Temporary and mobile work sites – Directive 92/57/EEC – 8th individual Directive - Continued

- **Project design stage:** to take account of the *general principles of prevention* and a *safety plan* when deciding architectural and/or organizational aspects, and when estimating the completion time of works. To prepare a *file of useful safety and health information* for any subsequent works.
- **Project execution stage:** to ensure that employers and self-employed persons *apply* the general safety and health plan is taken into account. To organize cooperation between employers in matters of safety, to check the procedures are being implemented correctly, to ensure that no unauthorized person enter.
- **Employers' obligations:** *minimum safety and health requirements* (Annex IV) – incl. Energy distribution systems, emergency routes and exits, ventilation, temperature, traffic routes and danger areas, sanitary installations etc.
- **Obligation of self-employed persons:** see project execution stage, Annex IV, the use of PPE and work equipment
- *Information* of workers on all safety and health measures on the work site, *consultation* and *participation*.

IV. THE WORKPLACE

IV.3. Extractive industries by means of boreholes – Directive 92/91/EEC - 11th individual Directive

- **Objective:** Improve the safety and health conditions of workers in the extractive industries concerned with exploration for and exploitation of minerals by means of boreholes (onshore and offshore).
- **Contents:** to *apply* safety consideration to workplaces right from the design stage. Supervisor in charge; *entrust work* involving a special risk only to suitable qualified staff, safety instructions are comprehensible to all workers, first aid facilities, safety exercises at regular intervals, document on safety and health must beforehand *prepared*, coordination if there are more than one firm.
- Protection against fire, explosions and health-endangering atmospheres, *preventive measures*, escape and rescue facilities, communication, warning, health surveillance before workers are assigned to duties and at regular intervals thereafter
- Ensure *consultation and participation* of workers on the matters covered by the Directive

IV. THE WORKPLACE

IV.3. Extractive industries in the surface and underground – Directive 92/104/EEC – 12th indiv. Dir. Cont.

- **Objective:** Improve the safety and health protection of workers in the surface and underground extractive industries
- **Contents:** Workplace are designed and operated in such a way as to protect the workers' safety and/or health, responsible supervision during operation of manned workplaces, entrust work involving a special risk only to competent workers; safety instructions are comprehensible to all workers concerned; provide first-aid facilities and run safety exercises at regular intervals.
- *Document* concerning safety and health beforehand (assessment, determination, appropriate measures), coordination if there are more than one firm
- Fire *prevention*, explosions, health-endangering noxious atmospheres, presence and *maintenance* of escape and rescue facilities, communication, warning, and alarm systems; sanitary installations, rest rooms, *information* of workers of the measures, regular health checks. Consultation and participation.

IV. THE WORKPLACE

IV.4. Equipment and protective systems for use in potentially explosive atmospheres – Directive 94/9/EC

- **Objective:** To ensure the free movement of equipment and protective systems intended for use in explosive atmospheres by harmonizing the national provisions.
- **Contents:** The Directive applies to electrical and non-electrical protective devices and systems (surface and mining equipment) and to items of equipment for use outside potentially explosive atmospheres but which impinge upon devices that are present in any such atmospheres.
- The Directive does not apply to: medical devices, protective devices and systems used on premises where potentially explosive or chemically unstable substances are stored, seagoing ships and mobile offshore units, certain means of transport.
- **Three categories for requirements:** common requirements, additional requirements for devices which can trigger an explosion, additional requirements for protective systems – procedures for *CE marking* depend upon the device and level of safety provided.
- Certain procedures for *assessment and checking* of protective devices - by notified bodies

IV. THE WORKPLACE

IV.5. Vessels (fishing vessels – Directive 93/103/EEC – 13th individual Directive

- **Objective:** Minimum practical requirements for *improving workers' safety and health* on board fishing vessels
- **Definition:** any vessel flying the flag of a Member State or registered under the plenary jurisdiction and used for commercial purposes
- **Contents:** Owners must fulfil certain obligations in order to safeguard workers' health and safety. They must ensure that their vessels are being used without endangering the health of workers. Occurrences at sea must be *described in a report* to be forwarded to the competent authorities. Regular technical *maintenance* and any defects are rectified as quickly as possible. Vessels have to be *cleaned regularly*, life-saving and survival equipment is in *good working condition*, PPE complies with the specifications of Annex IV.
- Annex I: min. requ. for new fishing vessels (15 m), Annex II: old fishing vessels (18 m), Annex III: life-saving and survival equip., Annex IV: PPE

IV. THE WORKPLACE

IV.5. Improved medical treatment on board vessels – Directive 92/29/EEC - Continued

- **Objective:** *improving medical assistance at sea*, since a vessel is a workplace which, on account of its mobility and its geographical isolation, presents high risks to the workers' safety and health on board; *excl. Inland navigation vessels, warships, pleasure boats and tugs operating in harbour areas.*
- **Contents:** every vessel always has to carry on board *medical supplies* which meet, in terms of quality, the specifications of Annex II for the category of vessel to which it belongs; quantities are *determined* according to the characteristics of the voyage, the activities to be carried out, the nature of the cargo and the number of workers. The content of the supplies are detailed on a *check-list* corresponding to the general framework laid down in Annex IV. *Watertight medicine chest for each lifeboat, sick bay* (bigger ships), *doctor* (100 or more workers). *Antidotes* if dangerous substances are carried.
- **Responsibilities of the owner:** *provision* and replenishment of medical supplies, *information and training, annual inspection*

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.1. Exposure to electro magnetic fields - Directive

2004/40/EC – 18th individual Directive

- **Objective:** To provide for measures to protect workers from the risks related to electromagnetic fields.
- **Contents:** The Directive lays down two types of value for exposure of workers: „*exposure limit values*” defined in Table 1 of the Annex on basis of the various frequencies that are recognized as having harmful effects on the human cardiovascular system or the central nervous system, whole-body heat stress or excessive localized heating of tissues, „*action values*”, or values above which employers must take the measures specified in the Directive. (Annex/Table 2). Action values obtained from International Commission on Non-Ionizing Radiation Protection (ICNIRP).
- **Employers’ obligations:** *Assessment, measurement and calculation* of the levels of electromagnetic fields and risks to which workers are exposed. Saving of the results of this assessment, suitable *data storage*. Assessment of *indirect effects*, such as interference with medical electronic equipment, fires and explosions resulting from ignition of flammable material.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.1. Exposure to electro magnetic fields - Directive

2004/40/EC – 18th individual Directive

- Once the action values are exceeded, employers must devise and implement an *action plan* comprising technical and/or organizational measures to prevent exposure from exceeding the exposure limit values (modification of working methods, choice of appropriate work equipment, better design of work stations).
- Exposed workers or their representatives must receive all necessary *information and training*.
- The Directive provides for the requirement of appropriate *surveillance of the health* of exposed workers. Where exposure exceeds the limit values, a *medical examination* is foreseen. If it transpires that the health of the workers concerned has been harmed as a result of this exposure, a *reassessment* of the risks must be carried out.
- Member States must provide for adequate *sanctions* in the event of *infringement* of the national provisions transposing the Directive.
- Member States must provide a *report* to the Commission every five years on the practical implementation of the Directive.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.2. Exposure to noise - Directive 2003/10/EC – 17th individual Directive

- **Objective:** To reduce exposure to noise in order to lessen the risk of hearing loss; to reduce noise levels preferably at source, and to provide for the provision and use of personal ear protectors.
- **Exposure limit values and exposure action values:** Limit value: 87 decibels (dB); action value: 80 dB (lower value) and 87 dB (upper value)
- **Employers' obligations:** Determination and *assessment* of risks. The risks resulting from exposure to noise must be reduced to the *lowest level* reasonably practicable, taking account of technical progress and the availability of noise control measures. At suitable intervals, noise experienced at work shall be assessed and, when necessary, measured in order to determine whether maximum decibel (dB) levels have been exceeded and whether workers have been affected.
- **Personal protection:** If the risks arising from noise exposure cannot be prevented by other means, properly fitting individual *hearing protectors* must be made available to workers (over the lower exposure action value: 80 dB)
- **Health surveillance:** If noise exceeds 80 dB – workers have right to *preventive audiometric testing*. Above an average level of 85 dB, workers are entitled to *regular hearing checks*. Individual *health records* are made and kept up to date.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.2. Exposure to noise - Directive 2003/10/EC – Cont.

- If the level *exceeds 87 dB*, the reasons for the excess level shall be identified and the employer shall draw up and apply a program of technical and/or organizational measures to reduce exposure; individual ear protectors must be used; the areas of excess exposure must be delimited and identified by signs, and, where appropriate, access must be restricted.
- Member States may, exceptionally, grant *derogations* under certain conditions.
- **Obligations of Member States:** To *ensure that risks are reduced* as far as possible in the design and construction of new installations and that *adequate information* is available on the noise produced by any new piece of equipment capable of reaching or exceeding 85 dB.
- To *ensure consultation* with workers' and employers' organizations before adopting the measures contained in the Directive and monitoring of their application by workers' representatives.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.3. Exposure to mechanical vibrations - Directive 2002/44/EC – 16th individual Directive

- **Objective:** It was considered necessary to legislate on the specific problem of exposure to mechanical vibration. Vibration poses a potential risk to workers as it may give rise to musculoskeletal, neurological and vascular disorders.
- **Exposure limit values and exposure „action” values** (above which employers must take measures):
- *For hand-arm vibration*, the daily exposure limit value per eight-hour reference period shall be 5 m/s² and the daily exposure action value per eight-hour ref. period shall be 2,5 m/s².
- *For whole-body vibration* (lower-back morbidity and trauma of the spine), the daily exposure limit value per eight-hour ref. period shall be 1,15 m/s² or, at the choice of the Member State concerned, a vibration dose value of 21 m/s^{1,75}, and the daily exposure action value per eight-hour ref. period shall be 0,5 m/s² or, at the choice of the Member State concerned, a vibration dose value of 9,1 m/s^{1,75}.
- Workers' exposure to vibration shall be assessed or measured on the basis of the technical specifications listed in the *Annex* to the Directive.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.3. Exposure to mechanical vibrations - Directive

2002/44/EC – 16th individual Directive - Continued

- **Employers' obligations:** *Determination and assessment* of risks. The level of exposure to mechanical vibration may be assessed by means of observation of specific working practices and reference to relevant information provided by the manufacturer of the equipment. The data obtained shall be *preserved* in a suitable form. *Particular attention* should be given to: the level, type and duration of exposure; the exposure limit values and exposure action values; any effects concerning the health and safety of workers; the existence of replacement equipment designed to reduce the levels of exposure to mechanical vibration; the extension of exposure to whole-body vibration beyond normal working hours; specific working conditions (e.g. low temperatures).
- Once the exposure „action” values are exceeded, the employer shall establish and implement a program of measures to *reduce the exposure to a minimum* (e.g. other working methods; appropriate work equipment; auxiliary equipment; information and training for workers; appropriate work schedules; provision of clothing to protect from cold and damp.)

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.3. Exposure to mechanical vibrations - Directive

2002/44/EC – 16th individual Directive - Continued

- **Member States** shall adopt provisions to ensure the appropriate *health surveillance* of workers. Member States shall establish arrangements to ensure that, for each worker who undergoes health surveillance, *individual health records* are kept. The individual worker shall, at his request, have access to the health records relating to him personally. Where a worker is found to have an identifiable disease or adverse health effect considered to be the result of exposure to mechanical vibration at work, the worker and the employer shall be *informed*; the employer shall review the measures including the possibility of *assigning the worker to alternative work* and arrange *continued health surveillance*.
- **Transitional periods:** With regard to implementation of the obligations referred to above (workers shall not be exposed above the exposure limit value), Member States shall be entitled to make use of a maximum *transitional period of five years* from 6 July 2005 where work equipment is used which was given to workers before 6 July 2007. With regard to equipment used in the *agriculture and forestry* sectors, Member States shall be entitled to extend the maximum transitional period by up to four years to a *total of nine years*. In the case of *sea and air transport*, Member States may grant *derogations* in duly justified circumstances to whole-body vibration.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.4. Risk of explosive atmospheres - Directive

1999/92/EC – 15th individual Directive

- **Objective:** To establish and harmonize minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres. An „explosive atmosphere” is a mixture with air, under atmospheric conditions, of flammable substances in the form of gases, vapours, mists or dusts in which, after ignition has occurred, combustion spreads to the entire unburned mixture.
- **Employers’ obligations:** The employer must take technical and/or organizational measures to *prevent* the formation of explosive atmospheres, prevent the ignition of explosive atmospheres, and *reduce* the effects of an explosion in such a way that workers are not at risk. The employer must ensure that a *health and safety protection document*, describing explosion protection measures and satisfying the requirements of Directive 89/391/EEC, is prepared and kept up to date.
- Workers and/or their representatives must be *informed* of all measures to be taken for their safety and health at work. The employer must take the necessary steps to ensure that workers potentially at risk from explosive atmospheres receive appropriate *training*.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.4. Risk of explosive atmospheres - Directive

1999/92/EC – 15th individual Directive, continued

- **Work equipment** for use in places where explosive atmospheres may occur *must comply with the minimum requirements* laid down in the Annex to the Directive. After consulting the Advisory Committee on Safety, Hygiene and Health Protection at Work, the Commission must draw up practical guidelines in a guide to good practice of a non-binding nature.
- **Member States must**, on request, endeavour to make *relevant information* available to employers, with particular reference to the guide to good practice.
- *Annex I* contains the classification of places where explosive atmospheres may occur. *Annex II* describes the minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres and criteria for the selection of equipment and protective systems. *Annex III* presents the warning sign for places where explosive atmospheres may occur.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.5. Exposure to chemical agents - Directive 98/24/EC

- **Objective:** minimum requirements for the protection of workers from risks to their safety and health arising, or likely to arise, from the effects of chemical agents
- **Contents:** For any chemical agent for which an indicative occupational exposure limit value is established at Community level, Member States must establish a national occupational exposure limit value, taking into account the Community limit value. On the same basis, binding occupational exposure limit values may be drawn up at Community level, account being taken of feasibility factors.
- **Employers' obligations:** to *determine* whether any hazardous chemical agents are present at the workplace and assess any risk to the safety and health arising from their presence. This *assessment* shall be kept up-to-date, particularly if there have been significant changes or if the results of health surveillance show it to be necessary. In the case of activities involving exposure to several hazardous chemical agents, the risks must be assessed on the basis of the risk presented by all such chemical agents *in combination*.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.5. Exposure to chemical agents - Dir. 98/24/EC – Cont.

- In the case of a *new activity* involving hazardous chemical agents, work must commence only after the risk of that activity has been assessed and appropriate preventive measures had been taken. The employer must take the necessary *preventive* measures.
- Risks must be *eliminated or reduced* to a minimum by the design and organization of systems of work; the provision of suitable equipment for any work with chemical agents; reducing to a minimum the duration and intensity of exposure; appropriate *hygiene measures*; reducing the quantity of chemical agents present at the workplace to the minimum required for the type of work concerned; suitable working procedures.
- Where the nature of the activity does not permit risk to be eliminated by substitution, the following *protection and prevention measures* must be taken, listed *in order of priority*: design of appropriate work processes and engineering controls and use of adequate equipment and materials so as to avoid or minimize the release of hazardous chemical agents; application of collective protection measures at the source of the risk; application of personal protection measures.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.5. Exposure to chemical agents - Dir. 98/24/EC – Cont.

- **Health surveillance:** The employer must *regularly measure* chemical agents which may present a risk to workers' health, in relation to the occupational exposure limit values.
- The employer must establish procedures (*action plans*) which can be implemented in the event of an accident, incident or emergency. When one of these events occurs, the employer must take appropriate *remedial action* as soon as possible and *inform* the workers concerned. Only workers who are needed to restore the normal situation are permitted to remain in the affected area; they must be *provided with* protective clothing, personal protective equipment, and specialized safety equipment and plant.
- The employer must ensure that *information* on emergency arrangements is *available*. The employer must ensure that the contents of containers and pipes and any hazard that they represent are *clearly identifiable*. Annex III to the Directive specifies limits above which certain chemical agents and activities involving chemical agents are prohibited. Member States may *permit derogations* from these prohibitions or provide individual authorizations.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.6. Dangers arising from ionizing radiation

Directive 96/29/Euratom

- **Objective:** To establish uniform basic safety standards to protect the health of workers and the general public against the dangers of ionizing radiation. The Directive applies to any practice which involves a hazard from ionizing radiation, either from an artificial source or from a natural source where natural radionuclides are treated owing to their radioactive, fissile or fertile properties.
- **Employers' obligations:** Each Member State must require the use of the mentioned practices *to be reported*, except in exceptional cases specified by the Directive. Each Member State must require *prior authorization of practices* likely to present a risk of ionizing radiation. The disposal, recycling or re-use of radioactive substances or of materials containing radioactive substances arising from any practice subject to compulsory reporting or authorization requires prior authorization unless the dispensation limits laid down by the competent national authorities are complied with.
- Member States must ensure that any new categories for any type of practice causing exposure to ionizing radiation, *before they are adopted or approved for the first time, are justified* by their economic, social or other benefits set against the adverse health effects they are likely to provoke.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.6. Dangers arising from ionizing radiation

Directive 96/29/Euratom - Continued

- Member States *may not authorize* the deliberate addition of radioactive substances in the production of foodstuffs, toys, personal ornaments or cosmetic products, or the import or export of such products.
- Where applicable, dose limitations should be used as part of measures to ensure optimum radiological protection. *Persons under the age of 18 may not be assigned to any work* which would make them *exposed workers*. The effective dose for exposed workers is limited to 100 mSv over five consecutive years, with the further provision that it must not exceed 50 mSv in any single year. *As soon as a pregnant woman or nursing mother informs her undertaking management of her situation, she may not be assigned to any work involving a significant risk of bodily radioactive contamination.*
- The Directive establishes exposure prevention measures. Exposure assessment includes *monitoring* of the workplace, individual monitoring and monitoring in the event of accidental or emergency exposures. *Medical surveillance* of exposed workers is based on the principles that govern occupational medicine in general.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.7. Exposure to artificial optical radiation

Directive 2006/25/EC – 19th individual Directive

- **Objective:** The exposure of workers to artificial optical radiation can have chronic adverse effects on the eyes and skin. This Directive reduces the level of exposure to this radiation firstly by the introduction of preventive measures in the design of workstations, in order to reduce the risks at source. It also fixes exposure limit values for workers exposed to non-coherent radiation and laser radiation (Annex 2).
- **Employers' obligations:** Assessment of the level of radiation. The employer *assesses or measures* the levels of optical radiation on the basis of the standards of the International Electrotechnical Commission (IEC), the International Commission on Illumination (CIE) and the European Committee for Standardization (CEN). In the case the limit values have been *exceeded*, the employer must *reduce the level of radiation* e.g. by choosing a different material or limiting the duration of exposure. *Worker information and training*; consultation and participation of workers with regard to the protection of their safety and health. The health of workers is subject to *surveillance* carried out by a doctor. *Health records* are made for each worker and updated after each health check.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.7. Exposure to artificial optical radiation

Directive 2006/25/EC – 19th individual Directive - Continued

- In the event of exposure *exceeding the limit values*, a *medical examination* is automatically made available to the workers. If the workers have suffered harmful effects to their health, the worker is informed by the doctor of the results relating to him and any significant findings; the employer *reviews the risk assessment and the measures* taken, implements the measures recommended by the competent persons and establishes a continuous *surveillance system*.
- The Member States must provide for appropriate *penalties* if the national provisions adopted pursuant to the Directive have been *infringed*.
- Every five years, the Member States provide the Commission with a *report* on the practical implementation of this Directive.
- Every five years, the Commission informs the European Parliament, the Council, and the European Economic and Social Committee (EESC) and the Advisory Committee on Safety and Health at Work of its assessment of these reports.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.8. Exposure to carcinogens and mutagens

Directive 2004/37/EC – 6th individual Directive

- **Objective:** minimum requirements for protecting workers against risks arising specifically from exposure to carcinogens and mutagens; to lessen exposure with a view to reducing health risks, to establish exposure limit values and to take preventive measures.
- **Contents:** The Directive does not apply to workers exposed only to radiation covered by the EAEC Treaty. It applies to workers exposed to asbestos, when its provisions are more favourable than those of Directive 83/477/EEC.
- **Employers' obligations:** The nature, degree and duration of workers' exposure must be regularly *determined* in order to assess any health risk and decide the measures to be taken. Account must be taken of all routes of exposure, including absorption into and/or through the skin.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.8. Exposure to carcinogens and mutagens

Directive 2004/37/EC – 6th indiv. Directive - Continued

- Reduction and replacement of the use of carcinogen by a substance, preparation or process which is *not dangerous or is less dangerous*. Prevention and reduction of exposure (use of closed system). If this is not feasible, the employer must ensure that the level of exposure is kept *as low as is technically possible*. Thirteen measures are to be applied.
- *Information for the competent authority* on request, concerning such matters as the reasons for using carcinogens, preventive measures taken and the number of workers exposed. Abnormal unforeseen/foreseeable exposure – *Information/consultation of workers*. Protective clothing and individual respiratory protection equipment must be worn, with exposure being kept to the *strict minimum of time necessary*.
- Access is *restricted* to workers who, by virtue of their work or duties are required to enter such areas.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.8. Exposure to carcinogens and mutagens

Directive 2004/37/EC – 6th indiv. Directive - Continued

- *Hygiene and individual protection measures* are to be taken where appropriate, at no financial cost to workers: workers must not eat, drink or smoke in working areas where there is a risk of contamination; workers are to be provided with appropriate clothing and separate storage places for work clothing and for street clothes; washing and toilet facilities are to be provided; protective equipment is to be properly stored, checked and cleaned before and after each use.
- *Information and training of workers:*
 - mainly concerning potential and additional risks to health (smoking), precautions to prevent exposure, hygiene, protective clothing and steps to be taken in the event of incidents;
 - containers, packages and installations containing carcinogens are to be clearly and legibly labelled, with warning signs clearly displayed;
 - workers or their representatives must have the opportunity to check that the directive is being correctly applied.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.9. Exposure to biological agents – Dir. 90/679/EEC

7th individual Directive

- **Objective:** specific minimum requirements designed to guarantee a better standard of safety and health for workers exposed to biological agents at work
- **Contents:** „Biological agents”: micro-organisms, including those which have been genetically modified, cell cultures and human endoparasites which may be able to provoke any infection, allergy or toxicity. They are classified into four groups according to their level of risk of infection.
- **Employers’ obligations:** *Replacement* of a dangerous biological agent by one which is not dangerous or less dangerous, if the nature of the activity so permits.
- Exposure to risks must be *prevented*. Where this is not technically practicable, the exposure risk must be *reduced to as low a level as necessary*. Nine ways of doing this are listed, e.g. limiting the number of workers exposed, collective and/or individual protection measures, means for safe collection, storage and disposal of waste by workers.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.9. Exposure to biological agents – Dir. 90/679/EEC -

7th individual Directive - Continued

- *Information for the competent authority* where there is a risk on:
- the results of the assessment, the activities in which workers may have been exposed, the number of workers exposed, the name and powers of the person responsible for safety and health, the protective and preventive measures taken, an *emergency plan* in the event of exposure to a group 3 or 4 agent; *Immediate information* on any accident or incident which may have resulted in the *release of an agent* and which could cause severe human infection and/or illness; where the undertaking ceases activity, a list of workers exposed and their medical records to be made available to the competent authority.
- *Hygiene and individual protection* – five types of measure to be applied without cost to workers: workers not to eat or drink in working areas subject to risk; protective clothing to be supplied; adequate washing and toilet facilities to be provided, possibly with skin antiseptics and eye washes; all protective equipment to be properly stored, checked and cleaned, and repaired or replaced; procedures for taking, handling and processing samples.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.9. Exposure to biological agents – Dir. 90/679/EEC -

7th individual Directive - Continued

- *Information and training of workers* on the potential risks to health, precautions to be taken, hygiene requirements, the use of protective equipment and clothing, and the steps to be taken by workers in the case of incidents and to prevent them.
- *Worker information in particular cases* – written instructions containing at least the procedure to be followed in the event of a serious accident or incident or for handling a group 4 agent; immediate information in the event of any accident or incident which may have resulted in the release of a group 3 or 4 biological agent, including the cause and the measures taken or to be taken; workers must immediately report any accident or incident involving the handling of a biological agent. They must have access to the information contained in the list of workers exposed, i.e. information which relates to them personally and anonymous collective information.
- *Consultation and participation of workers.* Notification to the competent authority prior to the first use of group 2, 3 and 4 biological agents and whenever there are substantial changes of importance to safety or health.
Health surveillance of workers

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.10. Exposure to asbestos – Dir. 83/477/EEC and 91/382/EEC

- **Objective:** To establish limit values and specific harmonized minimum requirements for the protection of workers. To reduce exposure to asbestos so as to lessen the risk of diseases occurring. The Directives do not apply to sea or air transport
- **Employers' obligations:** Any activity likely to entail a risk of exposure to dust arising from asbestos or materials containing asbestos must be assessed in such a way as to *determine the degree and nature* of the workers' exposure. These activities are to be *notified* by the employer *to the responsible authority of the Member State*. The notification must include at least a description of the types and quantities of asbestos used, the activities and processes involved, and the products manufactured. *Workers* or their representatives are *entitled to see* the documents concerned.
- The application of asbestos by means of the spraying process and working procedures that involve the use of low density (less than 1 g/cm³) insulating or soundproofing materials are prohibited.

V. CHEMICAL, PHYSICAL AND BIOLOGICAL AGENTS

V.10. Exposure to asbestos – Dir. 83/477/EEC and 91/382/EEC - Continued

- Exposure to asbestos is reduced by *limiting its use* as far as possible, keeping to a minimum the number of persons exposed, and taking adequate measures to maintain buildings and ensure that materials are properly stored, transported and labelled.
- *Asbestos-in-air concentrations are to be measured regularly*, if these values are exceeded, the reasons must be identified and *appropriate measures to remedy* the situation must be taken before work is resumed.
The limit values: - for chrysotile: 0.60 fibres per cm³ per eight-hour ref. period
other forms of asbestos: 0.30 fibres per cm³ per 8-hour ref. per.
- The places in which activities giving rise to exposure risks are carried out must be clearly delimited and indicated by *warning signs*. They shall be out of bounds to smokers and unauthorized workers. Areas are to be set aside where workers can eat and drink without risking contamination by asbestos dust. Workers are to be provided with appropriate working or protective clothing.
- Workers and/or their representatives must receive adequate *information*. Each worker's *state of health* must be assessed prior to exposure and subsequently at least once every three years. The employer is required to *keep a register*.