

Noise Directive : a step forward under the Swedish Presidency

Social Affairs Council reaches political agreement

The last Social Affairs Council under the Swedish Presidency, in June 2001, reached a (unanimous) political agreement on a common position on a draft Directive laying down minimum requirements for the protection of workers from risks arising from exposure to noise, especially the risk to hearing. The new Directive will be an individual directive under the framework directive, and will eventually replace the existing Directive 86/188/EEC.

The proposed Directive will be the second separate Directive after the "splitting" in 1999 of the Commission's original 1993 proposal, which combined in a single instrument four types of physical agents (noise, mechanical vibration, optical radiation and electro-magnetic fields and waves)¹.

The draft Directive fixes exposure limit values and exposure action values. The exposure values - 80 dB(A) and 85 dB(A) - are based on ambient noise levels and trigger different degrees of protective measures. So, when the lower exposure action value is reached, the employer must make individual hearing protectors available to the workers, and provide the workers and/or their representatives with information and training on the risks.

Values set in the amended proposal for a directive

Exposure limit values : $L_{ex, 8h} = \{87\}$ dB(A) and $p_{peak} = 200$ Pa respectively

Upper exposure action values : $L_{ex, 8h} = 85$ dB(A) and $p_{peak} = 200$ Pa respectively

Lower exposure action values : $L_{ex, 8h} = 80$ dB(A) and $p_{peak} = 112$ Pa respectively

¹ The Council of Ministers adopted a common position on the first Directive, which deals with vibrations, on 25 June 2001 after having reached political agreement at its 27/28 November 2000 session under the French Presidency. <http://ue.eu.int/newsroom/main.cfm?LANG=2>

² *Encyclopaedia of occupational health and safety* - 4th edition, ILO, Geneva.

³ Dr Antti Karjalainen and Dr Simon Virtanen, *European Statistics on occupational diseases, Evaluation of 1995 Pilot data*, European Commission, 1999.

⁴ Nurminen M., Karjalainen A., "Epidemiologic estimate of the proportion of fatalities related to occupational factors in Finland", in *Scandinavian Journal of Work, Environment & Health*, Vol 27 No 3, June 2001.

Once the upper exposure action value is reached, the employer must establish and implement a programme of measures to reduce exposure, the workplace must be marked with, and workers must use their hearing protectors. This is also the level at which workers are entitled to hearing checks. Where such checks reveal identifiable hearing damage, the workers must be informed and the employer must review his risk assessment. The employer must also take into account the advice of the doctor or competent authority in taking measures to eliminate or reduce risks.

The draft directive sets an exposure limit value of 87 dB(A) and peak sound pressure value (P_{peak}) of 200 Pa which are not to be exceeded! But the assessment of the noise exposure level takes account of the

attenuation provided by the individual hearing protectors worn by the worker, which must be worn when the value exceeds 85 dB(A).

Workers engaged in sea and air transport who were excluded from the scope of the 1986 Directive are now included. But a longer transposition period of five years on top of the three years provided for application of the directive is provided for workers on-board seagoing vessels.

How big a risk is noise today?

Noise is one of the most widespread workplace hazards². Some still regard it as a commonplace risk which is "part and parcel" of any work. In the European Union, 50 million workers report being exposed to intense noise (answering "yes" to the question: are you exposed in your work to noises so loud that you have to raise your voice to talk to people?). And the number of "yesses" has gone up since the Foundation's first survey! A partial picture of the true number of people exposed to intense noise is revealed in a Eurostat study³ showing that noise is the main cause of compensated auditory disorder. 18 419 cases were recognized in 1995, but this figure conceals wide variations in compensation systems. The between-country incidence varies more than 60-fold: from 10-20/million workers (Ireland, Spain) to 630/million workers (Finland), while compensable loss levels vary by a factor of four: from under 15dB hearing loss (Netherlands, Finland, Germany) to 50dB hearing loss required for recognition in Belgium, Ireland, and the UK. The other effects of noise are not reported at Community level.

A Finnish epidemiological survey⁴ estimated the share of annual fatalities from work-related factors. The main cause of death was found to be circulatory system disorders, themselves caused by stress (especially linked to working hours, e.g., shift work) and noise. The author cites copious evidence in the literature of non-auditory effects of noise from an exposure level of 65 dB(A).

Community measures to protect workers

In 1986, the Council adopted a Directive under article 100 of Treaty of Rome (unanimous vote). Its aim is "the protection of workers against risks to their hearing and, in so far as this Directive expressly so provides, to their health and safety (...)".

The Directive pre-dates the framework directive, and only lays obligations on the Member States, setting personal daily (discounting the wearing of individual hearing protectors) and weekly noise exposure levels (or maximum sound pressure values).

The directive sets an action value of 85dB(A) at which information and training must be given, hearing protectors worn and health surveillance provided, and a maximum value of 90dB(A); where this is likely to be exceeded, signs must be put up and access restricted, a programme of technical and organizational measures must be implemented, and the workers must wear ear protectors. From this value upwards, all measures are in each case subject to what is "*reasonably practicable*" - an expression never defined but which presumably intended to excuse the failure to take measures! On the role of workers and their representatives, the directive says that workers and/or their representatives "*shall be associated*" with assessment and measurement according to national law and practice, and that they shall have "*access*" to the results and data! No rules are laid down on the information, consultation or participation of workers and/or their representatives; they would not come until the 1989 framework directive.

For new plant and factories, the directive also requires the Member States to take appropriate measures so that "*the risks (are) reduced to the lowest level reasonably practicable, taking account of technical progress*", and that adequate information is made available about new equipment which may cause exposure above 85dB(A). It also specifies that the Council shall establish requirements according to which such articles "*when properly used, do not produce noise likely to constitute a risk to hearing*".

Finally, the directive provides that it will be re-examined by the Council before 1 January 1994 taking into account progress made in scientific knowledge and technology. The indications for measuring noise and checking hearing are detailed in Annexes. It was to be brought into force by 1 January 1990 (1 January 1991 for Portugal and Greece).

Implementation of this directive was to result in the revision of ISO standard 1999⁵, while among measures to complete the single market, the Council was to adopt Directive 89/392/EEC under article 100A of the Treaty, which provides that machinery placed on the market must be so designed and constructed that airborne noise emissions are "*reduced to the lowest level taking account of technical progress*" and that manufacturers must declare the sound pressure level when it exceeds 85dB(A) at the workstation.

The adoption of the 1989 framework directive would also lead, through individual directives, to a gradual dovetailing of Community legislation covering different types of risks to which workers are exposed. At the

end of 1992, the Commission published a proposal for a directive on physical agents, laying down common prevention principles for all agents, including noise. The Commission backed up its proposal with advances in scientific knowledge which certified that the risks incurred by workers are significant even from 75db(A)! But it again failed to take into account non-hearing-related effects *which are less occupationally significant than deafness-related ones*, and refused to cap exposure at lower levels⁶. On top of that, the European Parliament, in its Opinion of 20 April 1994, was to call for the examination of the noise element to be put back to 1 July 1995!

After that, not one Member State sought to bring this proposal to revise the Community rules on noise back onto the Council agenda until the Swedish Presidency in 2001.

What assessment ?

1. In 1986, the ETUC flatly rejected the legislative approach and the values adopted. It had campaigned for years to get the directive applied from 80dB(A) based on the Commission proposal⁷ recognizing that there was a risk of deafness from this value. It also rejected the "**reasonably practicable**" approach as likely to dilute the employer's general liability. The ETUC had also campaigned against another aspect of the Commission proposal⁸ which allowed measurements to be taken while individual hearing protectors were being worn, and so de facto raised the exposure level by 30 to 40 decibels. This was dropped from the final directive.

2. The detailed assessment made by the TUTB in 1991 based on the legislation transposing the 1986 directive revealed that **national legislation had been watered down**. And yet the Commission brought no failure to incorporate or infringement proceedings in the Court of Justice. When submitting its proposal for a Physical Agents Directive at the end of 1992, however, the Commission acknowledged the many problems that Member States had had in transposing the 1986 directive.

3. The current draft directive makes **advances** over the 1986 directive :

- the scope extends to all workers;
- the lower and upper exposure action values have been reduced from 85 to 80 dB(A) and from 90 to 85 dB(A);
- the upper limit is more clearly stated to be one that must **under no circumstances** be exceeded;
- the approach to health surveillance reflects the employer's obligations towards workers collectively rather than individually: reviewing the risk assessment, taking measures to eliminate or reduce risks, taking into account the advice of qualified persons or competent authorities, including assigning the worker to alternative work;

⁵ ISO 1999:1990 (2nd edition), *Acoustics - Determination of occupational noise exposure and estimation of noise-induced hearing impairment*.

⁶ Will the WHO (*Occupational and Community Noise*, Fact Sheet No 258, February 2001) and Finnish survey data persuade the Commission of the need to make non-auditory effects part of a preventive strategy, especially in the non-industrial sectors where most workers are employed today?

⁷ COM(82) 646.

⁸ Annex I. Indications for measuring noise, proposal for a directive, OJ C289 of 5 November 1982.

■ it gives recognition to worker's rights of consultation and participation on all the matters covered by the directive.

4. But the text also shows that the Council remains focused on unanimity, even though the legal basis allows it to be adopted by a qualified majority. The Council's compromises may water the directive down and make it harder to incorporate into national law because the legislator's intentions are not clear.

So, the Council has made the first-ever **linkage between an occupational exposure limit value and the use of personal protective equipment**. Both the 1986 directive (article 2.1) and the 1992 Commission proposal for a directive (article 2.2) stipulated that exposure levels are not to take into account any personal ear protector used. The new approach conflicts with the provisions of the framework directive (article 6) that collective protective measures - like compliance with exposure values - must be given priority over the use of individual protectors. The approach taken also shifts the employer's responsibility (article 5) onto the worker wearing the hearing protectors. The worker will not only suffer the consequences of but be liable for PPEs which are defective, improperly maintained, or not adapted to the work or the anatomical characteristics which determine perceived noise levels. The problem is that different models of individual hearing protectors (earmuffs or ear plugs) attenuate perceived noise levels differently. Directive 89/686/EEC, which lays down the specific design requirements for PPEs to protect against the harmful effects of noise (annex II point 3.5) provides that they must attenuate it to such an extent that the sound levels do not exceed the values laid down by Directive 86/188/EEC. The noise attenuation level must be labelled on the PPE. A series of standards specify the laboratory measuring procedures⁹. But the evidence is that the laboratory effectiveness of protectors depends on their being correctly worn, properly maintained and anatomically suited to the individual. There is also a marked difference between the attenuation efficiency of protectors when worn in a laboratory (almost no background noise, shorter wearing time than in the workplace) and in a work situation. It is also significant that the test is halted when the testee reports "any loss of attenuation". The literature¹⁰ reports effectiveness variations of from 2.5 dB(A) to 30 dB(A). This being so, how valid is it for the Council to set an upper value of 87dB(A) **with protectors** as opposed to the Commission's proposal of 90dB(A) **without protectors**. Is it a smokescreen to allow upper values higher than those set?

The reference to wearing individual hearing protectors must be dropped.

5. Questions also arise about why the Council has kept the **trigger level for access to health surveillance** at 85dB(A). The draft directive provides that

employers must take remedial measures when identifiable hearing damage is found, so the Council is restricting access to health surveillance to those workers who have probably already suffered most damage. This does not seem to add up, and is probably about the Council wanting to limit the number of workers who have access to health surveillance instead of reducing the number of people suffering hearing damage.

Increasing the number of people qualifying for health surveillance would be a stronger signal to employers to take remedial measures. The Council must recognize the right to health surveillance from 80dB(A).

6. The Council must give effect to **the requirements of information, consultation and participation of workers** in each individual directive under the framework directive. The reference to article 11 is good, but not enough. The evidence is that the framework directive requirements are often watered down when the individual directives are incorporated into national law. The current wording is too vague. The directive should expressly lay down workers' rights regarding risk assessment and the resulting implementing measures, including those for checking the efficiency of individual protectors and compliance with exposure limit values.

7. Sad to say, two Commission proposals have been dropped from the Council text :

■ One required Member States to take measures (e.g., putting data collection systems in place and making the data accessible) by which for employers and workers alike, for the purposes of conforming with Directive 89/655, to compare the noise emission levels of the different equipment placed on the market. Making such data available would enable employers to purchase less noisy equipment.

■ The other urged Member States to take into account what the Commission described as types of activity requiring "*particular vigilance*", where exposure values below those set might be provided. Such values are essential in some non-industrial sectors.

8. Finally, while the Council's revision of the Noise Directive to chime in with the framework directive can only be welcomed, it is also to be hoped that the European Parliament, which made no amendments in first reading, will come down firmly in favour of improving a draft directive on a "common" risk which affects tens of millions of workers. ■

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⁹ ISO 4869-2:1995, *Acoustics - Hearing Protectors - Part 2: Estimation of effective A-weighted sound pressure levels when hearing protectors are worn* (ISO 4869-2:1994).

¹⁰ Alain Mayer and Eero Korhonen, "Assessment of Protection Efficiency and comfort of personal Protective Equipment in Real Conditions of Use", in *International Journal of Occupational Safety and Ergonomics*, Vol. 5, No 3, pp. 347-360, 1999.