

Keynote Presentation

EUROPEAN LEGISLATION AND STANDARDISATION FOR THE CONTROL OF RISKS FROM VIBRATION AT WORK

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Introduction

Two pieces of European Union (EU) legislation together establish requirements for protection against risks from vibration at work. The vibration directive¹ specifies duties of employers to protect workers from risks from exposure to vibration; the machinery directive², specifies duties of manufacturers and suppliers regarding the safety of machinery marketed in the EU. This paper discusses both directives and the standardisation programmes that support them. It also addresses the implementation of these requirements in Great Britain.

Employers' duties: the vibration directive

This directive requires employers to assess and control risks to health and safety arising from hand-arm vibration (HAV) and whole-body vibration (WBV). Member States were required to implement the directive in national legislation by 6 July 2005.

Employers are required to eliminate vibration risk at source, or reduced to a minimum. The duties include: assessing risk and exposure; planning and implementing the necessary risk control measures; providing and maintaining suitable work equipment; providing workers with information and training on risks and their control; and monitoring and reviewing the effectiveness of the risk control programme. Daily exposure exceeding a specified action value triggers a requirement for a programme of technical and organisational measures to minimise vibration exposures and the resulting risk, and the provision of health surveillance. Exposures above a specified limit value are prohibited.

When conducting their risk assessments, employers are required to “assess and, if necessary, measure” the vibration exposure of workers, for comparison with the action and limit values. Vibration measurement in the workplace is not expected in all cases and the use of vibration information from equipment manufacturers is specifically mentioned. This provides a link with the machinery directive (see below).

Manufacturers' and suppliers' duties: The machinery directive

The machinery directive, first introduced in 1989, is intended to remove barriers to trade. It puts duties on manufacturers and suppliers who place machinery on the European market to design their products to eliminate or reduce risks to health and safety and to warn the user of any residual risks, providing information required for safe use (for example, operator training, maintenance and selection of consumables). There are specific requirements for minimising risk from vibration in the design and construction of the machine and, in the case of hand-held, hand-

guided and mobile machines, for declaring the vibration emission. If the declared emission of a machine is representative of the vibration in real-world use, it can be adequate to inform the user of residual vibration risks.

Standards supporting the two directives

The vibration directive contains two annexes (for HAV and WBV respectively) which define the metrics for daily vibration exposure by reference to ISO 5349-1:2001 for HAV and ISO 2631-1:1997 for WBV. The European Standards bodies (CEN and CENELEC) have no mandate from the European Commission to produce any standards in support of the vibration directive. However, CEN had, in 2001, adopted both parts of ISO 5349, and has also chosen to prepare a new standard providing guidance on assessing daily WBV exposures using the “A(8)” method.

The machinery directive is supported by a set of harmonized standards, mostly prepared by CEN and CENELEC under a work programme mandated by the European Commission. Where appropriate, this is done in partnership with ISO so that the relevant international standard is used to support the directive in Europe. The harmonized standards define safety requirements for various categories of machine (including the provision of user information); conformity with the relevant standard carries a presumption of conformity with the directive. The standards include test codes for vibration emission; some of those dealing with hand-operated equipment do not adequately describe the vibration in typical use and require revision.

Controlling risks from vibration at work in Great Britain

Both directives are implemented as regulations in the British legal system and are enforced by the Health and Safety Executive (HSE). HSE’s work programme includes targeted inspections of high-risk activities (currently focusing on construction, foundries and steel fabrication) to ensure that HAV risks are properly controlled. Visits to tool manufacturers and suppliers are also undertaken, to secure improved provision of information on vibration risks. This front-line work is supported by the production of guidance material and activities to communicate HSE’s messages on preventing vibration-related ill-health³.

References

1. European Parliament and the Council of the European Union (2002) Directive 2002/44/EC on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (vibration). Official Journal of the European Communities, OJ L177, 6.7.2002, 13.
2. Council of the European Union (1998) Council Directive 98/37/EC on the approximation of the laws of the Member States relating to machinery. Official Journal of the European Communities, OJ L207, 23.7.98, 1-46.
3. HSE’s vibration web pages. www.hse.gov.uk/vibration