

and worker-related factors in the design process, it can be a promising means of easing the tensions between the two dominating policy objectives : regulating free movement of equipment and the working environment. The dual dimension of essential requirements laid down by Community legislation and national occupational safety and health requirements in fact form the specific backcloth to the CEN and ISO's initiatives on work equipment

health and safety matters. The TUTB argues that these two regulatory elements can be reconciled by identifying and implementing mechanisms to feed back information on the use of work equipment to design and manufacturers : it remains to be seen which procedure in the CEN & ISO system would better promote participatory design experiences, with the aim of integrating *safety* and *design* into a coherent *safe design* culture. ■

## International standards and occupational safety

### New links between regulatory requirements and voluntary standards

In the past 20 years, two major developments in the area of harmonization of technical regulations and facilitation of trade have introduced new links between regulations and voluntary standards : the Agreement on Technical Barriers to Trade, now signed by some 147 countries in the context of the World Trade Organization, and, in Europe, the New Approach to harmonization of technical regulations. Both have given a new impetus to international standardization, particularly in the area of safety standards. The "Vienna Agreement" between ISO and CEN, in force for some twelve years now, has enabled a good synergy between the regional and international levels, and helped ensure that the construction of the EU internal market does not result in the building of a so-called "Fortress Europe".

Indeed, technical obstacles to trade often relate to diverging regulatory requirements. The level of safety that consumers and workers are entitled to expect must not be lowered in order to overcome these obstacles. Standardizers must ensure that this does not happen when regulators refer to their standards so as to facilitate international trade. They have therefore paid growing attention to associating all stakeholders with their work, operating transparent consensus-building procedures and designing both product and generic standards and guides to incorporate safety requirements.

### The longstanding involvement of ISO in safety at work and ergonomics

ISO has a long record of involvement in ergonomics and safety of industrial machinery

and protective equipment : ISO/TC 159 *Ergonomics* has published some 50 International Standards, from basic methodology for designing safe machines through carrying out risk assessment, to standards dealing with particular aspects of machine safety. Recent developments of particular interest have been the revision of ISO 6385 *Ergonomics in the design of work systems*, the extension of ISO 10075 to all aspects of ergonomic principles related to mental workload, and new standards related to the *human-system interaction in the IT field interface*. ISO/TC 94 *Personal safety – Protective clothing and equipment*, ISO/TC 199 *Safety of machinery*, as well as ISO/TC 23 *Tractors and machinery for agriculture and forestry* and ISO/TC 127 *Earth-moving machinery* are all deeply involved in safety related standards, often collaborating with CEN in the context of the Vienna Agreement.

### Taking user experience into account in standards development and implementation

The experience of users is paramount when developing safety standards to ensure the efficient incorporation of safety principles in the design of equipment and the workplace, all the more so as the tendency nowadays is to prefer performance over design standards, if only not to hinder innovation.

This can be done in various ways :

- by ensuring the participation of representatives of workers' organizations as well as of research and technical institutes involved in safety at work, at least in the activities of the ISO national mirror committees and whenever possible at the international level ;

- by developing general guidelines on the incorporation of safety elements in standards, as illustrated above in relation to the work of ISO/TC 159 ;
- by encouraging the participation of workers' expertise at the conformity assessment level, where the actual implementation and interpretation of standards may be tested, validated and improved.

### International standards : reconciling adequate safety and international trade

Owing to their global reach and acceptance, and because they are based on a consensus involving all stakeholders, International Standards are the modern way to address the complexity of today's technologies, as well as to reconcile the quest for adequate safety and the facilitation of international trade. ISO has recently launched a broad consultation through its national members and main international partners to capture expectations in regard to ISO for the coming decade. Involvement of stakeholders is one of the central issues, and participants in this workshop are invited to actively take part in this consultation through their national ISO member. ■

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