

EN 292 : the internationalization challenge

EN 292 - Safety of machinery is a basic standard drawn up in 1985 when Member States were negotiating the Machinery Directive. It sets the benchmark rules for both machinery designers and standards developers. Starting out as the first technical standard to embody the European consensus on how to make safe machinery, EN 292 is now moving into the international arena, as part of the increasing interest of many non-European countries in the New Approach strategy for product regulation.

In May 1999, CEN TC 114 - Safety of Machinery and ISO TC 199 - Safety of Machinery decided to revise both documents under the Vienna Agreement (regulating technical cooperation between ISO and CEN) under CEN's leadership. As a result, a Special Working Group consisting of experts from ISO, CEN, IEC and CENELEC is currently discussing the comments received from the parallel enquiry on prEN 292/DIS 12100 parts 1 and 2. The CEN Special Working Group is therefore faced with the taxing job of addressing the many technical comments received and moving the standard on towards a positive Parallel Formal Vote.

There are three fundamental challenges to the revision process: overlapping (inevitable given the nature of an A-standard), duplication (resulting from the progress made by B-standards), and contradiction (which all stakeholders want to avoid). In fact, given the hierarchy of A, B and C-standards, an ostensibly minor change to EN 292/ISO 12100 would have immediate knock-on effects on other machinery safety standards.

Pending the forthcoming (and concluding) revision meeting planned for september 2001, a number of things can be said about what the Special Group's Comments Resolution Meetings (CRMs) have achieved so far.

Terminology, manufacturers' responsibilities, risk reduction, requirements for guards, use of optoelectronic protective devices, mobility & lifting, non-professional users, are just some of the crucial issues behind the revision process. One of the first challenges is getting general agreement in CEN and ISO to ensure consistency between the definitions given in EN 292 and ISO/IEC 51 - Guide "Safety aspects - Guidelines for their inclusion in standards". However, both ISO and CEN recognize the main difference between the two standards, since ISO/IEC 51 applies to safety right across the board, while EN 292 deals with safety of machinery at the design stage.

An animated debate focused on the concept of **tolerable risk**, which some experts wanted including

on the grounds that it is widely used in international engineering, and a valuable help to designers in understanding when to conclude the iterative risk reduction strategy. Other experts, however, argue that tolerable risk conveys ideas that run counter to the principles of the Machinery Directive and, as such, has no place in EN 292, which lays down a risk reduction strategy intended to maximize risk reduction by making best use of available technology. Tolerable risk might also be misconstrued as a static concept, leaving it open to prejudice the risk reduction level to be achieved. The TUTB argues that manufacturers are not entitled to shirk their safety duties by dictating what risks are acceptable for others. Manufacturers face risks like economic loss, and civil and criminal liability for accidents; operators face risks to life and limb. So, public authorities would only have the power to monitor risk reduction as implemented by manufacturers and make a decision whether the risk achieved is tolerable or not.

Another factor discussed is **residual risk**. The international context in which EN 292/ISO 12100 will be used calls for appropriate allocation of responsibilities between user and designer in relation to risk reduction. The fact is that the European framework differentiating the legal duties of designers and users is today facing claims from countries which have no legislation equivalent to the Machinery and Work Equipment Directives. So, on one hand EN 292/ISO 12100 should not deal with user responsibilities, while on the other, it should deal with safety measures to be implemented by both manufacturers and users. In the former case, the residual risk should be the risk which manufacturers cannot design out of the machine; in the latter, it would be the risk level remaining after all safety measures implemented by both manufacturers and users. But differences also exist here in relation to risk reduction as such: some, for example, have questioned whether 'information for use' can be considered a risk reduction measure, since it has value only when the user makes the best use of it. Others want a recognition that different machines require different levels of user involvement, which may be responsible for the greater contribution to risk reduction.

In short, 'going international' has meant scrutinizing even basic concepts like "safety", "hazard", "risk", "inherent design", etc. It is not just a matter of terminology: it reflects the very different understanding of those basic concepts in different times, circumstances, societies, and industry sectors. ■

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