

M. Evangelos Vardakas
Commission européenne
DG Entreprises
SC 15 02/146
1049 Bruxelles

Brussels, 17 July 2002.
MS/ds/036

Dear Mr. Vardakas,

The TUTB would like to thank the European Commission, Directorate G - Single Market: Regulatory Environment, Standardisation & New Approach, for having agreed to attend the recent seminar on the application of the Machinery Directive, held at the TUTB's headquarters on 13-14 June 2002.

The consensus among participants – representing all the stakeholders affected by the application of the Machinery Directive – was that this public airing of crucial health and safety aspects of the Directive staged by the Trade Union Technical Bureau was a timely success.

We should like to take this opportunity to brief you on some key outcomes of the seminar. These conclusions are calculated to ensure the highest possible level of health protection and consumer safety - one of the key aims of the Commission proposal, as emphasized by Mr. Vitorino at the European Parliament session of Wednesday, 3 July 2002.

Broadly, the following three points to come out of the seminar support the TUTB's objective of formalizing the collection of feedback from machinery users.

Point 1. Interviews carried out in Finland, Italy, France, and Germany gave evidence that essential aspects of equipment design are often underestimated or even ignored by manufacturers, who are often unaware of the real conditions in which equipment is used. Failure to incorporate information derived from the daily experience of machinery operators into machinery design often means that in design modifications have to be made at later stages, adding to the costs for both users and manufacturers.

Point 2. Also, there is a growing awareness of the importance of users' experience among experts responsible for framing standards to support the application of the Machinery Directive, which also provides a solid basis for undertaking the five-year revision process. The fact is that standards development has been slow for a great number of machines: experience in formulating technical provisions is lacking and

prevention is still in its infancy. In these areas, there is a risk that design errors will be made if the real conditions of use are not taken into account.

Point 3. Finally, manufacturers' representatives share the view that user feedback can assist them in integrating ergonomic principles into machinery design. The current TUTB-SALTSA¹ European research project on *Participatory Design of Machines* also illustrates the need to improve designers' recognition of ergonomics as one of the pillars underpinning the safety and health of machinery operators.

These three elements are part of the TUTB's strategy to put the principles of the New Approach to work for the health and safety of workers.

They provide the reference for the next two sections of this document: the first section contains some specific comments on European Parliament Report **FINAL A-50216/2002**; the second section contains further proposals to improve the Commission proposal for a directive amending Machinery Directive 95/16/EC, **COM(2000) 899 final**.

The European Parliament Report on the Commission proposal

The TUTB welcomes the European Parliament Report on the Commission Proposal for the revision of the Machinery Directive.

A number of amendments are suggested which will help further the aims of greater clarity and understanding put forward in the Commission Proposal.

In particular, Amendment 30 (accepted in principle by the Commission) and Amendment 45 (accepted in full or in part by the Commission), contain elements intended to achieve clarifications in both *specific* and *general* terms.

The TUTB welcomes the content of Amendment 30 on Article 17 b, aimed at improving the *general* objective of uniform application of the Machinery Directive by exchanging information and experience between notified bodies and between the authorities responsible for surveillance in the Member States.

7. The Commission shall organise an exchange of experience between:
a) the authorities responsible for appointment and surveillance in the Member States,
and
b) the notified bodies
to coordinate the uniform application of this directive.

The TUTB also welcomes the wording of Amendment 45, concerning Annex I, paragraph 1.2.1, Safety and reliability of control systems:

¹ The Joint Programme for Working Life Research in a European Perspective is an undertaking by the Swedish Trade Unions LO, SACO and TCO and the National Institute for Working Life.

Control systems must be designed and constructed so that they are safe and reliable. Above all they must be designed and constructed in such a way that:

- *the rigours of normal use and external factors,*
- *human error during operation does not lead to hazardous situations, and*
- *defects and failure of control systems do not lead to risk situations.*

On this, the TUTB welcomes the requirement that *human error during operation does not lead to hazardous situations* (introduced in the Commission Proposal and accepted by the European Parliament).

The TUTB supports the Commission's intention to introduce human error into the Machinery Directive. Human error is a critical emerging issue today, as man-machine systems have become more sophisticated, making increasing demands on the mental rather than purely physical ability of operators.

The ground swell of concern which has emerged over the last two decades in relation to human-machine interaction has, of course, given rise to much research activity. In recent years, detailed analysis and identification of causative factors in past machinery accidents has shown that many events classified as “unsafe acts” or “human error” were actually *design* errors. On the other hand, there is a general agreement in the scientific community that the systematic and careful design of the user interface is the most effective way of minimizing the likelihood of human error when using machinery.

With this in mind, the TUTB suggests that the requirement that *human error during operation does not lead to hazardous situations* be reinforced with an additional requirement that *design must minimize human error*, in order to enhance the *preventive* value of the Essential Health and Safety Requirements illustrated in paragraph 1.2 **Controls**.

Otherwise, the existing wording, as amended by the European Parliament, would give the insufficient message that *machinery should be designed and constructed in such a way that appropriate safeguards neutralize human errors*. Instead, a *preventive* message should be given by emphasizing the importance of minimizing – by design – any possibility of *triggering* human error.

This suggestion chimes with the principles enshrined in the most recent revision of the basic machinery safety standard – EN 292 – which, in line with the Machinery Directive’s principles of safety integration, requires designers to favour inherent design measures over safeguards.

The wording of Paragraph 1.2.1 - Safety and reliability of control systems - would then read as follows

Control systems must be designed and constructed so that they are safe and reliable. Above all they must be designed and constructed in such a way that:

- *human error is minimized,*
- *the rigours of normal use and external factors,*

- human error during operation, and
- defects and failure of control systems do not lead to risk situations.

Suggestions to enhance the Commission Proposal

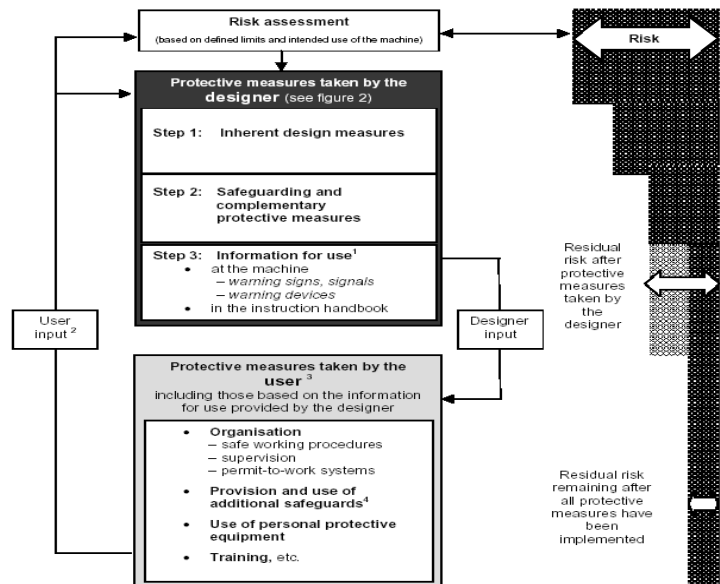
Introduction

Drawing on the main outcomes of the *Seminar on the Application of the Machinery Directive*, the TUTB would like to put forward some further comments intended to enhance the Commission proposal on a number of specific aspects.

The comments that follow are made with a view to introducing new duties for both manufacturers and national authorities.

The TUTB's main aim is to invite the Member States to arrange and formalize the systematic collection of experience and data from machinery users, so as to help designers take into account the worker-machine interface in the full range of conditions of use.

Collecting data on accidents and near misses involving machinery would help to put a workable gloss on manufacturers' duty to integrate user input by carrying out machinery risk assessment, as recently confirmed in the revision of the basic machinery safety standard, EN 292 (see Picture)



Another benefit from formalizing machinery users' feedback would be to help manufacturers comply with Essential Health and Safety Requirement 1.1.2, subparagraph a, which introduces the **foreseeable abnormal situations** to be taken into account by manufacturers.

*a. Machinery must be so constructed that it is fitted for its function, and can be adjusted and maintained without putting persons at risk when these operations are carried out under the conditions foreseen by the manufacturer but also in **foreseeable abnormal situations**.*

User feedback would also help designers comply with Essential Health and Safety Requirement 1.1.2, subparagraph c,

*The machinery must be so designed and constructed as to prevent **abnormal use** if such use would engender a risk. Where appropriate, the instructions must draw the user's*

attention to ways — *which experience has shown might occur* — in which the machinery should not be used.

Finally, national **market surveillance** activities could benefit from data gathered in other Member States to avoid duplication of inspection and enforcement activities, and to better focus the often limited resources available.

TUTB proposals

The TUTB suggests that Article 5 of the Commission Proposal be enhanced by placing the following obligations on manufacturers

Article 5

(...)

5. Manufacturers shall adopt measures enabling them to:

- a) Be informed of risks which machinery they supply might pose;
- b) Take appropriate action to avoid these risks, including keeping a register of machinery complaints, and investigating them to learn from feedback of experience from machinery users;
- c) Cooperate with the competent authorities on action taken to avoid the risks posed by machinery which they supply or have supplied. The procedures for such cooperation, including procedures for dialogue between manufacturers and users concerned on issues related to machinery safety, shall be established by the competent authorities.

Finally, the TUTB suggests that the foregoing recommendation be buttressed by placing the following obligations on Member States and the Commission, to be added to Article 19 of the Commission Proposal

Article 19

Member States shall ensure that machinery users and other interested parties are given a systematic opportunity to submit complaints to the competent authorities on machinery safety and on surveillance and control activities and that these complaints are followed up as appropriate. In accordance with Article 5, Member States will establish procedures for cooperation between manufacturers and competent authorities on action taken to avoid the risks posed by machinery. To this end, Member States shall support the systematic dialogue between manufacturers and users concerned on issues related to machinery safety. The Commission shall organize systematic exchanges of experience between Member States on feedback of experience and complaints from machinery users. Such exchange of information will benefit market surveillance activities and better direct sample investigation of machinery placed on the market.

Conclusions

The TUTB calls on the Commission to put the experience of machinery operators to work as an effective means of delivering the health and safety objectives enshrined in the New Approach principles.

It is clear from the views expressed by all stakeholders at the TUTB seminar on the application of the Machinery Directive that trade unions are seen as a powerful delivery system for collecting and transferring the experience of machinery's users, and bringing it into the equation to improve machinery design.

The TUTB therefore invites the Commission to reinstate Recital 18 of Directive 95/16 aimed at promoting an effective and appropriate contribution by employers and employees to the standardisation process.

Yours sincerely,

Marc Sapir
Director