

# Chapter 9

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## 9.1 Glossary

### **Approved Body**

An approved body is a third party that is competent to carry out special attestation procedures applying to machinery listed under Schedule 4. These bodies are designated by the EU member states. Further information is available from the DTI.

### **Competent Body**

The body or laboratory is presumed competent if it meets the assessment criteria laid down by the relevant harmonised standard (EN 45000).

### **Competent Person**

A competent person is someone who has reached the age of 18 and has undergone suitable training and sufficient practical instruction in a number of safety-related areas. The competent person is appointed in writing by the employer and is responsible for signing the certificate required under Regulation 33 of the PUWER Regulations (see Section 2.1.33).

### **Control Measures**

The measures that are taken to eliminate the hazard or to reduce the likelihood of occurrence to acceptable levels. These levels are well defined in law.

### **Control Reliability**

Control reliability is defined as a method of ensuring the integrity of the performance of guards, devices or control systems.

### **Danger Zone**

EN 292-1 defines the danger zone as any zone within and/or around machinery in which a person is exposed to risk of injury or damage to health.

**Diversity**

See “Redundancy”.

**EC Type Examination**

EC type examination is the procedure by which an approved body ascertains and certifies that sample machinery satisfies the provisions of the relevant regulations. This is mainly carried out on Schedule 4 machinery.

**EEA (European Economic Area)**

An agreement (signed in 1991 and effective from January 1994) between the countries of the European Union and the European Free Trade Association (excl. Switzerland), intended to create a zone of economic co-operation.

**Enforcement Authority**

In Great Britain it is the responsibility of the Health and Safety Executive (HSE) to enforce the regulations regarding machinery for use in the workplace. The local authority trading standards office is responsible for enforcing the regulations regarding machinery for private use.

**Exposed person**

Anyone who could be affected by a hazard.

**Guard**

EN 292-1 defines a guard as part of a machine specifically used to provide protection by means of a physical barrier.

**Hazard**

This is defined as something with the potential to cause harm.

**Machine/Machinery**

The Supply of Machinery (Safety) Regulations 1992 define a machine as an assembly of linked parts, at least one of which moves under power. The term machinery also covers interchangeable equipment and an assembly of machines which, in order to achieve one and the same end, are arranged and controlled so that they function as an integral whole.

**Notified Body**

See “Approved Body”.

**Redundancy**

Redundancy simply means that an installation has more than it actually needs in order to operate. For example, using two mirrored PLCs to control a plant, where one would do. There are two types of redundancy: homogenous and diverse. Homogenous redundancy uses identical methods to achieve redundancy, for example, using two or more 100% identical systems to control a plant. Diverse redundancy uses different methods to achieve redundancy, for example, using two or more different systems (e.g. microprocessors) to control a plant. Diverse redundancy has the advantage of being able to detect systematic faults.

**Responsible Person**

Manufacturers appoint a responsible person or an authorised representative to be responsible on their behalf for placing machinery on the market for the first time. In general, a manufacturer from within the EEA will appoint a member of staff with the necessary expertise to decide on such matters. If the manufacturer is outside the EEA, an authorised representative with access to the machine’s technical file will need to be appointed within the EEA.

## **Risk**

The likelihood that harm from a particular hazard could be realised. Essentially, risk is a combination of the nature of the hazard and the probability of occurrence. The risk involved in a particular technical process or machine condition depends largely on the following two factors: a) the expected **F**requency of an event which will lead to injury, and b) the anticipated extent of that **I**njury. This gives the formula:

$$\text{Risk} = \text{F} * \text{I}$$

Generally speaking, risk cannot be quantified, but is judged on the basis of experience and from comparisons with known risks.

## **Risk Assessment**

A series of logical steps to enable the hazards associated with work equipment to be reduced and eliminated in a systematic way.

## **Risk Limit**

The risk limit is the highest justifiable risk associated with a specific plant. Justifiable risk is determined by law makers, operators and independent experts.

## **Schedule 4 Machinery**

The most dangerous types of machinery are listed under Schedule 4 of the Supply of Machinery (Safety) Regulations 1992. Please refer to Section 1.4.

## **Statutory Instrument**

European directive ratified through Parliament.

## 9.2 Bibliography

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***Conformity Assessment***

Published by the DTI. Reference: O/N00420 J1897 30M

***CR 954 - 100, Safety of machinery - safety related parts of control systems - Part 100: Guide on the use and application of EN 954 - 1: 1996***

Published by CEN

***Electrical Equipment (implementing the Low Voltage Directive), Guidance Notes on UK Regulations***

Published by the DTI. Reference: URN 95/626

***Electromagnetic Compatibility, Guidance Notes on UK Regulations***

Published by the DTI. Reference: URN 95/683

***Essentials of Health and Safety at Work***

Published by the Health and Safety Executive. ISBN 0 7176 0716 X

***Five Steps to Risk Assessment***

Published by the Health and Safety Executive.

Reference: IND(G)163L

***Functional Safety. Safety-related systems***

IEC 61508

***Fundamental Safety Aspects to be considered for Measurement and Control Equipment***

DIN 19250

***Machinery, Guidance Notes on UK Regulations***

Published by the DTI. Reference: URN 95/650

***Management of Health and Safety at Work, Approved Code of Practice***

Published by the Health and Safety Executive. ISBN 0 7176 0412 8

***PES - Programmable Electronic Systems in safety-related applications. An introductory guide.***

Published by the Health and Safety Executive. ISBN 0 7176 1278 3

***PES - Programmable Electronic Systems in safety-related applications. General technical guidelines.***

Published by the Health and Safety Executive. ISBN 0 7176 0545 0

***Power Presses: Thorough examination and testing. Guidance Note PM 79***

Published by the Health and Safety Executive. ISBN 0 7176 0899 9

***Safe Machinery with Optoelectronic Protection***

Published by Erwin Sick Ltd. Reference: 8007988.02 97

***Safe Use of Power Presses, Approved Code of Practice and Guidance***

Published by the Health and Safety Executive. ISBN 0 7176 1627 4

***Safe Use of Work Equipment, Approved Code of Practice and Guidance***

Published by the Health and Safety Executive. ISBN 0 7176 1626 6

***The Electrical Equipment (Safety) Regulations 1994***

Published by HMSO. ISBN 0 1104 3917 1

***The Provision and Use of Work Equipment Regulations 1998***

Published by HMSO. ISBN 0 1107 9599 7

***The Supply of Machinery (Safety) (Amendment) Regulations 1994***

Published by HMSO. ISBN 0 1104 5063 9

***The Supply of Machinery (Safety) Regulations 1992***

Published by HMSO. ISBN 0 1102 5719 7

***Workplace Health, Safety and Welfare. Approved Code of Practice and Guidance***

Published by the Health and Safety Executive. ISBN 0 7176 1413 6

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