

Beware the CE Mark

By Phil Chambers BSc, CMIOSH

Some people facetiously say that CE stands for “Check Everything”. Unfortunately, there is some truth in this. Whilst the intention is to indicate that the equipment meets certain safety standards, there is no absolute assurance that this is so.

This draws people’s attention to the CE mark, it’s function and pitfalls. It describes how the procedure is intended to work, where the obligations are and typical examples where it goes wrong. It finishes with steps that a purchaser should include.



To what does CE Marking apply?

This applies to all equipment supplied for first time use in the EU after 1st January 1995. The organisation that introduces the machine is accountable for the process. Normally, this would be the manufacturer, but agents or importers would be accountable for equipment which originates outside the EU. Though we normally think of the process being applied to new machines, it applies to old machines if they were introduced into the EU after January 1995. Similarly, though it is intended to ease trading, it applies even if the equipment is for self-use. This is particularly tough on companies who produce specialized equipment to use themselves and would never sell it onwards.

Who polices CE Marking?

The short answer is nobody. Apart from specific machinery listed in Schedule 2, Part 4, Annex IV of the regulations, there is no organisation that either certifies the machine, or licences the supplier as being able to certify his machine. There are some good reasons why this should be so, but be aware that the process is one of pure trust on the supplier. Unfortunately, there is great variation in the knowledge and abilities of different suppliers and a CE label is no indication that the machine is safe.

Where does the buck stop?

The supplier has obligations under the Supply of Machinery (Safety) Regulations and also under section 6 of the Health and Safety at Work Act. The company who puts the equipment into use (ie the employer) has obligations under the Provision and use of Work Equipment Regulations and under section 2 of the Health and Safety at Work Act. It is the employer who has the final accountability for ensuring that the equipment is safe. Take the case of the London Borough of Tower Hamlets vs HSBC Bank. The printing operations of HSBC bought a brand new Spanish press which was CE marked and which they believed to be safe. An operator lost a finger in it, only a month after it was installed. HSBC were prosecuted, the manufacturer was not.

How is it supposed to work?

The legislation driving this is the Machinery Directive, or the Supply of Machinery (Safety) Regulations which enacts the directive in the UK.

The manufacturer must:

1. Design and build the equipment so that it complies with appropriate essential health and safety requirements (EHSRs) and harmonised European standards (HESs).
2. Assess the equipment for conformity with EHSRs) and (HESs).
3. Be able to compile a technical file proving conformance.
4. Draw up a declaration of conformity and affix the CE mark to the equipment.

Where the equipment is part of an assembly, step 4 is slightly different.

What goes wrong?

In my experience, the key problems arise from the appropriate EHSR's and HES's not being followed. The key points to look for are:

Gross non-conformities

On a machine I viewed recently at the company who was purchasing it, there was a finger crush point (capable of causing injuries requiring amputation) right next to a handle, scissor lifts had no protective edge trips and could shear a foot, a platform was of insufficient length and had incomplete guard rails and there was insufficient fixed guarding. None of these were difficult or expensive to control and one is rather puzzled as to why they had not been controlled at source.

Minor non-conformities

Some of the standards include requirements which have the best of intentions but may be difficult to incorporate. In other cases, compliance with the standard may actually increase the risk. These need to be assessed and the supplier should state where exceptions have been made.

Lack of awareness

An example I see quite often arises from how the safety related control system works. EN 13849 Safety Related Parts of Control Systems, if properly applied, will pick this up. Unfortunately, this standard is not structured in a way that makes it easy to follow and there are still examples of suppliers following its predecessor, EN 954-1, which is no longer a current standard. Suppliers typically realize that guard and emergency stops need to be positive, dual channel devices, and provide such items feeding into a high integrity safety relay. The problem I often see occurs when the only use they make of this arrangement is as an input to the PLC, which is therefore outside the control of the high integrity system. If you follow EN 13849, you can see the mean time between failures, which is a measure of the reliability of the whole control system, take a nose dive when you do this. The arrangement is not precluded by EN 13849, but the supplier must go to some lengths to prove that this arrangement is safe; surely everyone has experienced computer crashes or situations where programs freeze and one can anticipate situations where the safety functions are suspended because the software is busy elsewhere. I actually know of an injury that was caused by just this situation. An easier and far better arrangement is to have the safety related control system downstream of the PLC.

What should the purchaser do?

The two main actions a purchaser should take are:

Include clear specifications in your order, including statements that the safety related control system must be downstream of the PLC. One company with whom I work has a set of specifications to which supplier must adhere. You might consider a clause where you hold back final payment until it has been checked and any faults corrected.

Be aware that when equipment arrives, the presence of the CE mark does not necessarily mean it is safe. You must carry out a thorough risk assessment. Where there are major faults, then you could take this up with the supplier; they are the ones who should supply equipment which is fit for purpose.

About the author

Phil Chambers is an engineer with a background in automation and control, and became a chartered engineer in 1976. He is a chartered member of IOSH and started Strategic Safety Systems in 1996, providing safety, quality and environmental services mainly for manufacturing companies.



Strategic Safety Systems Ltd., 8 The Highgrove, Bishops Cleeve, Cheltenham, GL52 8JA, UK

Phone: 01242 679713 Mobile 077680 11667

E-Mail: info@StrategicSafety.co.uk Web site: www.StrategicSafety.co.uk