GKCL06 - "CE Marking does not mean products are safe, says WHICH?"

The "Which?" article published in their October 1st issue presents a very damning view of products in our high-streets: but is it true and is it justified?

The answer is an emphatic "Yes" to both questions. Which? claimed that one third of the products that it sampled and analysed were *"dangerous and could cause serious injury"* and concluded that *"CE Marking is failing because products which do not meet the essential safety requirements are reaching our shops"*. These are very powerful words and should put fear into the minds of all 'producers' of electronic and electrical equipment because the penalties are severe.

Many 'producers' incorrectly believe that product safety is easy, is not enforced and that the fines of a few thousand pounds are small - therefore, they believe, it will be cheaper to accept an occasional penalty and save the cost of demonstrating compliance. This is a big mistake. Enforcement actions are increasingly being taken and the cost of an enforced recall of affected products is enormous: both in terms of the cost of the recall activity, the cost of refunding payments for the 'defective' goods and the loss of public reputation. At a personal level - is a full page spread in our daily newspaper by "Acme Electronic Products Inc." warning that a washing machine that they have been selling for the last three years has a 'quality' problem that could burn down our houses or electrocute members of our family likely to impress us? Perhaps another question to consider is if we are about to make a purchase would we buy from that manufacturer?
The cost of getting it 'wrong' is enormous!

So, should we be surprised by the report? Is this situation new? In this case the answer is "No" to both questions. Let me explain….

In 1996 I was sitting on a panel with representative of Trading Standards and other consultants in London, I was asked how I thought SME's where doing in respect of designing for product safety. My answer then was that of the hundred or so products I have reviewed - and which had not been assessed by some third party test house - all of them failed to comply with the relevant safety standard. Furthermore some of these non-compliant products were potentially lethal. That view - whilst not popular with the audience - was supported by the BSI representative on the panel.
Earlier this year I wrote to the DTI, on behalf of a number of clients, expressing concern at the number of defective products on the market. The following examples where cited to that letter:-

1- *A modem supplied from the US supplier with a transformer that overheats and could be a potential electric shock hazard or fire hazard.*
2- *A Programmable Logic Controller intended for industrial use that does not appear to have adequate Creepage and Clearance Distances between the mains input and the 24Volt output from its power supply unit.*
3- *An imported, CE Marked Motor, rated "230V" and supplied with Declaration of Conformity. During routine testing we measured winding temperatures exceeded*

150 °C. Telephone conversations with the design office exposed the facts that the motor had been designed to run at 220 Vac, that it had never been tested at 255 Vac and that the winding temperature could reach over 200 °C. A temperature well outside the design limit of its insulation thus presenting both electric shock and potential fire hazards.

4- *A plethora of Power Supplies (intended for the home PC market) that, under single fault conditions, could allow the PC outputs could become live.*

So What is going wrong?

The answer is simple - many retailers, importers, systems integrators and OEM's are failing to undertake their duty of 'due diligence'. Some of the obvious things to check are:-

1- Is the CE Marking affixed?
2- Does the Declaration of Conformity refer to an appropriate harmonised standard?
3- Is there a Competent Body Style test report?
4- Does the test report state that the product conforms to the standard?
5- Are there adequate manufacturing controls in place to ensure compliance?

This is not intended to be alarmist but I have personally seen a Declaration of Conformity that was signed and issued on the basis of a TÜV Product Safety report which clearly stated "*The sample failed to comply with EN60204*" on the front page. These sorts of thing would be laughable were they not so tragic.
Whilst we are on this track please remember also that even an ISO 9000 manufacturing system is no guarantee that the products coming from it will be safe! Product Safety manufacturing controls must operate in 'product space' not 'process space' - the first article in this series GKCL01 explains this in detail. If the product design is non-compliant then the ISO accreditation will merely ensure that all of the items produced will fail to comply with the LVD!

The bottom line is compliance will not happen naturally by itself - it must be managed and planned. And remember the old saying that *failing to plan is planning to fail*.

Who is to Blame and Who will Suffer

If blame must be apportioned then most of it must be borne by the board of directors of those companies that have failed to manage this situation effectively. However we must all share some part of the blame for failing to report problems that we see; allowing them to be side-stepped or swept under the carpet.

Who will suffer - those injured, that goes without saying - but until our industry 'cleans up its act' then we will all suffer as profits fall because of avoidable, retrospective design, or recall activities.

Getting it Right

Getting it right is not difficult but it does require a determined policy and maybe a change of culture for many companies. These are the steps that many of my clients have taken in their successful implementation of product safety compliance:-

1- Appoint a ‘Champion’ who will ‘own’ product safety. This will usually be a board member with responsibility (and a budget) for managing the activity.
2- Appoint a ‘Competent Person’ who will be the day-to-day focal point for product safety compliance.
3- Put training and external support in place for the Competent Person.
4- Incorporate product safety into design reviews.
5- Follow the ‘golden rules’ to be given in the next issue - GKCL07.
6- Be prepared to say “No” if things are wrong and action is needed.
7- Do not assume that things will be acceptable - demand proof.
8- Learn to accept that changes do not happen overnight; people make mistakes; that this is an ‘improvement’ process; and it will take time.
9- Work with an external test-house or consultant that will support your company’s need to become self-reliant - you are likely to need external help because few companies will have the necessary skills internally.
10- Continue training - little and often is the key - successful athletes train regularly: so do successful engineers.
11- Put cost-effective manufacturing controls in place - remember that we must check the ‘product’ the quality process is pretty-much irrelevant in terms of the product safety of most electrical products.

These are just some of the actions that we must take if we want our industry is to survive - and continue to give us employment.

In Conclusion

Enforcement Officers through the EU are aware that these problems exist. In some countries there was a ‘softly softly’ approach. Those times are changing and I know of at least one company that has recently ceased trading because it could not afford to make its products compliant.

To create an organisation where regulatory compliance is part of the culture and where the internal ‘self assessment’ and ‘self declaration’ processes are reliable will take many months. It does not happen by accident - and it cannot be achieved without top level commitment. It is however the only path to industrial survival - and most companies want more than mere survival.

There is also an associated cost: but this cost is insignificant compared with that of designing a new product in the first place: and it is trivial when compared to the cost of getting it wrong and being forced to recall, repair or ‘buy-back’ several years worth of defective products.

Finally - a question that is being asked more and more frequently is “*What do I do if my company doesn’t take regulatory compliance seriously*?”
By way of an answer I usually ask “*Then how much longer will its customer continue to take ‘it’ seriously*?”