Design engineers often turn to plastic, but the world still values steel. The automotive companies would like to make a plastic car, but plastic doesn’t convey the quality message that steel does.

Look in a celebrity chef’s kitchen and you’ll stainless steel tools and kitchen appliances, not the lower cost plastic models. Look at mobile phones and even the buttons and other parts are plated to look like steel, and plating plastic is not easy. Indeed, Nokia has designed a special edition 8800 phone using a brushed stainless steel case which fits into a custom designed slot in the latest Aston Martin – steel equals quality!

The world likes the look and feel of steel and it, or something that looks like it, conveys an unspoken message of strength and durability.

So why is almost everything turning plastic? One reason could be the way that engineering graduates are taught. Solid model CAD systems are the tools of the trade for modern designers. And the beauty of a mould tool is that the tool actually looks exactly the same as the product or solid model.

It is easy to understand and see how an assembly of discrete plastic mouldings, each of which looks like part of the whole, can fit together to produce a complex finished product.

And it is also easy to relate to sheet metal forming tools that press car bodies because, just like their plastic mould tool counterparts, the form tools look like the product. Okay, there will be spring-back compensation hidden in there, but it doesn’t make it so different.

Now take a look at a complex progression tool. It looks nothing like the finished part, say a car radio housing or an airbag housing in a car. Each stage of the progression tool will remove material and/or bend the passing strip a little. I’d argue that you wouldn’t be able to find a CADCAM system to support this sort of product design work in any UK university and probably not many in any country.

That’s not to say that some software doesn’t exist. Vero International’s VISI-Progress, for example. But this is a system used by toolmakers and is used to design a progression tool from a component not to design the component for production by progression stamping in the first place. I don’t even know if there is a CAD system that will unwrap a metal part for manufacture by progression pressing.

The point is this, if the designer isn’t thinking metal pressing at the point of designing a new product, it won’t be a metal pressing. And that could be a wrong decision, too. We often now get customers coming to us because a plastic part has failed. Only with this failure do customers then think metal pressing.

At Clamason Industries we are tackling the problem at source. We have produced a booklet – Why not metal? Aimed at designers, we have so far circulated some 5,000. Unsurprisingly, the cover is a metallic grey!