

## Cautionary Tale: Skills Gap

There exists a skills gap in many manufacturing sectors, and this is as true of springmaking as any other sector. This applies in most countries today as manufacturing careers are viewed unfavourably by school children at the time they are selecting the subjects they wish to study at the end of their school career, or when applying for University. Jobs in IT and the service sector, in clean warm offices, are attracting too large a proportion of the able students, and this has been true for the many years now. Jobs in engineering and manufacturing require a long period of education with a potentially dirty job at the end of it, and the pay rates for engineers can be poor in comparison with those in banking, insurance and IT, or even the public sector.

The same underlying thinking also exists for students for whom an apprenticeship is the right career option. Learning the skills required for spring manufacture, particularly spring coiling (hot or cold) is going to require more application than other options available to today's school leavers. In western countries, employment in manufacturing is reducing year on year, and good news stories from this sector are few and far between, and this further deters people from selecting a manufacturing career. Even in developing countries, such as India, where employment in manufacturing is increasing, employment in IT is seen as the way forward, and people often end up in manufacturing when they couldn't get a career in IT. Manufacturing has, historically, been the primary driver of wealth and growth, and, as such, requires the best employees.

The author's personal perspective on the skills gap occurred when one of his daughters told her school that she wanted to be an engineer. The school discouraged this option because she was very good at English and Geography, but less good at Math. They wouldn't offer her the subjects she wanted at 16, so she left school (with my permission) and went to college where her chosen subjects were offered. She did well enough to gain a place at Liverpool University to study engineering, gained a first class masters degree and has been a railway engineer ever since. Most other students would have followed the school advice, and joined the ranks of people with qualifications of no use to manufacturing.

The question arises, "how to close this skills gap?" A quick search on the internet will give rise to a myriad of different answers to this question, and no clear consensus is evident. For training in the craft skills of spring manufacture, very few possibilities for training exist outside the workplace. A spring coiler is almost certain to have to learn the skills required from more experienced colleagues on the shop floor, probably with some guidance from managers.

For managers, technicians, salesmen and office staff who require an understanding of the whole process route possibilities for spring manufacture, there are a few providers of training courses around the world. IST is one such provider, and they offer training in material selection, spring manufacturing theory, spring design at a basic and more advanced level, and spring failure and prevention. The photograph shown here is of the most recent multi-client course given by IST in Mumbai, India in November 2012, attended by delegates from four different springmaking companies and range of companies who utilise springs in their products.

These courses may be given almost anywhere in the world, and may be tailored to the specific needs of individual clients. In IST's opinion, these training courses are the best resource available for closing the skills gap for the spring manufacturing sector, and a few companies promise this type of training when recruiting new staff.

The point of this cautionary tale is that the skills gap is likely to be a significant factor when a spring manufacturer is trying to recruit new staff because of growth or to replace retiring

employees. Craft training resources are scarce, but global training in spring technology for managers and technicians is available.



Training course on compression springs – materials, manufacture and design. This course was given in Mumbai, India. Similar courses have been delivered by your author, shown in the above photograph, in Australia, Malaysia, USA, Canada, Spain, France, Malta, Italy, The Netherlands, Sweden, Finland, Denmark and could be given in your country so long as your country is safe!

*Mark Hayes is Technical Advisor to the Institute of Spring Technology (IST) in Sheffield, England. He is also the principal trainer for the spring training courses that the Institute offers globally.*

*Readers are encouraged to contact him with comments about this cautionary tale, and with subjects that they would like to be addressed in future tales - e-mail [m.hayes@springexpert.co.uk](mailto:m.hayes@springexpert.co.uk)*