

Cautionary Tale XXVIII – Who’s the next Springmaker?

The worldwide demand for springs has grown at a slow rate over the last 20 years, and it is not anticipated that this situation will change significantly in the next 20, so it is certain that new springmakers will be required on every continent. Fresh faced, young and enthusiastic people will be recruited to our industry and they will need a wide range of skills if they are to be successful. Competition from the East is not going to diminish, whether that be Eastern Asia or Eastern Europe, but springmakers will still be required and have a market in all countries. Profit margins will continue to be low, and so entrepreneurial skills will be vital, but a knowledge of all aspects of spring materials and design will be the bedrock on which new personnel will help to keep this industry healthy.

Whoever the springmaker of the future is, training in spring technology to a specialised level, above and beyond their formal education, will be enormously advantageous whether they are managers, technical, or production people. The point of this cautionary tale is that new people are much less likely to be successful if they don’t invest significant time and effort into learning about all aspects of spring technology.

The market for springs has become global, but as was pointed out in cautionary tale XI, the materials available to the spring industry the world over are similar, and what is more, the price of the raw materials do not vary very much from country to country. In addition the machinery on which springs are manufactured is similar throughout the world. Hence, technical training does not have to be market or location specific.

So, what training does the next springmaker need? Everyone’s first instinct is to obtain training in spring design practices and rules, and that was discussed to some extent in Cautionary Tale XV. However, in order to design springs one first has to select a spring material, then there needs to be a very thorough appreciation of the benefits of each spring manufacturing process, and only then can spring design be undertaken efficiently. Even then, a knowledge of the mechanisms by which springs can fail, and how each of these mechanisms can be prevented would be very important. Tomorrow’s springmaker has to have knowledge of the industry as it has evolved today, and then has to have the technical or entrepreneurial skill to take the industry through the next generation.

Training in spring material selection will provide information about the relative merits of all candidate materials and their national and international supply specifications. It will also give the first stage of metallurgy for the non-metallurgist, thereby providing an understanding of terms such as pearlite, austemper, decarburisation.....

Training in spring manufacturing technology will provide information and understanding of the underlying principles behind residual stresses, heat treatment, prestressing, and surface engineering.

With the knowledge gained from these two courses, new springmakers will be able to embark on the process of designing low weight, efficient springs that are easy to make by automated processes – this last being especially important in the higher wage parts of the world. Before springmakers start to run too far with their new found spring design skills they ought to be trained in spring failure and prevention methods so as to avoid the mistakes of the last generation!

IST's philosophy regarding training to provide the skills required by personnel new to this industry has been described here, but it is also our experience that some people who have been in the industry for some time would benefit from the training described here, particularly those who change their role within a company.



Course given by IST in Mumbai, India earlier this year

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