

Textile Research and Innovation Centre (TRIC)

Textile Institute of Pakistan (TIP) has recently launched a new initiative aimed to facilitate the growth and development of the textile industry of Pakistan. The Textile Research and Innovation Centre (TRIC) is expected to meet Pakistan's needs in emerging technologies but also provide a new dimension to textile education in Pakistan. This will also help the textile industry of Pakistan to manufacture new value-added products and become competitive in the changing global market.

The TRIC is geared to foster genuine leading-edge research linking the industry and other institutions within Pakistan and abroad. Whilst the long term aim is to create a robust multidisciplinary centre encompassing all major areas of textile field, it is important to start with a more focused approach in the areas of immediate concern, as per the communication received by TIP, the Centre will focus initially on the following activities:

- ❖ Advanced Materials and Manufacturing research (such as technical textiles and applications of nanotechnology in textiles etc) and its associated contribution to teaching.
- ❖ The facilitation of postgraduate program at TIP and supervision of postgraduate research projects.
- ❖ Building research profile of Pakistan in the textile world by publicising research outcomes in the scholarly journals of international repute.
- ❖ Establishing collaborations with renowned research providers worldwide.
- ❖ Arrangement/organization of a regular research seminar program at TIP.
- ❖ Informing and engaging a wide community (industrialists, educationalists, students, media, NGOs and government agencies etc) about the emerging trends in textile field and their potential impacts on local/international market.

The Centre has started functioning from 1st August 2007 with currently available resources. An outline of step by step approach for the initial two-year period is given as follows:

Staffing and Infrastructure

The Centre is headed by Dr Zulfiqar Khan who has recently moved from Australia to take up this challenging task. The Head of TRIC, with input from the president Dr. Zubair Bandukda has recruited two supporting staff who have already started their projects in plasma treatment technology and new spinning techniques. Existing faculty members are also keen to initiate some projects in their relevant fields of interest. The primary considerations in this regard will, of course, be the fulfilment of industry needs. In addition, the Centre will have strategic support in the areas of finance, IT and administration from TIP staff.

The Centre is currently using TIP facilities and equipment as a starting point. However, some new equipment and other facilities would be added subject to research income generated and support from the industry. Research partnership with world's leading research providers and local industry is also on the agenda to use each other's facilities on reciprocal basis. There may also be some opportunities for sourcing the redundant machinery and equipment due to downsizing of the textile industry abroad.

Postgraduate Program

To conduct cost-effective research and produce a team of next generation indigenous researchers, it will be important to start postgraduate program at TIP. It may be a combination of coursework/research or only degree. This can be achieved with the joint academic supervision of local/foreign faculty. One of the key responsibilities of the Centre will be to facilitate such arrangements. For this purpose, current honours students will be persuaded to consider the continuation of their education to next step (ie at master level). Fresh students starting from 2007-2008 will also be encouraged to become active researchers and consider entering into research field after they graduate. This would be an ongoing process for generations to come.

Industry-based Projects

A healthy relationship between academia and industry is vital especially in the current circumstances when the textile industry of Pakistan is finding hard to keep its market share, apart from other factors, due to the lack of innovation and diversity in their products. The Centre would be an excellent platform for generating new ideas, facilitating collaborations and running pilot projects on behalf of the industry. The centre will also be able to produce prototypes of new products, develop trademarks and facilitate their marketing worldwide. Following are two examples in which TIP staff is directly or indirectly involved.

Example 1: In this case, some thermal products for new markets have been developed with a local manufacturers. This was done by the cost-effective use of wool on short-staple spinning machinery. The new fabrics produced are as cheap as normal cotton fabrics in terms of material

and manufacturing costs but much superior in terms of softness, handle, elegance and durability. In addition, these fabrics are composed of 100% natural fibres. A new trademark called "COTRINA" has been registered for these products with the help of an Australian company and attempts are underway to launch these products commercially.

Example 2: This approach employs a DREF spinning system to produce innovative products by core/sheath mechanism. This mechanism uses inferior but stronger stuff of same material in the core and superior covering on the outside to obtain similar properties as their normal counterparts. However, there is a significant cost-saving due to the less-expensive material used in the core. This project is still at the initial stage but has a huge potential for another success story.

The above two examples demonstrate how the Centre can help the local industry to add value and increase their product range.

The Review Process

A comprehensive review of the Centre will be conducted after two years to analyse the progress made and streamline the priorities in the light of new circumstances. In the initial 2-year period, the centre is hoping to achieve the following:

- ❖ To usher a new era of research and innovation for and with the textile industry of Pakistan.
- ❖ New products and trademark development.
- ❖ To initialize the postgraduate studies at TIP.
- ❖ To establish both short-term and long-term collaborations with other institutions.
- ❖ To foster a research culture at TIP and build and enhance research infrastructure at TIP.

Summary

Realizing the need for a Research Centre, TRIC is envisaged to be a role model for other institutions of the country. Once this is a proven success, the longer-term vision is to create a more robust structure comprised of a number of fields. The Centre will be the first step in achieving research excellence through innovation, collaboration and contemporary vision. ♦