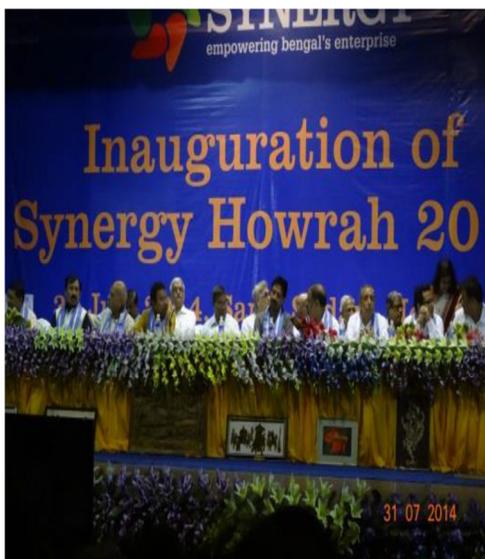


# SYNERGY HOWRAH- 2014



Inaugural Session, Synergy Howrah

The Council of Scientific and Industrial Research (CSIR) participated in a major way at the Synergy Howrah 2014, organized by the Department of Micro, Small and Medium Enterprise and Textiles, Govt. of West Bengal in association with District Administration, Howrah and Howrah Chamber of Commerce & Industry during 31 July to 2 August 2014. The event was inaugurated and organized at 'Sarat Sadan Complex', Howrah Maidan.

In this context it may be noted that in September 2013, a Memorandum of Understanding had been signed between CSIR and the Government of West Bengal regarding the establishment of the MSME-Technology Facilitation Centre (TFC). CSIR-Central Glass and Ceramic Research Institute, Kolkata, is the Nodal Centre for this project and houses the TFC, which CSIR set up together with the Government of West Bengal. This is a pioneering initiative in India. The vision behind the concept is to create a sustainable ecosystem of micro, small and medium enterprises to drive the economic prosperity of West Bengal.

The Mission of TFC is to achieve technological enablement of West Bengal's small scale sector leveraging the prowess of knowledge institutions. TFC acts as single point of access for information. It is mandated to network the knowledge institutions with the MSME sector. It will also take part in policy support and analytics, communication, skill development and training plus assess needs of the MSME sector.

Synergy Howrah was the third event in a chain of district-level events that have been planned following the enormous success of 'Synergy MSME 2013' at Kolkata. The event at Howrah was preceded by 'Synergy Siliguri' organized in February 2014.

As is the pattern for the events organized under the Synergy umbrella various 'Clinics', 'Help Desks' and 'Special Pavilions' were set up to provide all possible assistance and guidance to entrepreneurs. Entrepreneurs and aspiring entrepreneurs were provided information on all aspects of setting up/expanding business. This covered important fields such as: information on availability of land/electricity/ mandatory clearances such as Environmental/Pollution clearance, Fire License etc. and Banking/Financial management.

The event was planned in such a manner that in just one visit an entrepreneur (aspiring or experienced) could find answers to questions and pointers too, in addition to appropriate technology interventions and mentoring.

The Theme of the CSIR Pavilion during Synergy Howrah-2014 was ADOPTING CLEAN PROCESSES. Many of Howrah's industrial units and iron foundry etc., use traditional methods that have been found to be quite polluting in nature. There is a major problem of effluents and waste management. The need for technology interventions is therefore, acute. These facts guided the choice of the theme which seemed appropriate for the event and the locale.

The components included:

- Clean Fuels and Clean Energy
- Clean Metallurgical Processes and Applications
- Clean Processes for Ornamental Glass Making
- Clean Environment through Effective Effluent Management

CSIR technologies were showcased in the dedicated Technology Pavilion. Efforts were made to ensure that technologies suitable for the Howrah region were displayed so as to address local needs. Laboratories such as CSIR-National Metallurgical Laboratory, Jamshedpur, CSIR-Institute of Minerals and Materials Technology (CSIR-IMMT), Bhubaneswar, and CSIR- Glass and Ceramic Research Institute (Kolkata and Khurja) deployed personnel to interact with the visitors.

The Multi-fuel portable stove (HARSHA) designed by CSIR-IMMT which is capable of using a variety of solid fuels such as firewood, twigs, leaves, dung, raw coal, briquettes, bagasse and even agricultural wastes, attracted the attention of many visitors.

The popular appeal of the Terafil™ water filter attested to the burning need to access safe water. Terafil™ is a low cost filtration device that can process water rich in sediments, suspended particles, iron and even some microbes to provide safe drinking water. It usually uses a porous solid disc made of burnt red clay as a filter but the shape of the filter may be customised. Terafil™ filters can be used for both surface water and ground water at affordable costs and with minimal expenses for maintenance. Many visitors expressed their interest in the products displayed by the CSIR-National Metallurgical Laboratory. CSIR-NML is known for its innovations appropriate for the brassware cluster, in which the traditional practice of melting brass is grossly inefficient, polluting and hazardous. It is interesting that Dokra artisans from Bikna, Bankura, West Bengal have visited CSIR-NML to witness first-hand the demonstration of modified coke-based pit furnace. A few Dokra artisans have been trained to use the advanced furnace technologies at CSIR-NML.

CSIR-NML reported that the artisans gave positive feedback on their experience because the pollution level was reduced and coke consumption also came down significantly by using this technology. The batch melting per cycle was also reduced appreciably. Interest was also spiked because they could also use locally available coal in this easy-to-use furnace. This furnace fit in perfectly with their usage pattern.

A twin-technology from CSIR-NML was the anti-tarnishing lacquer that could help metals such as Copper, Brass and Bronze to retain their shine over several years. The technology behind these products has already been transferred and the product is available in the market. brass items for display etc.

The interesting part about this technology is that it can be used by manufacturers to coat the products leaving the factory and it can also be used by the users who have purchased brass items for display etc. The lacquer is easy to use and can be used at room temperature. There are no health hazards associated with its use. It is expected that this technology will empower Indian artisans and level the international playing fields in terms of the aesthetics and longevity of products.

The Portable Automated Ball Indenter (PABI) from CSIR-NML was also appreciated by the visiting entrepreneurs. The USP of PABI is its ability to estimate hardness, yield stress, yield ratio, tensile strength, strain hardening constant and fracture toughness in just one test. This technology has been transferred.

CSIR-CGCRI put the ceramic membrane filters and refractory bricks on display. These items evoked many questions from entrepreneurs. However, the most popular display at the Technology Pavilion was perhaps put up by Khurja Centre of CSIR-CGCRI. Sparkling glass beads of all colours and shapes fashioned into necklaces and keychains etc., captivated the imagination of budding and experienced entrepreneurs both. There were many queries about the non-traditional uses of these beads and the markets thereof. Interested entrepreneurs clamoured for training in this technology. The use of eco-friendly gas fired kilns interested them. Much of this interest also stemmed from the fact that the technology did not demand heavy investment or large space and was not labour intensive. Entrepreneurs were also interested in designing different items using these beads and their interest was sparked by the earrings and necklaces being fashioned out of loose beads even as they watched.

In addition, details of appropriate interventions available from CSIR laboratories such as CSIR- National Environmental Engineering Research Institute, Nagpur; CSIR- Central Leather Research Institute, CSIR- Institute of Minerals and Materials Technology Institute of Minerals and Materials Technology were prominently displayed and evoked interest. Information on Chemo Autotrophic Activated Carbon (CAACO) technology for tannery waste water treatment and Fenton-activated Carbon Catalytic Oxidation (FACCO) were greatly appreciated. Information about NEERI-Zar was also received well. A video on how modern technologies have benefitted the traditional Howrah Foundry and Re-rolling Industry was also commissioned for, and screened on, the occasion.