

COMMERCIALISING INNOVATION

Venture Center inaugurated at NCL Innovation Park

A 'Venture Center', a business incubator for knowledge-based enterprise, was inaugurated by Prof. Sir Richard Friend (Cavendish Professor at the University of Cambridge, UK and Founder of Cambridge Display Technology Ltd and Plastic Logic Ltd.) on 18 December 2006 at NCL Innovation Park in the presence of Dr. R.A. Mashelkar, DG-CSIR, New Delhi, Dr. S. Sivaram, Director, NCL, Pune, Prof. Ashok Mishra, Director, Indian Institute of Technology, Mumbai and Prof. K.N. Ganesh, Director, Indian Institute of Science Education and Research, Pune.

The 'Venture Center', which is scheduled to rollout its full services through 2007, will begin operations with a mentoring and advisory support program for NCL related entrepreneurship activities.

Need for support mechanisms

Speaking at the inaugural function, Prof. Friend emphasized the need for incubators, support systems and supporting environments to help scientists take their laboratory research to the market in the form of technology ventures in countries such as the UK and India. He believes that scientists in UK and India have to work much harder to

commercialize technology compared to their counterparts in the USA where the supporting mechanisms are well entrenched and more advanced. Dr. Sivaram provided a background about the genesis of the NCL Innovation Park and Venture Center. He expected the current ways in which CSIR labs have been interacting to change in the next 20 years. "NCL shall use the Venture Center and NCL Innovation Park to experiment new models of interaction with industry."

While Dr. Sivaram was aware of the risks of such experiments, he hoped the Center would disprove skeptics wrong by succeeding in building the next generation businesses for India. "The incubator would facilitate and allow scientists to pursue business ideas related to their research without having to sacrifice their scientific careers", he added. Dr. Mashelkar argued that India needs to dispel the myth that India cannot produce spinout companies comparable to the USA. "If Chinese Universities and research institutions can produce 2800 spin-out companies providing 80,000 quality jobs, why cannot India?" he asked. Dr. Mashelkar suggested that the Venture Center should aim to produce hundreds of Richard Friends. Speaking later in the press conference, Prof.

Ashok Mishra said that incubators play an important role by informing scientists, providing guidance and leads for assistance.

The journey from lab to market

In the evening, Prof. Friend delivered the first

Innovation and Technology Enterprise Lecture titled 'Company start-up in Cambridge: From science to technology to products'. In his highly appreciated talk, Prof. Friend described his journey taking laboratory science of the highest quality to technology and eventually products in the market place.

Prof. Friend, who has pioneered the field of polymer-based electronics and flexible displays, has successfully protected his inventions and commercialized these inventions through the formation of two start-up companies, viz., Cambridge Display Technology Ltd and Plastic Logic Ltd. In his talk, Prof. Friend pointed out that in his field many leading research groups were either in the industry or have strong linkages to industry – thus, hinting that good basic research and commercial applicable technology can go hand-in-hand. He also noted that academic research could exist symbiotically with complementing start-up company activities, enriching both. He highlighted the importance of patenting and having a strategy for defending patents. Prof. Friend pointed out to the largely scientific audience that having great technology is something very different from having a customer. He used the examples of his two companies to illustrate two very different progress paths in the early stages with respect to funding. Dr. Mashelkar spoke about the success of the Cambridge area in doing high-level science, while at the same time attracting almost 10% of Europe's venture capital investment. "Creating scientist-entrepreneurs will involve work at the local level by units such as the Venture Center, but also changes in rules of the government at Delhi," he added.

He hoped the Venture Center will pioneer the nucleation of technology enterprises and serve as a role model for many other Indian institutions.



Prof. Sir Richard Friend inaugurating the Venture Center

PETROCHEMICALS

Demand for feedstock cost escalations upsets economics of Assam gas cracker

Subsequent to the demand by the feedstock suppliers Oil India Ltd. (OIL), ONGC and Numaligarh Refinery Ltd. (NRL) for a higher price of gas and naphtha, the economics of the Assam gas cracker projects has been seriously dented. OIL and ONGC were given a price of Rs. 3,200 per thousand cubic metres (tcm), whereas they are now asking a 2.5% annual escalation, while NRL has sought import parity prices for naphtha, instead of Rs. 15,000 per ton fixed by the cabinet earlier.

There was a suggestion that a pooling mechanism be put in place by which if polymer prices go beyond the point where the cracker earns more than a 10% IRR, the additional money should be used to compensate the suppliers of feedstock. The argument here is that the price of polymers is strongly correlated to the price of feedstock. But there are others who claim that it will be risky to put together a model based on correlation

alone as the future is likely to be more uncertain than the past.

There are a few other issues which are also creating problems. For one, the rate of interest on loans has gone up from 8% assumed in the project to more than 9% now. In this context, there is now a plea that the IRR of the project be raised from 10 to 11%.

The project had earlier assumed operating costs to be fixed for 15 years. But operating costs — made up of wages, chemicals, catalysts, spares and utility costs — are expected to rise and a 5% annual escalation would now have to be taken into account. The point being made is that this escalation could have been absorbed if feedstock prices were constant. Now that producers are asking for a higher price, the only way the hike in operating costs can be compensated is by raising the subsidy on the project.

Use Tariff Commission's producer cost of gas as benchmark

There is a proposal to accept the producer price of gas as recommended by the Tariff Commission as the benchmark price of gas for the project. This is an alternative to the demand by OIL and ONGC that they be given a 2.5% escalation on the gas price over the price fixed by the Union cabinet.

The Tariff Commission had suggested a producer gas price of Rs. 3,450 per mmscmd for ONGC and Rs. 4,040 for OIL in its Draft Report on producer price of gas for these companies. The price is at a calorific value of 10,000-k.cal/m³. The report also suggests that for escalations and de-escalations in operating cost, for every 10% point change in wholesale price index (base year 1993-94) over 189.40 points (as on March, 2005), the producer price of natural gas would require a change of Rs. 55 per mmscmd.

IMPROVING ROADS

Shell commissions bitumen plant in West Bengal

Shell Bitumen India, a special purpose vehicle of Royal Dutch Shell, has commissioned its first bitumen plant in India at Uluberia in West Bengal. The plant would have a production capacity of 50,000-tpa.

A Shell spokesman said that this was the first bitumen plant in India and it would manufacture emulsions, crumb rubber modified bitumen and polymer modified bitumen.

The plant would also be able to ex-

pand capacity to meet the growing market demand. However, the spokesman declined to give the quantum of investments made for setting up the plant. He said that with the improved road connectivity across the country, the company was expecting a huge demand for its products.

According to the spokesperson, Shell is now planning to set up more bitumen plants in the country. "India is a big market for bitumen and the demand is expanding rapidly. We want to explore the

opportunity," he added. The spokesperson pointed out that the bitumen market in India is of 3.5-mt per year.

Commenting on the project, the chairman of the Shell group of companies in India, Mr. Vikram Singh Mehta said the company has entered the India market in bitumen with two objectives, to leverage over 80 years of experience across the world in building safe high quality roads and to build long standing profitable bitumen business in India.

CAPITAL GOODS

FICCI seeks relaxation of export obligation norms under EPCG

Emphasising the need for a more exporter friendly Export Promotion Capital Goods Scheme (EPCG), the Federation of Indian Chambers of Commerce & Industry (FICCI) has sought relaxation of export obligation conditions under the scheme in its memorandum submitted to Directorate General of Foreign Trade (DGFT) for the forthcoming Foreign Trade Policy 2007-08. FICCI has also suggested import of capital goods at a reduced rate of custom duty of 1-2 per cent under the EPCG Scheme, as against the existing 5 per cent.

Pointing-out the difficulties faced by exporters under the current EPCG scheme, FICCI said that the condition of exporting over and above the average level of exports achieved by an exporter in the preceding three years is becoming difficult to comply with in view of the fact that exports are already growing at a very high rate (24% on an average for the last three years). "The maintenance of average level of exports over and above this already high level in the preceding three years is almost impossible now for exporters."

In many cases, FICCI pointed out, capital goods are imported under the EPCG to replace old ones, which implies there is no creation of additional capacity in such cases. "So, to expect an exporter to maintain such a high level of exports, when there is no increase in capacity has no justification."

As this problem is more acute for large exporters, where absolute level of exports is already high, FICCI has suggested that the Government consider

some special dispensation or window for large exporters to fulfill their export obligation condition.

Concessional duty for import of capital goods

FICCI has also suggested that capital goods should be allowed to be imported at a reduced rate of custom duty, i.e. 1-2% from the existing 5%. "This is important in view of the proposal to bring down custom duty on all capital goods in the next budget to 5%." The chamber observed that with the steady fall in import duties each year, benefits under the 5% EPCG scheme have considerably reduced.

"Many exporters now find it unviable to import under the 5% EPCG scheme as they have to undertake an onerous obligation of exporting to the amount of eight times the duty saved on import of capital goods." According to FICCI, most exporters prefer to import capital goods by paying the full custom duty of 10% or 15%, the CVD and Special CVD. "As exporters

can claim CENVAT credit of CVD and Special CVD later on, the extra duty paid by an exporter under the normal channel is only 5-10%. But, exporter does not have to undertake onerous export obligation."

Besides this, there are other conditions making the EPCG scheme unpopular amongst exporters. In cases, where exporters are unable to meet export obligations within the stipulated period under the scheme, the cost of extension of export obligation period is very high.

FICCI has also sought import of spare parts of capital goods under the EPCG scheme, even if the related capital good is not imported under the scheme. As per the current foreign trade policy, import of spares under EPCG scheme is permitted only if the capital goods are also imported under the scheme. "However, imports of spare parts are in any case required for upgradation or maintenance of capital equipments," FICCI said.

Mr. K. Venkataramanan elected President, IICChE



Mr. K. Venkataramanan, President Operations & Member of the Board of Larsen & Toubro Ltd. (L&T) has been unanimously elected President, Indian Institute of Chemical Engineers (IICChE) for the year 2007.

His election was confirmed at the first Council meeting held at Bharuch on 2 Dec 2006, during the ChemCon 2006.

2007 marks the Diamond Jubilee of IICChE and the institute plans to make this year special with innovative programs all over the country.

SUSTAINABLE PLASTICS

'Holistic attitude needed to decide on issues of sustainability'

The National Chemical Laboratory (NCL), Pune, organised an international workshop on 'Sustainable Plastics in India and Asian Countries' under the aegis of ICS-UNIDO, based in Trieste (Italy), from 14-16 December, 2006. About 50 participants, comprising scientists and technologists, drawn from academia as well as industry, from 12 countries including USA, Germany, Thailand, Italy, India, Japan, Malaysia, Poland, Kuwait, Indonesia, Nepal and Iran attended the workshop.

The aim of the workshop was to establish a close cooperation between the academic and industrial sector, either through direct interaction or through the provision of services by national and regional R&D institutions.

Sustainability - the key to technological development

Sustainability of materials is the key to technological development. Sustainable plastics are an important factor in technological development, but also have issues in sustainability of raw materials, waste disposal problems etc. In this respect, the production of environment-friendly polymeric materials is the most logical option for management of plastics waste. Degradable plastics should replace conventional commodity plastics in those segments in which recycling is difficult or economically not feasible.

The workshop covered recent developments in the field of sustainable environmentally degradable polymers, espe-

cially those based on renewable resources, along with status reports of represented Asian countries. National and international standards and test methods were discussed, which take into account life-cycle analysis of the polymeric materials. Industries were represented by Reliance Industries (Mumbai), Haritanti (Chennai), and BIOS (Germany). Scientists from various countries spoke about the scientific developments in their countries in this field and on the problems of waste management, and the views of their society and government. The industrial participants elaborated on the technologies being adopted by them to overcome the problem of sustainability of raw materials and environmental issues.

There were several presentations from NCL regarding ongoing activities in the area of sustainable plastics from biomass.

200-mt of plastics in use

Prof. Emo Chiellini, University of Pisa (Italy), in his Keynote Address, presented an overview of environment-friendly, sustainable polymers, from natural as well as renewable sources. "About 200-mt of plastics are produced worldwide, and we cannot wish away plastics. But future developments must recognize the pros and cons of all materials."

Hybrid materials, he added, have a good scope for further development. Prof. S. Miertus, ICS-UNIDO, spoke about the goals and programs of ICSUNIDO in promoting environment-friendly polymers and cooperation amongst various countries.



Prof. Emo Chiellini delivering the keynote address

'Plastics have most favourable cost:benefit ratio'

In a paper on the benefits of plastics for mankind, Dr. U. Saroop, Reliance Industries, Mumbai, observed that plastics present the most favorable cost benefit ratio amongst comparable materials. "Plastics consume lesser energy than paper for manufacturing and emit lesser toxic gas emissions."

He added that plastics help improve the quality of life by helping preserve land, water and forest resources; being inert materials they are non-polluting, and hence integral to sustainable development.

He also stressed the need for a holistic view of all materials.

Dr. A.J. Varma, Polymer Science and Engineering Division, NCL and convener of the workshop presented NCL's work on the conversion of sugarcane bagasse to value-added cellulose and cellulose acetate plastics, lignin and hemicellulose. He also elaborated on the wide range of chemicals that can be obtained from cellulose and the use of starch as a

platform for range of chemicals. Mr. Sanjay Nene, NCL described the NCL work on conversion of sugarcane juice to lactic acid and poly(lactic acid), a promising plastic material for packaging applications.

Developments in Europe

Dr. Katerina Moraweitz, Biopolymer Technologies (BIOP), Germany, gave an interesting presentation on the industrial developments in Europe on various types of bioplastics such as *Ecoflex*, *Mater-Bi*, *Bioplast*, *Bionelle* etc., and elaborated on a new material *Biopar* based on potato starch mixed with a synthetic biodegradable plastic *Ecoflex*, which is a aliphatic polyester.

She exhibited samples of the products, which showed their immense potential as packaging materials for shopping bags, garbage bags, mulch films, geotextiles and molded pots and trays, if the economics become more attractive.

Dr. K. Suchiva, Mahidol University (Bangkok, Thailand) spoke about the programs in collaboration with ICS-UNIDO,

and about the technology roadmap for bio-based materials based on starch, chitin, jute, coir, etc. from 2006 onwards.

Dr. Hitoshi Takagi, Tokushima University (Japan) described his researches into 'green composites' based on natural fiber reinforcements, and showed that such products can even go into automobiles and mobile phones.

Dr. S. Sivaram, Director, NCL, spoke of the need to develop biomass resources for plastics, polymers, chemicals and fuel. He said that carbohydrates can be the new oil for generations to come.

Dr. Ramani Narayan, Michigan State University, USA gave a thorough exposition of the science behind setting standard testing protocols for biodegradable and compostable plastics.

There were several other talks on the national programs of various countries like Iran, Nepal, Poland, Kuwait, etc.

Round table discussion

The workshop culminated with a round table session to make firm conclusions and suggestions for further developing this field and enhancing cooperation between various participating countries. Strong interest was shown by all participating countries in further developing materials from renewable resources and waste biomass, and by the use of biotechnology, in addition to improving current systems. It was also agreed that a holistic attitude has to prevail in deciding the issues of sustainability and environment degradation.

The workshop also enabled formation of a network of scientists under the aegis of ICS-UNIDO who can discuss and cooperate with each other in bringing the results of their work into useful, sustainable, and environment-friendly products.



Prof. S. Miertus speaking on the goals of ICS-UNIDO

ETHANOL

Praj bags Rs. 170-crore orders from US

Praj Industries has contracted the second phase of orders from Cilion for its Imperial County project and from Missouri Valley Energy for its Meckling, South Dakota project. The company has also bagged the first order from the sugarcane belt of the US; the total value of these three orders is Rs. 170-crore.



Mr. Shashank Inamdar, Managing Director, said that for Cilion and Missouri, the first phase had involved the supply of technology package, while the second phase dealt with equipment supply. He

added that the Imperial County project is the third project for Praj from the Cilion Group. Cilion will produce 110-mgpa (million gallons per annum) ethanol from this facility. These second phase orders have been received during the last quarter of 2006.

Mr. Inamdar said that the order from Missouri Valley for a 55-mgpa ethanol plant gave it the entry into corn farmer's co-operative sector in the US mid-west. Missouri Valley Energy is promoted by Glacial Lake Energy, which operates an ethanol plant in the mid-

west and is currently engaged in the construction of three greenfield ethanol facilities. Mr. Inamdar also said that it has bagged an order from the sugarcane belt of the US. Louisiana Green Fuels has awarded a contract to Praj for an integrated 23-mgpa ethanol plant using sugarcane based feedstock. This plant will be located at Lacassine in Louisiana, adjacent to an existing cane syrup mill.

In the very first year of entry into the US, Praj has achieved sizable business resulting in capacity addition in the region of 700-mgpa by way of Praj technology and equipment, Mr Inamdar said.

ECONOMIC TRENDS

India manufacturing growth slows: PMI

India's manufacturing sector expanded at its slowest pace in five months in December as a slew of monetary tightening measures started to bite, dampening blistering demand and easing price pressures.

The seasonally adjusted Purchasing Managers' Index (PMI) fell to 56.6 in December from 58.9 in November as the strong momentum of previous months slackened due to slower domestic and external demand.

The PMI, compiled by British-based NTC research and sponsored by ABN AMRO Bank, tracks changes in manufacturing business conditions by polling 500 companies each month on output, orders, employment and prices.

PMI readings above 50.0 signal an improvement in business conditions while readings below 50.0 show a dete-

rioration. In October, the index showed manufacturing expanding at its fastest pace since the survey was introduced in April 2005.

India's economy grew an annual 9.1% in the first half of the fiscal year that ends in March, and the Reserve Bank of India (RBI) has been raising interest rates throughout the year to keep price pressures in check. Last month, it announced an increase in the amount of funds banks have to keep on deposit at the central bank.

The PMI output index fell to its lowest in five months at 59.5 in December from 63.9 in November, while new orders dropped to 61.7 from 65.5 in November as the pace of exports cooled. The export order index fell to 54.1 in December from 58.4 in the previous month, while backlogs of work rose at their weakest pace since April.

Softer inflation

The survey showed input price inflation had softened. The seasonally adjusted input price index fell to 55.1 in December from 58.9 in the previous month. "The sharp fall in the rate of average input cost inflation for firms in December is encouraging and reflects the impact of moderation in global commodity prices, particularly oil," said Abheek Barua, chief economist, India, at ABN AMRO Bank.

The output price index fell to 51.9 in December from 52.1, signalling a moderating rate of factory gate price inflation. India's annual inflation rate, based on wholesale prices, is running above 5 per cent and is forecast to top 6 per cent in early January, beyond the central bank's 5.0-5.5 per cent range for the end of the fiscal year in March 2007.

ENVIRONMENTAL IMPACT

Tirupur dyeing units' strike may hit knitwear exports

Exports of cotton knitwear may severely be affected if the strike in the dyeing/bleaching units in Tirupur, which started continues for a further one week. According to Tirupur Exporters Association (TEA) Executive Secretary, Mr. S Sakhivel the Tirupur industrial cluster exported knitted garments worth Rs. 8,000-crore during the last fiscal, which accounts for 75% of the total exports. Mr. Sakhivel said the strike would have a negative impact on knitwear exports.

The dyeing/bleaching units decided to down shutters from the first day of the New Year following a Madras High Court order that imposed a fine of Rs. 0.06 per litre of effluent discharged into the Noyyal River, which is the prime irrigation source in this region. Earlier, the pollution control board of the state had ordered the units to install reverse osmosis plants to attain zero effluent discharge. The units were reportedly discharging wastewater without any proper treatment into the Noyyal river. According to the HC order, the dyeing units are required to pay Rs. 70-80 lakh as fine every day for discharging effluents in the



river. Mr. Sakhivel said that entrepreneurs have invested Rs. 25,000-crore in nearly 3,000 units comprising stitching, embroidery, labelling, packaging, buttoning and printing and employing around five lakh people. Only after dyeing, he said, other units could bring out the finished product. If the strike continues for a further one week, he said, the production at all knitwear units would be severely jeopardized, he added. In addition, he said that the current order book position of knitwear export firms exceeds Rs. 1,000-crore, which has to be dispatched through January and February. "At this stage, it is not sure whether we could supply goods against already accepted orders and the importers may also not place further orders," he added.

Mr. Sakhivel warned, as importers might well turn to other countries, India will lose its lucrative overseas market. The Tirupur dyers and exporters associations have convened emergency meetings and shot memoranda to the Prime Minister and the state government to find a suitable solution.

PRE-BUDGET
RECOMMENDATIONS**FICCI moots R&D fund for food processing sector**

In its pre-Budget submission on the food processing sector to the Revenue Secretary, Mr K.M. Chandrasekhar, FICCI has suggested that an R&D fund be created for innovative products, particularly export market focused products. Similarly, the fund should also be available for market studies for product development in the new emerging markets. The Ministry of Commerce and Industry and the Ministry of Science and Technology should make necessary efforts to bring inventions related to the agri/food sector developed by other countries into India, said the chamber. Currently, organisations addressing the educational and R&D requirements in food processing are too few and there is a need to augment their efforts.

Food engineering professionals need to develop sufficient awareness and relevant principles of nutrition, preservation and storage techniques, processing unit operations, bio-processing and waste management, among others. Research to generate and choose technologies on food products that are potentially used as industrial raw material need to be undertaken.

FEEDSTOCK

FACT begins ammonia imports

As part of cost reduction measures, the public sector FACT has started using imported ammonia for the production of fertilisers. The first consignment of imported ammonia (7,200-tons) from Saudi Arabia was unloaded to the storage tank at Willingdon Island recently. The ammonia storage facility at Kochi port was re-commissioned and better instrument control systems were installed there. The present cost of imported ammonia is lower than that of naphtha-based ammonia produced here. The imported ammonia will be used for the production of *Factomfos* at FACT's Kochi division. It will be brought to Ambalamedu using railway wagons. The company is expecting more flexibility and better profitability from the use of imported ammonia, along with the indigenously produced one, a company release said.

FEEDSTOCK

GAIL disputes investment in ONGC's Dahej extraction plant

A dispute is brewing between the country's largest oil and gas players — upstream giant Oil and Natural Gas Corporation (ONGC) and gas transportation major GAIL India Ltd. The bone of contention is ONGC's upcoming methane-propane (C2-C3) extraction plant at Dahej, which GAIL wants to be "reviewed".

C2-C3 is used as feedstock for gas cracker plants and for LPG production. GAIL — the owner and operator of the country's largest gas transmission network, 5,470 km of pipeline — is of the view that the ONGC unit would starve its gas processing plants along the 2,800 km long Hazira-Bijaipur-Jagdishpur (HBJ) pipeline of "rich" gas, making them non-performing assets in the long-term. GAIL has spent Rs. 4,000 crore on the projects. "If ONGC sets up the C2-C3 extraction unit at Dahej, the lack of rich gas

will force closure of our processing plants along the HBJ pipeline," said a GAIL official.

ONGC Chairman and Managing Director, Mr. R.S. Sharma said work on the Dahej plant was almost 50% complete and it was too late to pull out. He added ONGC had already conveyed the message to both the ministry and GAIL. "GAIL should've decided on sources of feedstock before they set up their plants," he said.

On an appeal from GAIL, the Oil Ministry is believed to have approached ONGC on the matter, though it had earlier given the go-ahead for the project to ONGC.

ONGC's C2-C3 extraction project at Dahej is expected to go onstream in 2009. The LNG is originally imported from Qatar's

Ras Gas and regassified at Dahej at a plant operated by Petronet LNG, which is jointly promoted by GAIL, ONGC, Indian Oil Corporation and Bharat Petroleum Corporation. The regassified gas, rich in C2 and C3, is currently pumped into the Dahej-Bijaipur pipeline which feeds the processing and petrochemical plants along the HBJ pipeline. The Dahej-Bijaipur pipeline connects with the HBJ line at Bijaipur.

When the issue came up before the Parliamentary Committee on Public Undertakings, the Oil Ministry defended its decision to allow ONGC to set up the C2-C3 extraction unit at Dahej by saying the upstream major was the only promoter which did not have marketing rights for the gas from Petronet's Dahej plant. The ministry further said ONGC would also pay 15 cents per mBtu as royalty.

MILESTONE

R.A. Mashelkar retires as DG, CSIR

Dr. R.A. Mashelkar, FRS, Director General, CSIR laid down his office on 31 December, after a distinguished tenure of 11 years. Under his vibrant leadership, CSIR turned into a global R&D platform. He transformed CSIR into a user focused and performance driven R&D organization that emphasized innovation-centered development. During his tenure, CSIR's



turnaround has received accolades from all quarters — be it business houses, management experts, eminent scientists or political leadership.

Winner of around 50 National and International Awards, Dr. Mashelkar has been well known for spearheading a new thinking in the direction of science and technology.

He chaired about 12 high power committees, set up to look into diverse issues of national importance. He will also be known for championing the cause of protection of traditional knowledge in India by fighting the turmeric and *Basmati* battles,

with set a new paradigm in the protection of developing world's traditional knowledge heritage. Dr. Mashelkar is only the third Indian engineer to have been elected as Fellow of Royal Society (FRS), London, in the 20th Century. He was elected Foreign Fellow of US National Academy of Science (2005), only the eighth Indian scientist in over 140 years to have been so honoured. He was the first scientist from Asia to have won the 'Stars of Asia Award', which was presented by George Bush (Sr), former US President.

Over 25 universities have honoured him with honorary doctorates, which include Universities of London, Salford, Pretoria, Wisconsin and Delhi.

ENHANCING EXPORTS

Export support system needs to be beefed up: FICCI

Even as the exporting community has expressed optimism on achieving the revised export target of US\$125-bn in the current fiscal (2006-07), bulk of them feel that this target can be surpassed provided certain deficiencies in the support system are addressed. These include, amongst others, maintaining an exchange rate range favorable to exporters, moderating the taxes at various levels, improving physical infrastructure, reconsidering the scrapped schemes like the Target Plus scheme and checking the frequent fluctuations in the prices of raw materials. This assessment has been made by FICCI, based on the feedback received from exporters representing a range sectors. A majority of the exporters feel that rising input costs is a serious matter and that it needs to be addressed by the Indian government as it has started to weaken the competitiveness of Indian exporters. Some exporters have even reported fluctuations in the prices of raw material preventing them from taking large orders. The exporters have demanded that the government immediately implement the promise of abolishing the export cess.

The participating companies have also questioned the need to route imports through the State Trading Corporation even when they have the privilege of advance licenses. The restriction placed on advance license holders in which they cannot import certain materials directly and have to necessarily go through STC for these even when the importables are to be used for exports should be removed (restriction under clause 4.1.13 of the FTP).

The exporters have also called for moderating the port charges such as inland haulage charges. Some of the exporters have suggested minimizing the margins for financing pre-shipment and post-

shipment credits and to reduce the response time taken for providing such credit.

Several exporters have complained that there is a dearth of information in the Indian embassies abroad and that their requests for information related to market structure, distribution channels, legal aspects for promoting business, details of reliable distributors etc are not adequately met. They have strongly suggested that the Indian embassies in foreign countries should become facilitation centers for promoting Indian businesses. For this the Indian embassies should maintain a repository of updated trade and commercial data about the country and should also be in constant touch with the local trade associations.

Help combat tariff and non-tariff barriers

The exporters also feel that the Government should take initiative in combating the problems that has to do with the tariff and non-tariff barriers. The respondents mentioned that as India reduces its tariff rates, it should insist other countries to also lower their tariff rates.

Further, the government should strongly take up cases where the gains from tariff reduction are nullified by imposition of non-tariff barriers. As an example of non-tariff barriers faced by Indian exporters, it was pointed out that some countries insist on attaching lab clearance certificates, radioactivity certificates and have stringent labeling norms before imports are allowed into their territory.

Problems at sea ports

Regarding problems faced at the sea ports used for inbound and outbound shipments, a frequent complaint that was made by the respondents related to ex-

treme congestion at the ports / yards and the containers remaining unattended for days together. The clearance of exports / imports is generally delayed due to frequent congestion at ports for want of sufficient space / equipments / allied infrastructure. The unusual delay in exports results in poor reputation of Indian exporters in the international market and also adds to their operational costs. Exporters suggest that congestion at the ports be tackled on a war footing for sustaining the growth in exports. Further, agencies responsible for operating the yards should ensure that cranes and vehicles are available to all the exporters at all times. It has been suggested to have more container terminals and to minimize the birthing limitations at ports.

It has also been pointed out that there are times when there is a severe lack of space aboard ships that overbook cargo through multiple slot agents. As a result, consignments booked on a particular ship are shutout, either for want of space or for captain's preference for specific cargo. This upsets delivery schedules, leading to either cancellation of contracts or payment of compensation to importing parties.

Some of the participating companies have pointed out that vessels are shut in a very *ad hoc* manner and, as a result, several times the containers are not lifted.

There have also been incidents of theft and pilferage at the ports due to poor security. As a result of such incidents, the relation of Indian exporters with overseas buyers gets strained so much so that at times all future orders are cancelled. It is suggested that CCTVs should be installed at all warehouses and ports and that the cargo should be monitored by skilled and responsible security officials.