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EMERGENCE OF INDIAN MULTINATIONALS

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1. World over the focus is shifting to setting up facilities for competitive and high value added production and services. This is driving organizations in various countries to undertake technology upgradation and modernization in their production processes and services so as to develop state-of-the-art technological capabilities for survival and growth, in both, domestic and the export markets. With the onset of rapid globalization, organizations are relying more and more on technology acquisition, adaptation and absorption, besides indigenous technology development. The technology trade business demands that the countries spread awareness about their own technological strengths and also, explore foreign markets for exports as well as technology acquisitions.

2. India has a large pool of qualified and experienced manpower and has developed strong industrial and technological capabilities in some sectors, which could be shared with other developing countries for mutual advantages. India's S&T programmes are designed in such a way that they encourage international co-operation. S&T Agreements have been signed with a number of countries and collaborative work is going on in a number of areas of common interest such as energy security, disaster mitigation, discovery of new medicines for fatal diseases, overcoming water scarcity, easier and cheaper connectivity, etc. It has been India's endeavour to reach out to anyone in the world and work towards finding scientific solutions to the common problems being faced by the people, the world over.

3. The national expenditure on Research and Development (R&D) has increased from Rs 89,136.1 million in 1996-97 to Rs 216,395.8 million in 2004-05. R&D expenditure as percentage of GNP in 2002-03 was 0.80 per cent. The share of various sectors in the total R&D expenditure for the year 2002-03 was to the tune of – central government (62.6 per cent), public sector industry (4.5 per cent), private sector (20.3 per cent), state governments (8.5 per cent), and the higher education (4.1 per cent). Twelve major scientific agencies accounted for 84.1 per cent of the R&D expenditure incurred by Central Government in 2002-03.

4. The total investment on R&D by the industrial sector has increased from Rs 4,505.6 million in 1985-86 to Rs 44,571.9 million in 2002-03 (0.47 per cent of their sales turnover). The number of R&D units involved were 1,477 in the private sector and 93 in the public/joint sector besides 248 Scientific and Industrial Research Organizations (SIROs).

5. India's merchandize exports had touched US$102 billion during 2005-06 and the target for the year 2006-07 is US$126 billion. According to *World Trade Report 2006*, India's share in world merchandise exports inched up to 0.9 per cent in calendar year 2005, during which India recorded US$90 billion out of total global exports of US$10,121 billion. The technology intensive exports roughly constitute around 25 per cent of the merchandize exports. While India contributes to 0.9 per cent of world merchandize exports, in terms of high, medium and low technology exports, its contributions are merely 0.15 per cent, 0.3 per cent and 1.9 per cent respectively. Services exports stood at a level of around US$67 billion during 2005-06. The technology intensive exports have been growing at an average growth rate of around 25 per cent over the last three years compared to the growth rate of around 20 per cent of merchandize exports. The services exports have been growing even faster.

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6. Globalization has become an Imperative for Indian Companies

When the Indian economy liberalized in the early 1990s, with the licensing system for setting up industries getting dismantled and foreign direct investment being encouraged, it was greatly feared that Indian companies would not be able to match up to the marketing and financial prowess of MNCs. More than a decade later, Corporate India has shown that it not only has the capabilities to face up to the might of the MNCs who have entered India, but also challenge their position in international markets. Indian companies have been spurred to cross domestic boundaries and consider entry into new products for maintaining their market position. This is most evident in the case of Aurobindo Pharma, which started its transition from a single product, domestic player in mid-1990s to become a multiproduct global player today. Severe margin pressures on its primary product semi-synthetic penicillin forced it to look out for higher margin products and penetrate into new geographies. The company added newer products like cephalosporins, life style drugs and anti-HIV drugs to its portfolio and got its manufacturing facilities approved by several regulatory authorities to give a thrust to exports. Today high growth markets (like Brazil and China) and regulated markets (like US, Canada and Europe) contribute more than 50 per cent to total revenues of the company. It is not only the private sector, but also the public sector, which has been aggressively looking at globalization opportunities. An interesting example is that of Indian Oil, which was protected historically by regulations preventing entry of private players to become a dominant player in the downstream refining and marketing sector in India. Post liberalization, competition from private players in the domestic market has forced the company to look for revenues from international markets. To this effect, the company has begun to pursue global diversification by targeting exploration opportunities and providing technical services to companies in the Middle East as well as marketing its products across Asia.

7. Indian Companies have followed a mix of Strategies to Establish a Global Footprint

The attitudinal change to turn global has led to the emergence of many Indian MNCs who have overcome geographic boundaries by adopting a mix of business strategies. Most commonly, companies have used the route of greenfield investments or acquisitions overseas or a combination of both. Others have made their exports more cost competitive *vis-a-vis* global peers. A few have entered into technical tie-ups with global partners to build capabilities and then leverage them in the international markets. Several companies have ramped up their scale of operations to a level essential for a global foray.

7.1 Making Investments in Greenfield Venture or Acquisitions

For those companies concentrating on making investments outside India, a mix of organic and inorganic growth has been the most common route towards globalization. The industry leading on this front is the IT industry, which has put India on the global map.TCS, with 169 offices in 35 countries world-wide, is not only dominant in English speaking countries, but also has a strong presence in the Spanish and Portuguese speaking regions of the world. Its strategic acquisitions of a banking and BPO business in Chile, and a banking solutions company in Australia, have helped it to gain complementary skills and geographic presence. Wipro, which commenced operations in the vegetable oils business, today

has a presence across the largest number of verticals in the IT industry. What has set Wipro apart from its peers is its aggressive acquisition strategy to grow its technology and industry capabilities. The company, which sees inorganic growth as a key to expanding its business, has made several acquisitions since 2002 and is looking for more opportunities to build scale. Old economy industries like auto-ancillaries, paints, pharmaceuticals, agro-chemicals, etc. are also part of this trend. Sundram Fasteners, the first Indian engineering company to set up a greenfield venture in China to manufacture high tensile fasteners, has made acquisitions in Europe to establish a strong position in developed markets and gain access to blue-chip customers. Another company in the automotive space, Amtek Auto has followed a similar strategy for global growth. Driven by its vision to attain proximity to customers and reduce lead times for delivery, it has set up a ring gear unit in Detroit, the global hub of automotive manufacturing, and has made strategic acquisitions in the US, UK and Germany. Asian Paints, one of the top ten decorative paint companies in the world, has pursued a globalization strategy of entering fast growing markets with robust demand and low per capita consumption of paints. In the initial years it focused on forming joint ventures with existing players in growth markets. Later its focus shifted to acquisitions, the most important being that of Berger International, which gave it access to the growing markets in Asia, Africa and the Caribbean countries. Driven by its global vision, the company today services customers across 65 countries and has manufacturing facilities across 22 countries. United Phosphorus has successfully transformed itself from a domestic insecticide player to a global generic agrochemicals player, through a string of acquisitions of companies and products. Crucial acquisitions of European companies have helped it to establish a strong foothold in the highly competitive developed markets that are dominated by giants like Dow Chemicals, Dupont, BASF, etc. VSNL, one of India's largest telecom companies, has acquired Teleglobe International Holdings and Tyco Global Network in its drive to offer global connectivity and confirm its position as a leading global telecom service provider. In the pharma space, Nicholas Piramal, which has positioned itself as a high-end contract manufacturer for bulk drugs and formulations for renowned global companies, has made a strategic acquisition of Avecia Pharmaceuticals (UK), which has

CRUCIAL ACQUISITIONS MADE BY INDIAN COMPANIES

Amtek Auto	Zelter GmbH, Germany; GWK Group, UK; Lloyds, Brierly Hill, UK; Midwest Mfg. Co., USA
Asian Paints	Delmege Forsyth, Sri Lanka; Pacific Paints, Australia; Berger International, SCIB Chemical, Egypt; Taubmans Paints, Fiji
Aurobindo Pharma	Milpharm, UK
Bharat Forge	CDP Aluminiumtechnik, Germany; Federal Forge, USA; Imatra Forging Group, Sweden and Scotland
Dr Reddy's Labs	Roche's API business in Mexico; Betapharm Group, Germany
Glenmark Pharma	Laboratorios Klinger, Brazil; Servycal, S.A., Argentina and Bouwer Bartlett, South Africa
Indian Hotels	Hotels in Zambia and Australia
M&M	Jiangling Tractor Company, China
Marico	Sundari LLC, USA
Motherson Sumi	Reiner Präzision GmbH and G+S Kunststofftechnik GmbH in Germany
Nicholas Piramal	Rhodia's IA in UK and India; Avecia, UK
Satyam Computer	Citisoft, UK
Sterlite Industries	Monte Cello Corporation, Netherlands, the holding company of copper mines in Australia
Sundram Fasteners	Dana Spicer, UK; Peiner Umformtechnik GmbH, Germany
Tata Motors	Daewoo Commercial Vehicles, Korea; Hispano Carrocera, Spain
Tata Steel	NatSteel Asia
Tata Tea	Tetley, Good Earth, JEM_A, Glaceau
TCS	Comicrom, Chile; FNS, Australia
United Phosphorus	MTM Agrochem, UK; Agrodan, Denmark; Midland Fumigants, Europe; Cequisa, Spain; Shaw Wallace Agrochem, India; Advanta (seed business), Netherlands
VSNL	Teleglobe International Holdings, Tyco Global Network
Wipro	Spectramind, GE's healthcare software arm, global energy practice of American Management Systems, Nervewire, US; Ericsson's Indian R&D arm.

given it access to new clients as well as critical technologies. Prior to this, its acquisition of Rhodia's inhalations anaesthetics business, giving it access to technologies and state-of-the-art manufacturing facilities, has helped to make its contract manufacturing business stronger. Wockhardt, a large biotech products company, has established marketing subsidiaries in the large market of the US and the growing market of Brazil. Acquisition of three companies in Europe has helped it to establish a strong position in the region, especially UK. The hotel industry is not far behind in this trend. Indian Hotels, which operates the largest hotel chain in India, has nearly 16 per cent of its revenues coming from international operations. While management contracts have been the preferred route for the company to establish a global presence, it has not shied from making strategic acquisitions of hotel properties in growth markets like Australia and Zambia whenever the opportunity arose.

7.2 Making Exports Cost Competitive in Relation to Global Peers

For some players having global plans, lowering cost of production *vis-a-vis* key competitors has been a strategy for establishing a global footprint through exports. For instance, Tata Steel, representing India's largest, integrated steel plant in the private sector, is firmly entrenched as a low cost producer among global steel majors. It has leveraged on captive raw material resources in the form of in-house mines and collieries. This has been augmented with rightsizing of its employees, rise in employee productivity through training and modernization and a strategy of split-location manufacturing of producing semi-finished products in proximity to raw materials and by finishing them at locations which are near to markets. Tata Motors, India's largest manufacturer of commercial vehicles and second largest manufacturer of passenger cars, began exports from India by leveraging its low-cost manufacturing base, a result of its rationalized vendor base improvements in its supply chain and developing low-cost product development capabilities. Gokaldas Exports, the largest apparel exporter from India, has leveraged the advantage of low labour costs in India to export to large retailers and brands across the world and has nearly its entire turnover coming from international markets. Its supply chain is also global, with nearly three-fourths of its raw material requirements being imported.

7.3 Forming Alliances with International Companies

A few companies, whether in the manufacturing sector or the services sector, have formed alliances with global companies for acquiring technology and accessing customers in global markets. Satyam Computer, which has grown from a mere domestic IT services company to becoming a global player, has nurtured strategic alliances with over 50 technology leaders, wherein Satyam uses the technology, goes to market with these technology leaders, or provides services based on their technologies. Thermax, which has grown from a small boiler company to a large, multi-divisional energy and environment solutions provider, has formed alliances with global players of the likes of Babcock & Wilcox, Honeywell and Kawasaki to access key markets and technology. Larsen & Toubro, the largest engineering and construction company in India, has collaborated with several international engineering companies to be able to give impetus to the solutions provided to its clients globally. Some of its prominent global partners include Chiyoda Corporation of Japan, Sargent & Lundy LLC, USA, Ramboll A/S of Denmark and Voith Paper, Germany. In the manufacturing sector, Motherson Sumi Systems Limited (MSSL), India's largest producer of integrated wiring harnesses, has built its strong engineering skills and machining capabilities through joint ventures with several international tier-1 auto component companies. MSSL acquires technology from these companies for manufacturing, as a result of which it is in a position to provide end-to-end solutions to its global customers, including its technology partners. Rico Auto, one of the largest full service supplier of auto components and assembly in India, has grown mainly through alliances and joint ventures with global companies. Its partners include FCC Co. Japan (for clutch assemblies for two-wheelers and automobiles and flywheels for automobiles), Pierburg, Germany (for water pumps and oil pumps) and Teksid Aluminium, Italy (for aluminium engine blocks and heads).

Mahindra & Mahindra (M&M), market leader in India in multi-utility vehicles and tractors, has a strategic technical partnership with International Truck and Engine Corporation to manufacture and market vehicles in India as well as exports, besides providing components and engineering services to International's North American operations. Its joint venture with Jiangling Motor Company Group for tractors has given it access to the Chinese market and other export markets, besides giving it an opportunity to source components from China. Ashok Leyland, whose exports of commercial vehicles account for nearly 50 per cent of commercial vehicles exports from India, has a global presence across 30 countries in Asia, Africa and the Middle East. It has fostered a tradition of technological leadership achieved through a combination of robust in-house R&D and technology tie-ups with international leaders – Hino

Motors (Japan) for engines, ZF (Germany) for gearboxes and Dana Corporation (USA) for axles.

7.4 Ramp-up in Scale of Operations

Another way in which companies have effectively competed in global markets has been by achieving scale by investing in global size capacities. This is most evident in the case of Moser Baer, the second largest optical media manufacturer in the world, which has scaled capacity over the last few years to cater to large global orders. Today it is a supplier-of-choice to all the top twelve global optical media brands and exports constitute nearly three-fourths of its total revenues. Bharat Forge, the largest exporter of auto components from India and the second largest forging company in the world, has continuously relied on creating capacities in India and abroad, with a view to cater to the quality as well as quantity requirements of its global customers. Reliance Industries, the largest private sector business house in India having activities spanning exploration and production of oil and gas, refining and marketing of petrochemicals and textiles, has created world-class capacities across its entire product portfolio. Today it is the world's largest producer of PSF and PFY, third largest producer of paraxylene, third largest producer of MEG and sixth largest producer of PTA. Its oil refinery in Gujarat is the third largest in the world. Similarly Arvind Mills, which is today the third largest denim manufacturer in the world, has invested heavily in increasing capacity for denim fabric and has a vertically integrated denim plant that ranks amongst the most modern in the world. In the media and entertainment industry, Zee Telefilms, revolutionized the satellite television industry in India before undertaking its global initiatives. It today caters to more than one million subscribers outside India through its large scale of operations comprising its bouquet of 22 channels that are beamed across 120 countries.

7.5 Leveraging International Capital Markets

Several companies growing on the globalization platform have leveraged international capital markets to fund their globalization activities, a case in point being Sterlite Industries, the flagship company of the Vedanta Resources Plc. Sterlite has gained from the money raised by Vedanta through its IPO on the LSE, this being the first primary listing by an Indian company on the LSE. Its success in the later years in tapping the global financial markets has paved the way for it to position itself as a major player in the global non-ferrous metals market through acquisitions and capacity expansions targeted at exports.

8. Globalization History of Indian Companies has Lessons to Offer those Who are Planning to Embark on a Similar Path

The experiences from the growth path of companies from an emerging economy to global ones has several lessons to offer to those looking for a similar growth. This path is not an easy one and organizations need to translate their homegrown capabilities and the talent of their people to cross geographic boundaries. One key learning from the experience of Indian MNCs is that companies need to build a core competency and possibly avenues to generate internal accruals or external finances for funding globalization plans. There are examples of several companies that have first built a robust and sustainable domestic business model by honing it through continuous experimentation in the home market and thus creating a core competency. This has provided for an ability to build difficult-to-imitate capabilities to achieve global standards of competitiveness. This has been ably supported by the willingness of their promoters and management to stay invested in their new businesses for a longer duration of time. For instance, Titan, India's largest watch manufacturer, first developed a formidable distribution network and superior designing capabilities in India, which were used to compete with the designing capabilities of players in the European market. The domestic business also helped in staying invested in the global operations for a longer time. Voltas, today enjoys the distinction of being the country's premier exporter of electro-mechanical projects, with a footprint in over thirty countries. This is mainly a result of its experience in India built across varied applications, which is being leveraged for several prestigious mandates as an EPC contractor across Asia. Similarly, ITC, India's largest cigarette producer and a diversified FMCG company, has anchored on its core competencies of strong distribution reach, superior brand building capabilities and effective supply chain management. Its global initiatives, ranging from exports of cigarettes to agri-products to paper and packaging, have been built on the foundation of its backward integration linkages with Indian farmers for procurement of inputs. Marico, another well-known FMCG company, has successfully created brands in the largely commodity-oriented business of hair oils and edible oils. These brands have been leveraged to develop a significant franchise across countries, including the US, Middle East, Asia and Australia by targeting the Indian diaspora. In the pharma space, Dr Reddy's Laboratories, one of India's largest pharmaceutical companies, has built a core competency in R&D by investing heavily in research and drug discovery. It has moved from being a seller of bulk actives in India to an exporter of

difficult-to-manufacture bulk actives to highly regulated developed markets. Another pharma company, Glenmark, has leveraged its well integrated business model in India covering activities ranging from drug discovery to development of API to marketing of formulations to an increasing number of markets, both regulated as well as unregulated.

Last, but not the least, to support its globalization activities, it is also imperative for a company to manage a team of talented executives with international experience, who are the repository of its core skills and organizational culture and are given the independence to take decisions in diverse markets. For instance, Dabur, whose international operations are handled by its subsidiary Dabur International in Dubai, has its own independent team to oversee all global activities and monitor its manufacturing subsidiaries in other countries. Tata Tea, which became the second largest branded tea company in the world, after the acquisition of Tetley, successfully created a structure that facilitated joint working of its employees in India and abroad. A well-thought through process was adopted for the integration of the two companies by identifying the common beliefs between them. A steering committee was created with several task forces reporting to it and comprising managers of both companies. Some teams were given timebound tasks while others worked on unification of some processes. This structure was converted into a Supervisory Board, reporting to the Board of Tata Tea, and taking decisions on matters concerning both companies. It was supported by four integration teams, with people from both companies and having an agenda to drive geographical and product category growth, improve operational performance and drive common business processes. For Infosys, the second largest foreign exchange earner in the software services business in India, the most important factor responsible for its success has been its ability to attract, develop and retain outstanding human capital. Given the nature of its business, the company competes on the strength of its people and has invested heavily in recruitment and training. Some of its pioneering initiatives include a residential Global Education Centre for training, which is the largest corporate training centre in the world capable of training 4,500 people at a time, and its initiative Campus Connect, a nation-wide programme which focuses on aligning the needs of colleges, faculty and students with industry needs. Its Employee Stock Offer Plan has been an important factor to attract and retain high quality staff in India as well as in the talent competitive markets of Europe and the US. To build a strong senior management, the company's Infosys Leadership Institute facilitates the development of a cadre of global leaders with the competencies required to steer the company into the future.

9. The Trend towards Globalization of Indian Companies is Expected to Strengthen Further

As India makes rapid strides in its economic growth, it is increasingly becoming an attractive destination for international companies, thus heating up the competition in the domestic market. Indian companies cannot ignore the fact that in order to face this competition, they not only have to emerge stronger in the domestic market, but also challenge these companies in their international turf. There are several instances of Indian companies who have become MNCs in their own right through sizeable investments made abroad or becoming suppliers of choice for global companies by leveraging lower costs in India. This trend will increasingly extend to the next rung of companies who are looking at aggressive growth, with overseas acquisitions being the most preferred route for this. These companies realize that it is essential for them to achieve global size and competitiveness to establish a broader market position and to sustain a strong position in the global markets. To achieve global size they need to look at growth opportunities outside the domestic borders. Whether it is manufacturing companies that are adding relationships and customers by transferring work into India, or software firms that are strengthening their domain capabilities and filling in gaps in their business portfolios, the message is very clear for all companies. In order to succeed they need to expand their global reach by developing vision, capability and management bandwidth.

Also, the Indian industry must be on the lookout for emerging trade opportunities from various regions in the world such as Africa, ASEAN, CIS and Latin America.

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KALEIDOSCOPE OF INDIA'S OVERSEAS BUSINESS

ENGINEERING

Punj Lloyd Bags Rs 1,348-cr Order from Libyan Co.

ENGINEERING and construction company Punj Lloyd Ltd (PLL) has bagged an order worth over Rs 1,348 crore ($290 million) from Libya's Sirte Oil Company for pipeline projects.

The order, the single largest ever contract bid won by PLL, is to be executed on an EPC (engineering procurement and construction) basis and comprises two main contracts. The first contract, worth over Rs 692 crore ($149 million) involves the construction of the main 98.4 km pipeline from Tripoli to Melita. It also entails the construction of a 21-km branch pipeline to the Zawia power plant, the company said. The work, slated for completion in 22 months, also involves the construction of gas pressure reducing and metering stations and a compressor station at Melita. Under the second contract, worth over Rs 655 crore ($141 million), the company would complete a 157-km "El Khoms-Tripoli" pipeline.

Punj Lloyd said it would also undertake civil, mechanical, electrical and instrumentation work on the gas pressure reducing, metering and compressor stations at Sidra and Wachkah. This project is to be completed in 18 months.

(*The Hindu Business Line*, 11&22 August 2006)

M&M Expands Overseas Business

MAHINDRA & MAHINDRA (M&M) has entered into a contract with the Government of Gambia to supply tractors along with matching implements. The company is going to set up a satellite plant that will assemble these tractors and to offer sales and after-sales service. It is the first commercial venture that the tractor company has signed with an African country.

The company has also expanded its tractor business in China (acquiring 80 per cent stake in Jiangling Motors to set up Mahindra China Tractor), set up a branch office in Australia and launched its East European operations starting with Serbia and Montenegro.

Expanding their automobile business on the global front, the M&M has introduced the Scorpio range in Sri Lanka. Besides the Scorpio range, the company has plans to introduce the Bolero pick-up double cab and the Bolero Load Carrier. These models were recently displayed at the Auto Show India in Colombo, Sri Lanka.

(*The Hindu Business Line*, 22 August 2006)

L&T Gets Chinese and Saudi Orders

Larsen & Toubro (L&T) has secured a Rs 368-crore order for supply of critical gasification equipment for Datang International Power Generation Co. Ltd. in China. L&T will supply three sets of gasification equipment for the customer's coal-based olefin project in Duolun county, Inner Mongolia. The equipment will be based on the process technology of Shell Global Solutions. L&T's Heavy Engineering Division, which has completed supply of coal gasification equipment for a 500,000 TPA ammonia plant to Yuntianhua Group, is currently executing orders for coal gasification equipment for a 500,000 TPA methanol plant for Zhongyuan project and a 20,000 bpd crude equivalent direct coal liquefaction plant of the Shenhua Group. With this contract, the cumulative order booking of L&T's Heavy Engineering Division from China exceeds Rs 990 crore ($220 million), according to the statement.

The L&T, along with its consortium partner, Haldor Topsoe of Denmark, also bagged an order worth $150 million for setting up a high-tech methanol and carbon monoxide plant in Saudi Arabia. The order was bagged from Saudi Formaldehyde Chemical Co. Ltd.

The scope of work comprises residual basic engineering, detailed engineering, project management and procurement of equipment for the plant. L&T will manufacture some of the critical equipment at its Powai and Hazira facilities.

(*www.businessline.in*)

Turbo Tech to Supply Gas Turbines to Taiwan

TURBO Tech Precision Engineering Ltd. has received orders for supply of 500 KW gas turbines to Taiwan for meeting offsite power generation requirements. Orders for the turbines were placed by the Industrial Technology Research Institute of Taiwan. Taiwan's requirements are estimated at 400 turbines. Turbines are to be used for meeting power

generation in regions prone to natural disasters in the nation. Turbines are preferred in view of the cost advantage. Turbo Tech's Turbines cost the equivalent of about $300 per KW, which is considerably cheaper than its international competitors. The Company has already shipped turbines to the Philippines and Korea.

(*www.businessline.in*)

Praj Ind Buys US Engineering Co. for Rs 22.5 cr

THE Pune-based Praj Industries Ltd. has acquired the Omaha-based C.J. Schneider (CJS) Engineering Corporation Inc., with expertise and experience in providing detailed engineering services to the biofuel industry including ethanol plants, in a Rs 22.5-crore deal.

CJS already has contracts on hand from leading ethanol producers for supply of various services, a statement released by the company said, adding the wholly owned US subsidiary will complement Praj's own business in the US.

This acquisition will benefit the US customers to get a wider range of services and the company expects enhanced business potential as a result, the statement said. CJS employs highly experienced engineering professionals with a collective experience of over 350 man-years, the statement added.

The company has been contracted to supply technology and machinery for seven ethanol plants in the country within six month of its entry into US market.

While two of the contracts based in California, contracts are also now being worked out at Minnesota, Iowa and Missouri. The company is also making inroads into the European market where it has got contracts from Bulgaria and Romania following its arrival in the UK market with a contract for British Sugars.

Praj is a global Indian company that offers innovative solutions to add value in alcohol and brewery technology and related wastewater treatment systems for customers in India and around the world. Praj is positioned as a knowledge-based company with expertise and experience in bioprocesses and engineering. It delivers know-how, licence, engineering design, plant & equipment, project management, commissioning and customer care and turnkey projects.

(*The Hindu Business Line*, 20 September 2006)

DRUGS & PHARMACEUTICALS

Indian Pharma Companies Top DMF Filings

THE Indian pharma industry has filed the largest number of drug master files (DMFs) with the United States Food and Drug Administration (USFDA) during the quarter ended June 2006.

Indian companies accounted for the largest share of 35 per cent in the overall filings of 355 DMF submissions during the quarter under review, according to industry sources.

While there has been a broad-based participation by the Indian pharma companies with 32 companies submitting a total of 97 drug dossiers excluding non-drug filings, the scene was mostly dominated by the mid-sized companies over the domestic industry majors. There has been increased number of filings per product, which, according to the analysts, highlights the competitive pressure.

The Hyderabad-based Aurobindo Pharma Ltd. has topped the list of Indian pharma companies with 21 DMF filings, followed by Lupin with nine and Matrix Laboratories with eight. Among the larger pharma companies, Sun Pharma filed six DMFs, Dr Reddy's Laboratories three DMFs, including one from its Mexican facility, and Ranbaxy Laboratories one.

(*The Hindu Business Line*, 23 August 2006)

ENERGY & POWER

Suzlon Bags Two Orders Worth Rs 345 cr from Italy and Portugal

SUZLON Energy AS (SEAS), the Denmark-based international business headquarters of wind turbine energy manufacturer Suzlon Energy Ltd. has bagged two orders worth Rs 345 crore for a total of 61 MW from Italy and Portugal.

The company is now all set to focus on untapped European markets such as France and Greece for potential business, the Chairman and Managing Director, Shri Tulsi R. Tanti, said adding that 40 per cent of the company's revenues would come this year from export business.

The company has signed a contract with Maestrale Green Energy of Italy for 21 MW and has already signed a contract with Portugal's Technologies Energeticas, SA, for 39.9 MW of wind turbine capacity, for a wind farm project in the Penamacor region. The orders will be delivered from the last quarter of the current fiscal with all supplies, barring the tower, to be from India, Shri Tanti said.

"The order marks Suzlon's breakthrough into the emerging wind energy markets of Europe. Suzlon already drives technology development in centres in Belgium, Germany and Netherlands and this order marks Suzlon's emergence as a full-fledged player on the European wind energy stage," Shri Tanti said. The global wind energy market of 11800 MW was worth $14 bn last fiscal and grew by 40 per cent in that period.

The Italian contract, meanwhile, is for an EPC contract for the 21 MW Marignano project comprising 10 units of the Suzlon S88-2.1 MW turbine. Maestrale Green Energy currently has 400 MW in its Italian pipeline and more in other European countries according to Mr Carlo Durante, CEO.

(*The Hindu Business Line*, 24 August 2006)

BHEL Bags Turnkey Projects

THE Bharat Heavy Electricals Limited (BHEL) has secured two Turnkey Power Projects worth Rs.2.2 billion ($47.5 million). One project has been secured from Power Grid Corporation of India for setting up a 220 KV substation at Kabul and second project has been secured from Water & Power Consultancy Services (WAPCOS) India, for supply and installation of electromechanical packages for 42 MW Salma Hydroelectric Power Plant in Afghanistan.

BHEL's scope of work for the Kabul substation project includes design, manufacture, supply, erection and commissioning, besides civil works. For the Salma Hydro Project, the scope of work will be similar for the 3x14 MW Francis-type hydro turbines with matching generators and micro-processor based control and excitation equipment.

BHEL has also bagged a Rs 55 crore contract for setting up a substation in Bangladesh. The contract, awarded by the Power Grid Company of Bangladesh, entails supply and installation of a new 230 KV substation and the expansion of an existing substation. The Asian Development Bank is funding the project. BHEL has executed a number of contracts in Bangladesh, including a turnkey project for a 100 MW power plant, but this would be the first order for substations. BHEL would be involved in design, supply, construction and commissioning of 230 KV substation at Baghabari and expansion of Ishurdi substation of Bangladesh.

BHEL has also bagged a Rs 46 crore order to set up two substations in Ethiopia. The contract for 230 KV sub-stations was awarded by Ethiopian Electric Power Corporation and is part of the electrification programme of the Ethiopian Government. BHEL's scope of work includes design, supply and commissioning of the Semera and Dichoto substations in Ethiopia.

(*www. businessline.com*)

RECENT POLICY INITIATIVES

Panel to Study R&D Sops for Auto Sector

THE Government has set up a high level committee to prepare a package of tax concessions and incentives for promoting R&D in the automobiles sector. The committee will be headed by Dr. R.A. Mashelkar, Director-General of Council for Scientific and Industrial Research.

"The committee, set up by the Finance Ministry, will take a holistic view after evaluating the present fiscal structure," an official from the Ministry of Heavy Industries and Public Enterprises said. "All issues relating to demands for incentives will be looked into by the committee," he said. The committee would come out with its recommendations before the Budget process begins, he added.

To achieve the desired output of $145 billion by 2016, a thrust need to be lent to R&D, as envisaged in the draft Automotive Mission Plan (AMP). Demands, including allowing 100 per cent grant for fundamental research, 75 per cent for pre-competitive technology and 50 per cent for product development, will be studied by the committee. The industry has also sought incentives like promoting technology acquisition through tax exemptions and zero levies on technology transfers.

(*The Financial Express*, 11 September 2006)

Electronic Goods Manufacturers Hit by EU Standards

ELECTRICAL and electronic manufacturers could see exports to the European Union (EU) plunge by a third because of their failure to meet new standards on hazardous materials. The EU has, on 1 July, introduced new restrictions on hazardous substance content in electrical and electronic appliances that could cost India around Rs 1,500 crore worth of exports, says the Indian Electrical and Electronics and Manufacturers Association (IEEMA).

India earned around Rs 4,500 crore from exports of machinery and electrical products in 2005-06. This accounts to about 3 per cent of the country's total foreign trade. The EU accounted for Rs 1,500 crore of the sector's exports, making it the second largest market after the United States.

A majority of the Indian companies in this sector were earlier immune from the Restriction of the Use of Certain

Hazardous Substances (RoHS) in electrical and electronic equipment directive, said Shri Sunil More, Secretary General, IEEMA.

The regulation required a maximum concentration of 0.1 per cent by weight of many environmentally hazardous substances such as lead, chromium and mercury that were inevitable in the production of electrical products.

As per the RoHS directive, all the member states of European Union will have to ensure that all new electrical & electronic equipment in the European markets should not contain the restricted substances, which are toxic.

Material will be purchased from the market and tested for the RoHS compliance by authorized enforcement agencies. In case it is found non-conforming, the product will be banned throughout Europe.

A heavy fine will also be imposed on the producer, which may differ from country to country. For instance, Sony has lost 90 million euros because of the cadmium content was more in their mobile phones.

Sales of the product were halted by Dutch authority, where ban on cadmium is being implemented. To remain a 'supplier of choice' in green markets, manufacturers must comply with regulations restricting the use of hazardous substances.

Large manufacturers such as Larsen and Touburo (L&T) and Crompton Greaves had already prepared for the regulation issued in 2005, but many small and medium-sized companies had failed to comply. Experts said, manufacturers have to upgrade their own production equipment and ensure that the standards are applied by their parts suppliers, which would bring an average rise of 10 per cent in production costs.

(*www.economictimes.com*)

Announcement of India-UK S&T Innovation Council

INDIA and UK made a joint statement on Intellectual Property Rights (IPRs) to create and implement an IPR programme. The agreement was signed by Commerce & Industry Minister, Shri Kamal Nath and UK Science Minister Mr. Lord Sainsbury, at the second annual India-UK Business Leaders Forum '06 in London.

Shri Kamal Nath urged UK companies to tap Indian potential by investing in the country, thus making India, UK's largest trading partner. "UK stands to benefit from India's entrepreneurial power and from the fact that India's growth needs less fuel compared with China," he observed.

The Commerce Minister also released a report titled "Going Global - India Inc. in UK". On the sidelines, Science & Technology Minister, Shri Kapil Sibal announced creation of a new India-UK Science & Technology Innovation Council to promote collaboration in innovation.

The focus of this Council will be on strategic areas of next-generation communication technologies, biotechnology & stem cell research and advanced materials & nano-technology. Shri Sibal announced that Indian and UK scientists and institutions will collaborate with a funding of upto £12 mn from the UK, with matching contribution from India. The Joint Economic Trade Committee will be linked with the Science & Technology Innovation Council as proposed by Shri Sibal.

(*www.economictimes.com*)

Govt Scientists to Get Royalty, Reason to Patent: Kapil Sibal

SCIENTISTS working with various government research institutes will soon get a share of the licensing fee the government charges when the technology is transferred to a company for making a marketable product.

Science and Technology Minister, Shri Kapil Sibal said that a proposed new legislation will discourage government scientists from publishing papers, but instead, would encourage them to patent the technology, leading to wealth creation.

"We are introducing a bill in the budget session which will give a share of the license fee, patent royalty and profits from a particular innovation to the innovator," Shri Sibal told on the sidelines of the ongoing India Economic Summit. He said the government proposes to give 30 per cent of the royalty, licence fees and profits from a public-funded research project to the scientist who had worked on the project. Of the rest 70 per cent, 40 per cent will go to the institute, while the balance 30 per cent will be used for the project. He said the onus would be on the individual researcher to report his study and seek a patent for the same. There will be a proper innovation reporting procedure for scientists too, he said.

Shri Sibal also said that the proposed new biotechnology policy would be presented to the Cabinet in a couple of months.

(*www.economictimes.com*)

JOINT VENTURES

BEML Targets Latin American Defence Mart

THE state-owned Bharat Earth Movers Ltd (BEML), which recently announced a joint venture with a Brazilian firm, is looking at the Latin American defence and earth moving equipment market.

Making Brazil the centre, the company proposes to export various defence equipments, rail coaches and a host of earth moving equipment to Latin American countries, said Shri V.R.S. Natarajan, Chairman and Managing Director of BEML.

BEML is setting up an assembly plant on the outskirts of Rio-de-Janeiro in Brazil as a 60:40 joint venture with its Brazilian partner Compagnie Comercio E Construcoes to manufacture mining and construction equipment, rail wagons, closed wagons for transport of goods and bogies. The plant, involving an investment of Rs 100 crore, will start commercial production within a year.

"They have evinced interest in some of the products like weapon loading systems, ground support equipment, pontoon bridges (mobile bridge). We are exploring the possibility of exporting some of the components from India and assembling them in Brazil," Shri Natarajan said. BEML is engaging an international consultant in Brazil to do the due diligence and prepare detailed project report before setting up the assembly plant.

"We are setting up the plant in Brazil and opening marketing offices in all Latin American countries. Entire Latin America is a mining continent offering us a huge opportunity for export. Each country has got either iron ore, gold, diamond or copper mines. We want to arrive there," he said.

BEML has set a target of achieving Rs 5,000 crore turnover by 2013-14. The company, which reported a turnover of $490 million (Rs 2,252 crore) in 2005-06, is expecting a growth of over 20 per cent, to touch $600 million (Rs 2,758 crore) during the current fiscal.

(*www.busines-standard.com*)

Tata Steel Sets Up Subsidiary for SA Project

TATA Steel has set up a new subsidiary, Tata Steel KZN (Pty) to spearhead its proposed ferro chrome venture in South Africa. The construction work for the new 670 million rands plant at Richards Bay (or roughly around Rs 442 crore) began recently. Tata Steel holds 90 per cent of the shares in Tata Steel KZN (Pty) with the remaining 10 per cent being held by Tata Africa Holdings.

The plant will produce 1,35,000 tonnes of high carbon ferro chrome annually during the first phase, using ore imported from India and Iran. The site is located within the Industrial Development Zone, at Alton North Area, in the country's largest port city of KwaZulu-Natal. The plant is scheduled to be commissioned in the fourth quarter of 2007. Tata Steel Managing Director, Shri Muthuraman said: "The ferro chrome plant would be the cleanest in the world with state-of-the-art production processes. Ferro chrome is used in the manufacture of stainless steel and the plant's output will be exported to Tata Steel existing customers, principally in Asia, Europe and the US."

Elaborating Shri Muthuraman said: "South Africa had been selected from an initial short list of eight countries. The final choice was between sites in South Africa and Australia, with South Africa winning because of factors including power costs, skilled technological base and manpower, developed infrastructure/logistics arrangements and strong financial institutions."

(*The Economic Times*, 23 August 2006)

FACT Plans Joint Venture with Syrian Firm

FERTILISERS and Chemicals Travancore Ltd. (FACT) and a Syrian Company, Adi Establishment, have signed a memorandum of intent (MoI) for jointly setting up a Rs 2,000-crore ammonia-urea complex in Egypt. The MoI, states the basic intentions and the split of responsibilities of both the parties and that will form the basis for proceeding further with the proposal.

Though two alternative locations were considered for the project i.e., Syria and Egypt, the latter was selected for setting up the project following confirmation by Adi Establishment about "availability of natural gas at a substantially lower price than in Syria".

The proposed complex would have ammonia and urea plant and all the associated facilities with an annual production capacity in the range of 7-10 lakh tonne of urea. Natural gas, land, electricity, water and other infrastructure facilities required for the project would be arranged by the Syrian company.

FACT may have equity participation to the extent of 50 per cent in the project. The fertiliser major with its experience in design, construction and operation of fertiliser and chemical plants would handle all the technical matters related to the project.

(*The Hindu Business Line*, 11 August 2006)

TECHNOLOGY/PROJECT OFFERS

LIST OF SELECT EXPORTABLE TECHNOLOGIES/PROJECTS FROM SMEs IN TAMIL NADU AND KERALA STATES OF INDIA

Sector	*Technology/Project offered*	*Name of company*	*Value of offer**
Agro and Food	1. To Manufacture Herbal and Spice Extract	Arjuna Natural Extracts Ltd., Kerala	US$4.0 mn
	2. To Supply Sugar Production Plant	Ponni Sugars (Erode) Ltd., Tamil Nadu	US$11.0 mn
Automotive Components	3. To Manufacture Automobile Instrument Cluster(Speedometer)	Pricol Ltd., Tamil Nadu	US$ 4.5 mn
	4. To Manufacture Air Braking System	Sundaram-Clayton Ltd., Tamil Nadu	US$0.9 mn
Ayurveda	5. To Manufacture Ayurvedic based Pharmaceuticals & Neutraceuticals for B.P., Piles & Diabetes	Bipha Durg Laboratories, Kerala	US$1.0 mn
Drugs and Pharmaceuticals	6. To Manufacture Bulk Drugs – Beta Carotene, Lycopene & Phycocyanin	ABL Biotechnologies Ltd., Tamil Nadu	US$2.5 mn
	7. To Manufacture Retractable Safety Scalpel	Futura Medical Products (P) Ltd., Kerala	US$1.0 mn
Engineering	8. To Manufacture Aluminum Heat Exchanger	Alkraft Thermotechnologies Pvt. Ltd., Tamil Nadu	US$2.0 mn
	9. To Supply Mini Steel Plant Employing Electric Arc Furnaces & Continuous Casting Machine	Steel Complex Ltd., Kerala	US$4.0 mn
	10. To provide Technology & Know-how for Embedded Motor Controls	Dalmia Electrodyn Technologies (P) Ltd., Tamil Nadu	Royalty : 5% of Sales turnover
	11. To Set up Facility for Manufacturing Fly Ash Bricks (4000 Bricks / Hour)	Engineers Enterprises Tamil Nadu	US$0.1 mn
	12. To Manufacture & Supply Coffee Processing Plant	Mckinnon India Pvt. Ltd., Tamil Nadu	US$0.035 mn
	13. To Manufacture Compressors for Different Applications	Elgi Equipment Ltd., Tamil Nadu	US$5.0 mn
Textile Machinery	14. To Manufacture Industrial Automation System for Textile Mills	Applied Automation Systems Pvt. Ltd., Tamil Nadu	US$0.33 mn
	15. To Manufacture Textile Top Rollers	Vetri Engineers, Tamil Nadu	US$0.5 mn
Leather	16. To Manufacture Finished Goat Leather for Footwear and Leather Goods Industry	Butterfly Leathers, Chennai, Tamil Nadu	US$1.27 mn

* Value is excluding cost of land & building

Note: The above list is an extract from the "Report on Profiles of Exportable Technologies from SME's in Tamil Nadu and Kerala States in India" prepared by Pixel Networks, Mumbai for DSIR, Government of India, New Delhi.

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