Management's Discussion & Analysis

The management of Larsen & Toubro Limited presents the analysis of performance of the Company for the year 2003-2004 and the outlook for the future, which is based on assessment of the current business environment. It may vary due to future economic and other developments, both in India and abroad.

REVIEW OF ECONOMY

During the year 2003-2004, the Indian economy fared well with an estimated GDP growth of around 7% after a sluggish 4.4% during 2002-2003. All the major economic indicators were favourable, helping India's growth to the second highest position after China. The highlights of the year 2003-2004 were :

- Strong agricultural growth aided by above-normal monsoon
- Broad-based revival in industry
- Robust growth in exports
- Record accretion to foreign exchange reserves
- Buoyant capital market
- Soft interest rate scenario
- Inflation at targeted levels of 4% to 5%
- Sharp appreciation of Rupee vis-à-vis US Dollar

Construction, which accounts for over 5% of India's GDP, registered a growth of 6.5% during 2003-2004. The growth in domestic manufacturing sector increased to 7.2% during the year from 6% in FY 2003. The capital goods sector grew by 11.9% during the year. Significantly the machinery and equipment segment recorded a growth of 13.8% after a meagre 1.8% during FY 2003. As commodity prices revived across the globe, cement, steel and metal industries recorded significant improvement in performance.

On the global front, the year 2003-2004 witnessed a broad economic recovery. World output rose by 4.6% after a growth of 3.9% in the previous year. There has been a strong resurgence in global trade which increased by 6.8% in volume compared to 4.5% in 2002-2003. The financial markets witnessed a broad rally in equity prices and a further drop in bond spreads. The exchange markets saw depreciation in the US dollar and appreciation of most emerging market currencies. A significant aspect of the recovery was the economic revival in the United States and the robust growth rates in China and India. The year saw an increasing trend in investments in the Oil & Gas and Petroleum refining sectors in select markets, especially the Middle East. Aggravation of geopolitical risks, impacting the already high oil prices has been a major concern.

COMPANY PERFORMANCE

Aided by improved business environment, the Company performed well during 2003-2004. The details of the performance are provided later in the report.

Notwithstanding the intense competitive pressures, the Company maintained its leadership position in most of its business domestically and strengthened its presence in select international markets. During the year, the Company had to cope with increasing customer expectations, global competition and the pressure on margins. The Company had to address the challenges of talent augmentation, resource optimization and value creation.

During 2003-2004, the Company undertook the following major initiatives to enhance its value proposition :

1. Business Restructuring

The cement business of the Company was demerged into UltraTech CemCo Limited with effect from April 1, 2003 as per the Scheme of Arrangement under Sections 391 – 394 of the Companies Act, 1956, approved by the shareholders of the Company on 3rd February, 2004 and sanctioned by the High Court of Judicature at Bombay on 22nd April, 2004. Accordingly, all assets and liabilities of the cement business of the Company as of 1st April, 2003 have been transferred to UltraTech CemCo Limited.

The Company discontinued the unprofitable metal packaging business with effect from 13th June, 2003. Efforts are under way to exit Glass container business which has been identified as non-core business for the Company.

Consequent to the above restructuring, the Company would be a more focused player in engineering, construction and technology areas.

2. Capital Reorganization

The Company has restructured its equity capital as under during the year pursuant to the Scheme of Arrangement sanctioned by the High Court of Judicature, Bombay on 22nd April, 2004:

a) The authorized capital of the Company is reorganized into 162,50,00,000 equity shares of Rs.2/- each.

b) The subscribed and paid-up share capital of the Company has been reduced by Rs.223.86 crore being no longer represented by assets of the Company consequent to cement business demerger and by Rs.0.06 crore in respect of shares issued after the effective date of demerger.

c) The above reduction was effected by reducing the face value of the equity shares of the Company from Rs.10/- per equity share to Re.1/- per equity share.

d) Simultaneously, with the above reduction of share capital, 24,88,03,591 equity shares of face value of Re.1/- have been consolidated into 12,44,01,796 equity shares of Rs.2/- each, fully paid.

3. Thrust on Exports

The Company continued with its strategy of enlarging its presence in select international markets to derisk dependence on domestic economy. The Company's growing international order book and export revenues testify the success of the various initiatives that the Company has undertaken to improve its capabilities and competitiveness. During the year 2003-2004, export revenues have accounted for 14% of the Company's total revenues. Some of the specific initiatives undertaken by the Company during 2003-2004 towards increased international focus are:

a) Strengthening the organizational structure to ensure sharp focus on international business.

b) Management review and clearances for developing business in select markets.

c) Recruitment of people including foreign nationals with international experience in specific domains.

d) Proactive certifications and accreditations from international customers, EPC contractors and process licensors.

e) Increased speed in introduction of new products with contemporary features and getting requisite product approvals.

4. Talent Retention / Acquisition

The Company placed considerable emphasis during 2003-2004 on augmenting its talent pool. The Company stepped up its efforts to -

a) Identify among its current employees people with potential to shoulder larger / critical responsibilities.

b) Recruit superior performers with requisite domain expertise both at entry level and for lateral shifts.

c) Train and nurture the talent pool by providing career enhancing opportunities to work in challenging assignments.

d) Provide exposure to work in international market environment.

e) Fine tune performance appraisals and reward system focused on results accomplishment and effectiveness.

5. Value Creation

In addition to the business restructuring dealt with earlier in the report, the Company has taken certain initiatives to improve its value creation potential. Some of these initiatives are :

a) Proactive alliances with technology partners in domains where the Company foresees future business opportunities.

b) Improving the processes by benchmarking with the best in class for faster delivery of superior quality products / services.

c) Focus on products / services which are at the higher end of the value chain.

d) Portfolio review of businesses to aggressively support businesses with profitable growth potential and exit low value businesses.

e) Thrust on engineering and design services including high end software solutions through e-Engineering services for conceptual and product engineering and embedded systems.

6. Segment Performance

The Company's business consists of the following major segments:

Name of the Segment	% of Segment Revenue
Engineering & Construction (E&C) [Construction, E&C Projects and Heavy Engineering]	83%
Electrical & Electronics	10%
Others	7%

Given below are the performance highlights of the major operating Divisions of the Company during 2003-2004 in addition to financial review of the Company's performance, information on the Company's HR initiatives, Industrial Relations, Corporate Social Initiatives during 2003-2004. The brief details of the activities of major Subsidiary and Associate Companies are also enclosed.



Breakwaters built by L&T for a prestigious naval project on India's western seaboard. Other maritime structures designed and executed by L&T include docks, container terminals, wharves, jetties and coal berths.





A. Ramakrishna

CONSTRUCTION

AN OVERVIEW

L&T undertakes engineering design and construction of infrastructure and industrial projects covering civil, mechanical, electrical and instrumentation engineering disciplines through its ECC (Engineering, Construction and Contracts) Division. ECC is India's largest construction organization with many of the country's prized landmark constructions to its credit. The ECC Division offers complete turnkey solutions including engineering, and the use of mechanized methods of construction and modern management principles on the lines of construction majors of the developed world. This has helped ECC establish itself as an undisputed leader in the domestic construction industry.

ECC is organized into five Business Sectors and operates through four Zones for project execution both within India and abroad. In-house Engineering Design and Research has enabled the Division to undertake complete turnkey projects across the business sectors. ECC's customers have the advantage of getting the project completed on time - many a time setting world records in quality, at competitive prices.

BUSINESS ENVIRONMENT

Transportation Infrastructure - The Government has tendered out majority of the road packages under the Golden Quadrilateral programme. The award for larger packages under NHDP Phase II

(North East South West corridor) is expected during 2004-2005. With smaller contractors participating in the tenders and the entry of foreign construction companies, the environment for the transportation infrastructure business has become highly competitive. Some of the major initiatives being undertaken by the Government that augur well for this sector are:

- Development of State highways through World Bank / ADB aid.
- Investment plans for strengthening the railway network.
- "Sagarmala" project for improvement in port connectivity.
- Public-private partnerships for development of ports and airports

Urban Infrastructure – The business environment for urban infrastructure projects improved during 2003-2004. Some of the growth drivers for the sector have been:

- Growth in IT & ITES related activities creating a demand for quality office space.
- Incentives to the Housing sector leading to growing need for high-end housing / townships.
- Thrust on healthcare necessitating construction of better quality hospitals.
- Focus on sports and leisure leading to building of stadia / academies.

Building Products - L&T Concrete is a market leader with 31% share in the Ready Mix Concrete (RMC) market in India. Road connectivity projects across the country, flyovers, conversion to concrete roads, Metro Rail projects etc. have contributed to growth in RMC. Acceptance of cement substitutes has also helped popularizing RMC. The Company plans to expand the RMC operations rapidly in the country by investing in additional RMC plants in select markets.

Power and Electrical Sectors - Enactment of the Electricity Act 2003 and opening up of the Power sector to private players in the areas of transmission and distribution have provided an impetus to the growth of these sectors. Following additional initiatives by the Government in the power sector provide encouraging business opportunities going forward:

- APDRP, AG&SP (Accelerated Generation & Supply Program), AREP (Accelerated Rural Electrification Program)
- Target of additional 100,000 MW by 2012
- Planned capacity addition of 6615 MW in the nuclear energy sector by 2012 and private sector participation in atomic energy
- The Government's initiative to create infrastructure to generate 50,000 MW Hydroelectric Power
- Proposed 400kV transmission line projects by West Bengal, Andhra Pradesh, Rajasthan and Haryana state electricity authorities.

These developments provide exciting opportunities to the Division's Electrical projects business. Competition from OEMs in Substation business has intensified. Some multinationals have re-entered this sector as the job sizes have now become larger. Many NTPC / SEB projects are given on "Package Route", which would mean competing with many small players. Purchase preference continues on selective basis. The reduction in custom duty will bring down project import costs, thereby increasing competition from international power majors.

Industrial Projects & Utilities - The increase in capacity utilization in the manufacturing sector and growth in the services sector have contributed to the large investment outlays for industrial projects and utilities. Some of the significant developments in these sectors are :

- Increased investment in infrastructure has driven the demand for Metals & Minerals, though stiff competition is encountered from Chinese firms in the Ferrous and Non-Ferrous sector.
- The recent thrust on Power, Port and Mining sectors has helped the revival of the traditional Coal handling business.
- Major Water supply projects are scheduled in Gujarat, Rajasthan and Madhya Pradesh. Many innovative projects for achieving reduction of "Unaccounted for Water" are being proposed on the lines of similar projects in Chennai and Bangalore. A number of Industrial Effluent Disposal projects are being planned across the country.

Usage of CNG as fuel and investment in oil exploration and development are likely to give impetus to downstream facilities.

SIGNIFICANT INITIATIVES

The Division has launched several significant initiatives during the year. Among others, the initiatives include :

- Building capabilities by acquiring critical plant & machinery
- Augmenting specialist skills in design & construction engineering and adopting higher technology for faster and superior construction without diluting the cost competitiveness
- Nurturing long-term business relationships with reputed customers
- Improving sub-contractor productivity
- Technical audit for continuous process improvements
- Advanced cost monitoring systems.

These initiatives are expected to contribute towards improving profitability of the Division. While seeking to increase the Company's share of international business, focus has been on being a preferred contractor for India-assisted projects and for Indian corporates investing abroad.



Water supply system built by L&T in Tamil Nadu. In addition to supply and distribution, L&T also executes projects for water treatment and industrial effluents.

The other major initiatives include :

Internationalization - Sales from International Operations are steadily increasing in line with the Company's vision to become an Indian multinational. Construction opportunities overseas, particularly in Sudan, Oman and Myanmar are encouraging. Joint Venture Companies in Qatar and Sudan as also presence in China, Vietnam and Sri Lanka are expected to increase the Company's global reach. The proposed GCC Grid and Transmission line projects in African countries would help expand Electrical projects business. The thrust on geographical expansion through focus countries is expected to yield good results in the years to come.

Construction Workmen Training - The construction industry in India employs over 30 million people. The quality, cost and completion time of construction projects are dependent on the skill and workmanship of the workers. International construction companies, especially from China, Malaysia and Korea have achieved superior productivity levels. This affects the competitiveness of the Indian construction companies.

Recognizing the need for construction workmen training, the Company has established training facilities at Chennai and Mumbai. The training methodologies developed with inputs from some prestigious international experts have been well appreciated by nodal agencies like Construction Industry Development Council (CIDC), New Delhi and National Academy of Construction (NAC), Hyderabad.

Resources & Supply Chain Management – The Division has taken steps to streamline certain major cost components like sub-contracting, material and transaction costs. Some of these include :

- Registration of vendors / sub-contractors through the Enterprise Information Portal
- Standardisation of sub-contractor selection and management process
- Establishment of performance rating system for vendors / sub-contractors

Consortium Approach for Execution of Projects - Bidding through the tender route that follows a transparent, step-by-step process may not always result in appropriate awarding of projects and satisfactory performance. Much of such unsatisfactory performance could be due to extremely unrealistic pricing. It would, therefore, be in the interests of the project sponsors to examine other alternative methods of awarding

contracts without sacrificing the principle of least cost, and at the same time ensuring successful completion of projects.

Organization Structure - The Division adopted a new 5 x 4 matrix type organization structure which comprises

a) Five business sectors that function as investment centers and focus on technology upgradation, business development, technical audit & trouble-shooting

b) Four zones which provide operational support to the Regions and project sites for higher efficiency.

The above matrix structure is proving effective and is being continuously fine-tuned to adapt to growing market needs.

MAJOR ORDERS BOOKED / EXECUTED

Some of the major orders booked during the year 2003-2004 include :

Domestic

	Rs. crore
• Civil and structural work for 2000 MW (8 X 250 MW) Subansiri Lower Hydroelectric Project in Arunachal Pradesh	922
• Construction of bridge at Howrah for 2nd Vivekanand Bridge Tollway Company Pvt. Ltd.	471
• Sinter Plant - 3, Blast Furnace 'G' upgradation and 132/33 Kv Substations at Jamshedpur for TISCO	271



Diamond-shaped 'Mani Kanchan' – Gem and Jewellery Park built at Kolkata by L&T.

- Construction of leaching plant at Chanderia for Hindustan Zinc Ltd. 179
- Construction of Sports complex at Guwahati for National Games Secretariat of Assam 139
- Construction of Bridge over River Ganga at Allahabad for NHAI 110
- 400 Kv Transmission Line from Muzaffarpur to Gorakhpur for Power Links Transmission Ltd. 104

International

Rs. crore

- Engineering & Construction of soda ash plant at Kenya for Magadi Soda Ash Co. 262
- Expansion of 33 Kv transmission network in Al Ain area, UAE for Abu Dhabi Water & Electricity Authority 121
- Construction of Hotel / Service apartments at Bahrain for Radisson Group 71
- Design, supply, installation, testing and commissioning of Double circuit of Submarine and land power cable in UAE for Abu Dhabi Water & Electricity Authority 55
- Bridge at Jumeriah, Dubai for Nakheel 44
- Construction of IT park at Colombo, Sri Lanka 27
- Construction of showroom and carwash shed at Sharjah, UAE for Dyna Trade 26

The Division has executed the following major projects during the year 2003-2004 :

- Bhuj Hospital being India's First earthquake Resistant structure with Base Isolator technology
- "Mani-Kanchan" - Gem & Jewellery Park, Kolkata
- Design and construction of Twin Hockey stadium at Hyderabad of 500 Capacity each, completed in record time of 69 Days
- IT building for Cognizant Technology Solutions at Chennai
- Construction of Kanchipuram – Walajahpet Road, completed 1½ months ahead of schedule
- Construction of Surat - Manor Road, completed 2½ months ahead of schedule
- 2.5 km long AJC Bose Road Flyover in Kolkata
- Construction of 2.47 Km long Gowthami Bridge & 1Km long Vasista Bridge in Andhra Pradesh as part of NHAI Golden Quadrilateral programme
- Project Seabird for the Indian Navy, completed 265 days ahead of schedule
- Chilime Hydroelectric Project in Nepal and Tala Hydroelectric Project in Bhutan
- Electrical System Package for Tarapur - Units 3 & 4 of Nuclear Power Corporation of India Ltd.
- Construction and commissioning of Coal Terminal at Haldia Dock Berth 4 A
- Effluent Marine outfall pipeline project for GIDC at Dahej
- Water Supply to Chennai - Telugu Ganga Project
- Hydro test on 500 MW NTPC Ramagundam Boiler, completed a record 6 months ahead of schedule
- Consultancy for Sohar Industrial Infrastructure Utility Corridor in Oman
- 2,400 Kms of live line stringing of Optical Ground Wire (OPGW) on 400 Kv transmission line for the first time in India - for Power Grid Corporation of India Ltd.
- 7 Bays of 400 Kv GIS erected and 220 Kv systems for Startup Power commissioned ahead of schedule for NPCIL, Tarapur
- Supply & Erection of 400 Kv Transmission Line at Chamera, Himachal Pradesh (Himalayan Terrain)
- Testing of world's heaviest TL Tower in UAE (400 Kv, weight 95 MT, height 56.5 m)

OUTLOOK

Focus on Industrial projects, Utilities such as power & water and infrastructure sector, is expected to drive the growth initiatives of the Company in the construction business. Pre-bid marketing, technology acquisition, skillful project evaluation and execution, prudent resource management and customer relationship management are the thrust areas for the Company to retain its leadership position in the construction segment.

The Division would continue to focus on effective risk management practices. Models to identify and manage risks are constantly fine-tuned to ensure profitable growth. Necessary checks would be applied to ensure that the Division bids for the right job at the right price.

The Division has chalked out sector-wise strategies to improve its competitive positioning. Improved site management and shorter construction time would increase the competitive advantage of the Company in its various business sectors.

The business prospects for the Company in the hydel, electrical & transmission lines and cross-country pipelines sectors are expected to be good. The Division is well positioned to gain from development initiatives spearheaded by the Government in the areas of infrastructure sector, viz. Roads, Ports, Airports and Power. Strategic tie-ups with manufacturers of equipment and suppliers of input materials will be pursued.

The Division plans to consolidate its leadership position in the ready mix concrete business. Customer centric marketing of total solutions, introduction of new product lines through technology upgradation and EPC solution for cross country pipelines are some of the futuristic initiatives being taken by the Company.



Process platform at Heera Complex of Oil & Natural Gas Corporation Limited. L&T has executed total platform projects, within internationally benchmarked delivery schedules. Dedicated project teams are backed by extensive fabrication facilities with matching construction resources. In addition to India's oil majors, L&T's projects expertise serves gas and oil fields in the Middle East and Africa.





K. Venkataramanan

E&C PROJECTS

AN OVERVIEW

The performance of the E&C Projects Division during 2003-2004 was encouraging. The Division succeeded in securing prestigious large value orders, consolidating its leadership position in the domestic market.

The success in penetrating the overseas market continued with the securing of the first international order for setting up a cement plant on turnkey basis and making further in-roads into important GCC countries by bagging orders in the Hydrocarbon Sector.

The year 2003-2004 was the year of enhancing the reputation of the Company for excellence in execution. The Division was successful in achieving 'on-time delivery' of a number of fast-track projects under execution during the period. With a track record in delivery leadership and cost competitiveness, the Division succeeded in bagging new orders against stiff international competition.

The improved performance of the Division could be achieved due to its strong technological foundation, project management capabilities, innovative procurement initiatives, superior customer relationship management and its team of experienced engineers committed to excellence.

BUSINESS ENVIRONMENT

The business environment remained conducive throughout the year 2003-2004. Among the various industrial sectors, the Oil & Gas sector saw significant activity during the year with the domestic majors proposing schedules for reconstruction of ageing platforms. The passage of the Electricity Act, 2003 and the deregulation of the Power sector saw revival of a number of Utility Power projects. Though no grass-root expansion was seen in the Refinery sector, a number of opportunities emerged in the areas of fuel-quality upgradation and retrofitting of existing plants. The opening up of the Nuclear and Defence sectors has created new business opportunities for private players. The business potential of these developments is expected to be visible in the coming years. The public sector purchase preference, however, continues to hurt private EPC players.

SIGNIFICANT INITIATIVES

The Division continued to take various initiatives during the year 2003-2004 in gaining a firm foot-hold in the international market and consolidating its domestic market presence. Some of these initiatives are:

Modular Fabrication Facilities - To exploit future opportunities in the Oil and Gas sector, the Division is supplementing the Fabrication yard at Hazira with a new facility at Mangalore. The Division has acquired land and is in the process of developing a fabrication yard with a sea-front.

e-Engineering Solutions - The Company has established a leadership position in Design & Engineering. The E&C Projects Division has pioneered the application of CAD/CAE for design and engineering. Leveraging on these skills, the Division provides engineering solutions to various industries viz. Automotive, Aerospace, Construction Machinery, Heavy Engineering and Ship Building. This initiative will cater to the potentially large engineering outsourcing market from India.



Catalytic Reforming Unit and hydrogen plant of Chennai Petroleum Corporation Limited. L&T's track record in major refinery packages includes the simultaneous execution of several clean-fuel projects on a lumpsum turnkey basis. L&T is one of the few companies in India pre-qualified to handle such large process-intensive projects overseas.



Emphasis on Health, Safety and Environment - The Division is committed to the highest Health, Safety and Environment (HSE) standards. HSE management system at E&C Projects Division conforms to ISO 14000 and OHSAS 18001. State-of-the-art HSE practices are being incorporated during project design as well as execution to conform to international standards

Internationally Recognized Certification for Project Professionals – The Division continues its focus on enhancing the capabilities of its business resources. The Division has introduced a Qualified Project Management Professionals Certification Test (QPMP) which is an internationally recognized certification for assessing the skills of its Project Managers. This initiative has been taken to meet the complex challenges of project execution. At present the Division has a large base of such QPMP certified professionals. The initiatives on Capabilities and Leadership Development (CALD) and Global Expatriates (GLOPAT) continue to receive focused attention.

Risk Management - The Division has taken numerous initiatives to mitigate the risks inherent in the execution of high value projects. It has formulated a Risk Management Protocol which serves as an important guide to its various business units and strives to create awareness amongst all employees on risk management. The Division uses the latest assessment tools to identify risk early to ensure effective mitigation. The initiative on Knowledge Management Systems which incorporate all key learnings from completed projects is a cornerstone of the risk management protocol.

MAJOR ORDERS BOOKED / EXECUTED

During the year, the Division procured a large order of Rs.1006 crore from ONGC for a 9 well platform project. A few of the other high value domestic project orders bagged by the Division were:

	Rs. crore
• 388.5 MW Gas Turbine based power plant at Andhra Pradesh for Vemagiri Power Generation Limited	690
• N 9 & N 10 Well platform project at Mumbai High for ONGC	365
• Motor Spirit Quality upgradation project for IOCL, Mathura	278
• Coke Drum system package of Delayed Coker Unit for IOCL, Panipat	215
• 1.2 MTPY Cement plant for Lafarge Surma, Bangladesh on turnkey basis	477
• EPC works for Gas gathering plant at BuHasa for Abu Dhabi Gas Industries Limited (GASCO)	132
• Sulphur Recovery Unit replacement project for Abu Dhabi Oil Refining Co. (Takreer), Abu Dhabi	104
• 3 Nos. fully assembled Evaporators for Sidem, France at Ras Al Khaimah, UAE	34

In the international markets, the Division bagged several orders against global competition. Some of the noteworthy international orders booked during 2003-2004 were:

The Division executed during 2003-2004 several major orders, some of which were :

Domestic

- MNW injection cum gas compression platform for EIL-ONGC
- Naphtha Hydrotreater, Catalytic Reformer Unit & Hydrogen Generation Unit for Chennai Petroleum Corporation Limited
- Hydrogen Generation Unit for Bharat Petroleum Corporation Limited
- Supply & Erection of 2 Nos. Hydrogen Reformer Packages for IOCL
- Diesel Hydrotreater (DHDT) and Hydrogen Package for IOCL
- PTA (Purified Terephthalic Acid) plant for IOCL
- Sulphur block & associated facilities for BPCL
- Pyro processing upgradation / Clinker Grinding Unit for Jaypee Cement Ltd.
- Primary Piping Package for TAPP 3 & 4 for Nuclear Power Corporation India Ltd.
- Supply of various equipment including O&M for one year for TNEB, Kuttalam
- Renovation and modernization works for Kutch Lignite Thermal Power Station, Gujarat Electricity Board

International

- Gas Processing facilities & offshore pipelines for Power Plant for Songas Ltd. A/c AES, Tanzania
- Capacity augmentation of Sulphur Recovery Unit at Shuaiba Refinery and Mina Abdullah Refinery, Kuwait for Kuwait National Petroleum Corporation



200 MW open-cycle power plant with six gas turbines set up by L&T at Salalah in Oman. L&T also built substations and erected transmission lines as part of the package. Other power plants set up overseas by L&T include a 168 MW combined-cycle plant in Sri Lanka.

- Primary Reformer Packages (2 Nos.) for Oman India Fertiliser Company (OMIFCO)
- Living quarters and power upgrade project for Qatar General Petroleum Corporation
- Evaporators and other equipment for Sidem Mobin, France

OUTLOOK

The Division is augmenting its present capacity in conventional oil platform building to exploit opportunities in development of both offshore and onshore gas processing facilities. With prospects in deep water exploration on the rise, the Division is also looking at building capability in this domain.

The Division is pursuing modernization projects undertaken by its key customers in the Oil & Gas sector. Large opportunities exist in the Refinery and the upstream Oil & Gas sectors in the Middle East and select countries in West Africa. The Division has established a track record of executing up-gradation and revamp projects for various refineries. It expects to leverage its expertise to win more such projects both in the country as well as in the mature Middle East markets.

Given the low per-capita petrochemical consumption in India, capacity additions in the petrochemical industry are likely to provide new business opportunities. The Division intends to target cracker as well as downstream projects in this sector on the strength of its on-going experience in execution of the prestigious IOCL PTA project.

De-licensing and freeing up of controls coupled with new gas finds are expected to provide impetus to setting up of new gas based power projects, thereby providing opportunities to the Division. The Division has strategically prepared itself for the emerging EPC opportunities in the Nuclear Power and Defence sectors, which look very promising.

On the strength of a healthy order backlog and the emerging business opportunities, the Division foresees a promising year ahead in all its sectors.



Two 30-metre acrylonitrile (ACN) reactors being shipped to the SECCO project in China. Dimensions: 9.4 m dia., 30 m long. Weight: approx. 600 metric tonnes. SECCO is a joint venture of British Petroleum and Chinese majors - SINOPEC and Shanghai Petrochemical Co. The ACN reactors supplied by L&T will go into the heart of the 260,000 tonne-per-annum ACN plant.





P. M. Mehta

HEAVY ENGINEERING DIVISION

AN OVERVIEW

Heavy Engineering Division has established a reputation for quality products in the global market with its strong engineering capabilities and state of the art manufacturing facilities. The Division manufactures and supplies precision, custom engineered critical Process Plant Equipment and Industrial Machinery to core sector industries like Fertilizer, Refinery, Petrochemical, Chemical, Oil & Gas, Power, Aerospace, Paper & Pulp, Steel and Ports and other Strategic sectors. The Division also supplies Rubber Processing machinery for the Tyre Industry and undertakes marketing of Industrial Valves and Plastic processing machinery manufactured by the Company's Joint Ventures.

The Division's manufacturing facilities are located at Mumbai in Maharashtra, Hazira & Baroda in Gujarat, Kansbahal in Orissa, Chennai in Tamil Nadu and Visakhapatnam in Andhra Pradesh.

The Division is working towards becoming the preferred supplier of fabricated equipment in the global market through continuous improvements in quality, delivery performance and manufacturing technology.

BUSINESS ENVIRONMENT

The business for the domestic process plant equipment continued to be subdued as in the past four years except in the Refinery sector. There was no major investment in the domestic fertilizer sector. Exports remained the mainstay of the Process plant equipment business.

With the recovery of the Indian automobile industry, demand for Tyre machinery in the domestic market picked up. With the closing of unviable plants in Europe and USA and the Government allowing import of used tyre machinery, second hand tyre presses are available at attractive prices. The business is facing increasing competition from imports from China, Russia and Turkey. There are, however, good opportunities in select markets for export of Rubber processing machinery, which the Division is seeking to utilize.

SIGNIFICANT INITIATIVES

The Division has evolved strategies for maintaining its leadership position in the process plant business and for gaining a competitive advantage in the Defence equipment sector being opened up to the private sector.

Thrust on Exports - Export order booking during 2003-2004 increased by over 55% to Rs.429 crore. Export Sales reached Rs.257 crore during 2003-2004 and represents 28% of total customer sales.

The Division continued working towards achieving a “preferred supplier” relationship with major EPC contractors. The Division’s Hazira Works was recognised as the “Most Valuable Supplier” by Fluor Daniel of USA, a major EPC contractor. Key customers recognised the quality and on-time delivery performance of the Division by awarding prestigious orders for Reactors on “Nomination” basis during the year.

Some of the key success factors for the Export performance have been close interaction with customers, reliable performance, improved planning to execute orders on time and positioning the Company as a reliable long term partner.

Capability Building - The Division has introduced a number of initiatives to deliver higher value to its customers. The Division is striving to move up the value chain by strengthening its Design and Engineering capabilities and the development of new products. The Division has set up “Technology Development Centers” separately for the Process Plant sector and for other



Absorber being despatched to Burrup Peninsula, Western Australia, for Kellogg JV / Woodside Energy Limited, Phase IV Expansion Project. Dimensions: 3.3m dia, 38m-long. Weight: approx.290 tonnes.

Strategic sectors.

The Division is concentrating on heavier and high unit value products which require development of appropriate manufacturing technology and improved project planning and monitoring skills. The Division is implementing "Critical Chain Project Management" methodology based on the "Theory of Constraints" to better plan, monitor and deliver long lead time equipment on schedule.

Hi-Tech Products - Development and manufacture of Hi-Tech products is the key to the Division's growth strategy. Apart from its own development efforts through the "Technology Development Centers", the Division has also made further progress in finalising technology collaboration agreements with key global players.

The Division has received Letters of Intent from the Government for manufacture of defence equipment under five broad categories, after the Government of India announced liberalization of the Defence sector and private sector participation in this area. However, the policy announcements are yet to be yet operationalized.

Leveraging of Information Technology - A number of information technology initiatives have been implemented to improve operational efficiency of the business. These include:

- Integrated Computer systems including ERP at all major locations
- Web based Vendor Managed Inventory / Procurement system for high volume Factory operating Supplies
- e- Procurement / Reverse auctions
- Customer Relationship Management
- Internet based design / data transfer with overseas clients
- Work-flow based Employee self service suites with back-end ERP integration
- Facility to query ERP system using SMS for select applications

MAJOR ORDERS BOOKED / EXECUTED

The Division booked several significant orders during 2003-2004, some of which are :

	Rs. crore
• Steam generators, Reactor and Safety vessel for Bharatiya Nabhikiya Vidyut Nigam Limited	137
• Second HDS Reactor for DHDS unit for HPCL-Vizag	25

Large orders were also procured from customers such as Apollo Tyres, MRF, NPCIL etc.

Of the international orders booked by the Division, the major ones are :

	Rs. crore
• Gassifier Internals & Shell for Yunnan Tianan Chem.Co., China	104
• Ammonia Convertor, Secondary Reformer Waste Heat Boiler, Ammonia Unitised Chiller etc. for Galaxy Projects, Australia	49
• Reactors for Kellog Brown & Root A/C Exxon Mobile	32
• Overflow Converter & C2 Splitter column for Kellog Brown & Root A/C SASOL Technology Limited, South Africa	25

During 2003-2004, the Division executed several orders for critical equipment such as:

- Fertilizer Plant equipment for Oman India Fertilizer Co.
- Ethylene Oxide Reactors for BASF for a Project in China
- Hot Separator for Bechtel, U.S.A.
- High Pressure Heat Exchangers for Daelim for IOCL - Mathura Project
- Reactors for Foster Wheeler Italian S.P.A.

OUTLOOK

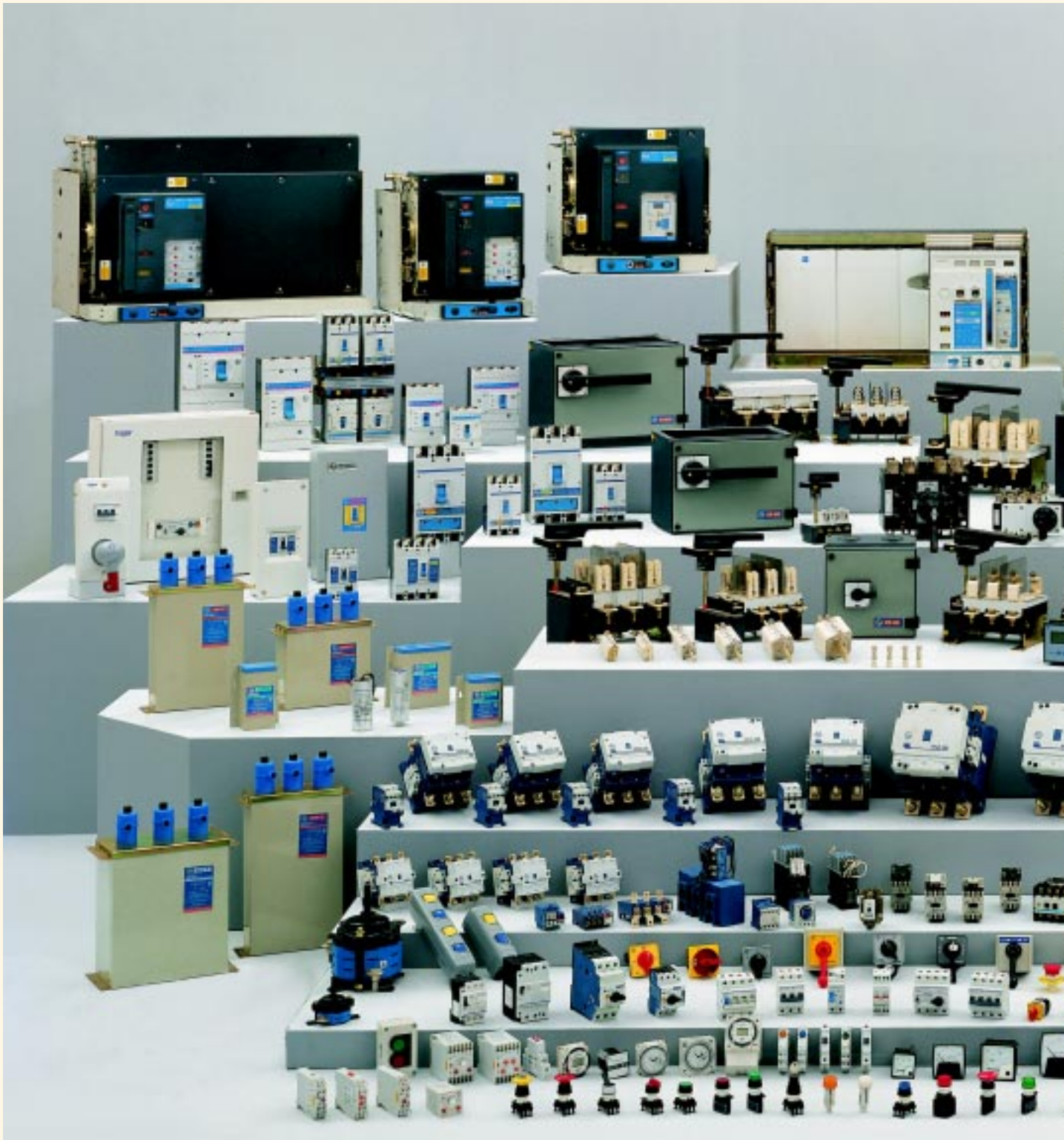
The Division expects good business prospects for heavy and high unit value Process Plant equipment in the Export market. Clean fuel programs will continue to offer good business opportunities. New technology projects like Gas-to-Liquid and Coal-to-Gas have good future prospects.

After a lull in the domestic fertilizer industry, projects for energy conservation in fertilizer plants are now reviving. These projects will require additional equipment in the existing plants.

The share of Nuclear Power in the country's Power generation is expected to increase sharply. The installed capacity of Nuclear Power is scheduled to be ramped up to 20,000 - 30,000 MWe by the year 2020 from the present 2700 MWe. There are good business prospects in this sector in the medium to long term.

The market for crushing equipment and systems is witnessing a healthy growth fuelled by investments in Road projects and sponge iron plants. The paper and pulp industry is increasing capacity as well as investing in revamping the existing plants due to the growing demand for paper. The Wind energy sector also continues to grow at a good pace. Both these market segments will provide good growth prospects for machinery manufactured at the Kansbahal facility.

Indian Industry has been eagerly awaiting the operationalisation of the Government's policy on private sector participation in manufacture of Defence equipment. The Government has set up a Rs.25,000 crore non-lapsable "Modernisation Fund" for Defence equipment. The Division is optimistic about the business potential of the Defence sector in the medium to long term.



L&T is India's largest manufacturer of low-tension switchgear, offering the widest choice of products, versions and accessories. Most products are certified by ASTA (U.K.) and KEMA (the Netherlands), and carry CE / CSA / UL marks.





R. N. Mukhija

ELECTRICAL AND ELECTRONICS DIVISION

AN OVERVIEW

The Electrical & Electronics Division (EBG) is organized into eight Strategic Business Units (SBU) in three sectors as follows :

Electrical	- Standard Products
	- Electrical Systems & Equipment
Electronics I	- Metering & Protection Systems
	- Medical Equipment & Systems
	- Embedded Systems & Software
Electronics II	- Control & Automation
	- Petroleum Dispensing Pumps & Systems
	- Enterprise Networking Business

EBG enjoys a dominant position in most of the above businesses it operates in.

BUSINESS ENVIRONMENT

The Electricity Act 2003 and the Government's focus on Accelerated Power Development & Reforms Program (APDRP) and rural electrification have furthered the growth of the electrical industry from 5% in 2002-2003 to 12% in 2003-2004, especially in the areas of upgradation and modernization of power



L&T's range of medical equipment meets international regulatory and safety requirements, and is widely exported to Europe, the Middle East and South East Asia. US Food & Drug Administration (FDA) approval has been received for selected monitors.

sub-transmission and distribution networks. Revival of the traditional Power industry is a good sign for the Control and Automation Sector.

The Electrical and Electronics Division during the period under review outperformed the industry with sales increasing by 17%. In spite of the intense competition from multinational companies, the Division continued to maintain and consolidate its pre-eminent position in almost all its businesses in India. The Division is the market leader in Electrical Standard Products and Electrical Systems & Equipment.

The Petroleum Dispensing Pumps & Systems business has benefited from the entry of private players in fuel distribution, technological advancement in retail outlet automation and increase in the length of national highways due to the Golden Quadrilateral project. With the volumes and revenues doubling, the Division further consolidated its position in Petroleum Dispensing Pumps & Systems during 2003-2004.

SIGNIFICANT INITIATIVES

The Division's improved performance during 2003-2004 has been achieved due to the focus on innovations in business processes, introduction of new products, proactive service to customers and increasing customer base by offering product variants on a regular basis to satisfy their requirements. Key initiatives taken by the Division include:

Development of New Products / Technology - In order to mitigate the risk of changes in technology and product obsolescence, the Division has been constantly focusing on innovations and introduction of new products, product variants and addressing new markets. High New Product Intensity (NPI) has been the key to success. Some of the new products won prestigious awards at international forums. The Petroleum Dispensing Pumps & Systems business has designed petroleum dispensers incorporating several innovations that would serve to make these products contemporary and

acceptable globally. Innovation has not been limited to hardware, but also extends to various products like Switchgears, Meters and Medical equipment which have embedded intelligence software.

Cost Leadership - Cost competitiveness has been enhanced through improvements in processes using tools like Value Engineering, Six-Sigma, Lean Manufacturing, Reverse auctioning, e-Procurement and e-enablement of the sales processes. Innovations in leveraging these tools have led to significant savings. About 210 value engineering projects and 96 Six-Sigma projects were undertaken during 2003-2004 and successfully completed.

Thrust on Exports - On the export front, the Division embarked upon a focused market development strategy. The various product development initiatives taken, including certification from the Association of Short Circuit Testing Authority, UK (ASTA) for Low Voltage Switchboards range started yielding results. Revenues from exports increased by 75% during 2003-2004, over the previous year. Exports of switchboards witnessed significant increase during 2003-2004. The Medical Equipment Division received approvals from the Food and Drug Administration (FDA) for some of its Patient Monitoring Systems and Ultrasound scanners, thereby opening up the large US market for these products. In addition Medical Equipment is also exported to Europe & China. The Division presently exports its electrical products to Middle East, South East Asia and the neighboring countries.

EVA implementation - The Division has adopted EVA programme across all levels to enhance performance orientation, value creation and equitable reward system. This is consistent with the Company's thrust on enhancing stakeholder value and encouraging entrepreneurial leadership within.

Intellectual Property Rights – The Division has been placing increased thrust on Intellectual Property Rights in order to protect its product innovations. Given the focus on R&D and high level of new product intensity, a total of 45 IPR applications were filed during 2003-2004. The Division has also applied for patents and design registrations in China and USA.

OUTLOOK

With most of the innovative processes introduced in the earlier years now maturing and the manufacturing sector witnessing an upward trend, the outlook for the Division is promising.

As a part of the Power sector reforms, the Government has approved the strategy formulated by the Ministry of Power for distribution reforms. The approval envisages an expenditure of Rs. 40,000 crore during the Tenth Five Year Plan under Accelerated Power Development & Reforms Program (APDRP) scheme for implementing the upgradation and modernization of sub-transmission and distribution schemes. Rural electrification is also gaining momentum and a Rural Electricity Supply Technology (REST) mission has been constituted for focused



Meters and relays manufactured and marketed by L&T.

action. All the above developments certainly boost the prospects of the Electrical Standard Products, Electrical Systems & equipment and Metering business.

With the economy growing at a healthy rate and the increased participation by private players in fuel distribution leading to advancement in retail outlet automation, the Petroleum Dispensing Pumps & Systems business would be benefited. The Control & Automation business is expected to benefit from the resurgence in domestic and international Cement, Metals and Gas sectors both in domestic and international markets.

The Union Government has provided fiscal incentives for the growth of healthcare industry. This will boost large investments in this sector, leading to improved business prospects for the Medical Equipment business.

With the Automotive, Medical and Electrical product companies from North America and Europe focussing on Indian companies to offer total solutions in embedded systems software and mechanical design, the Embedded Systems & Software business is poised for a quantum growth.

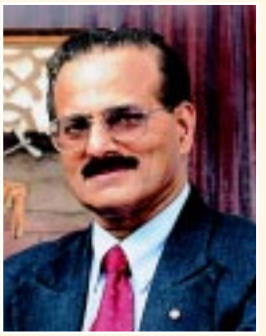


L&T's switchboards installed at a power plant in Oman.



L&T-Komatsu's PC 300LC-7 hydraulic excavator in action at a mining site. L&T-Komatsu Limited manufactures an extensive range of hydraulic excavators for the construction and mining sectors.





J. P. Nayak

DIVERSIFIED BUSINESS DIVISION

BUSINESS ENVIRONMENT

Welding & Industrial Products - The Welding and Industrial Products business provides Welding solutions, including Welding Processes and consumables for repair and maintenance, Carbide cutting tools and Robotics and Automation. The business involves application development and supplying consumables suitable for application in collaboration with Messer Eutectic Castolin Group of Companies.

The Company enjoys a leadership position in the domestic market with a market share of 47%. The Welding business also includes marketing of inverter based equipments from FRONIUS of Austria and Arc Spray / HVOF / Plasma systems and consumables from TAFA-PRAXAIR, U.S.A. The Company exports Eutectic Welding alloys to neighbouring countries like Sri Lanka and Bangladesh.

The Company is the sole distributor in India for ISCAR, Israel for carbide cutting tools in the high end cutting tool market. The tools are supplied primarily to Automobiles, Engineering & Defence sectors.

The Robotics and Automation business

of the Company involves design, engineering and supply of automation systems with Robots in collaboration with M/s. Yaskawa, Japan for applications in field of Automobile and Process Industry.

The Company's strength in these businesses can be attributed to a nationwide network of stockists and a trained team of engineers at key industrial centres to offer guidance on protective and repair maintenance techniques. The focus on development of new products and high-end technology solutions has contributed to around 12% of turnover in 2003-2004.

Earthmoving & Construction Equipment – The Division markets and provides after-sales services for :

a) Hydraulic Excavators manufactured by L&T-Komatsu Limited, a joint venture between Larsen & Toubro Limited and Komatsu Limited, Japan

b) Backhoe Loaders and Vibratory Compactors manufactured by L&T-Case Equipment Pvt. Limited, a Joint Venture between Larsen & Toubro Limited and CNH America LLC.

Besides the above equipment, the Company markets and provides service support for a range of high-pressure hydraulic products manufactured by L&T-Komatsu Limited and Poclain Hydraulics Industrie, France.

A new excavator 'L&T-Komatsu Model PC 300' introduced during the year has been well received.

Packaging Business Unit - This unit consists of manufacturing and marketing of Metal Packaging & Glass Containers for Soft Drinks, Liquor, Pharmaceuticals, Processed Food, etc.

As a part of its exit strategy from non-value adding businesses, the Company discontinued production of Metal Closures at Powai Works from 13th June 2003. Consequently, all outsourcing



The 5000 series of agricultural tractors – part of the wide range manufactured by L&T-John Deere at its plant near Pune. In addition to a large domestic market, L&T-John Deere tractors are exported to U.S.A., Mexico, China and Turkey.



L&T-CASE 851 loader-backhoe engaged in removal of top layer to facilitate resurfacing of road.

operations of Metal Packaging business have also been discontinued.

The business environment for Glass Packaging has improved during 2003-2004. Better price realisation and cost reduction in Glass Containers business resulted in significantly improved performance during 2003-2004.

OUTLOOK

The thrust on infrastructure development initiatives is expected to improve the business environment. In the Construction Equipment business, all the major sectors such as Coal, Cement and Mining are expected to grow at about 6% during 2004-2005. The hydraulic excavator market is expected to grow at about 20% during 2004-2005. Sectors such as Defence, Railways, Automobiles, Oil & Gas etc. are expected to witness brisk growth during the near to medium term. Growth prospects in these sectors would provide encouraging business opportunities to the Welding & Industrial Products business.

As part of overall review of business portfolios and long term future strategy, the Company has decided to reduce its exposure in some non-core businesses like Glass Containers and is actively pursuing divestment of the Glass business as a going concern.

E&C Revenues up by 34%, make up for loss of turnover due to de-merger of cement business

Group Gross Sales & Other Income at Rs. 11531 crore

Group PBT and PAT higher at Rs. 1068 crore and Rs. 747 crore



Y. M. Deosthalee

FINANCIAL REVIEW

The Company's performance during 2003-2004 reflects improved business environment. Importantly, the manufacturing sector grew by 7.2% during 2003-2004 with the capital goods industry leading the way with a growth of over 12%. The industrial revival this time having spread into basic and capital goods implies addition to production capacities over the next few years. Investment activity picked up in select sectors such as Oil & Gas, Petrochemicals, Infrastructure and Power. Competition was intense, with many multinational companies evincing keen interest in most of the available opportunities. Prices continued to be subject to competitive pressures.

Company Performance

Pursuant to the demerger of the cement division of the Company, the financials for the year 2003-2004 exclude the operating results of the cement business whereas the audited financials for the previous year include the same. The financial performance of the Company for the year ended 31st March, 2004 requires to be viewed in this back drop.

Overall, the Company has performed well with a Return on Capital Employed of over 13% and a Return on Net Worth of 21% for the year 2003-2004. The Company's order booking, revenues and profits recorded impressive growth during the year.

Revenues

Sales & service income (excluding cement) of the Company for 2003-2004 was at Rs.9807 crore. This represents a growth of 32% over the Company's revenues for 2002-2003 excluding cement business. The increase was largely due to the rise in the revenues of the E&C segment, which grew by 34%, during the year. Sales from Electrical and Electronics business also grew by a significant 23%. The Company earned Other income of Rs.398 crore which comprises mainly dividends from Subsidiaries & Associate Companies (Rs.37 crore), income from treasury investments (Rs.63 crore) and other business related income.

Exports

The Company's export order booking at Rs.1949 crore during 2003-2004 was marginally lower than the previous year. The E&C segment booked export orders worth Rs.1857 crore. during 2003-2004.

Export earnings during the year were at Rs.1399 crore, representing more than 14% of the Company's total turnover. Export revenues from the E&C segment were marginally higher at Rs.1307 crore.

Manufacturing & Other Costs

The Company incurred Rs.7503 crore during 2003-2004 towards manufacturing, construction and operating expenses. Given the large number of orders under execution by the E&C segment, the expenditure on raw materials, construction materials, sub-contracts and stores & spares increased during the year. Operationalisation of the new RMC plants, rise in steel price and other input costs such as fuel, higher packing & forwarding cost aligned to rising exports, increased deployment of hired equipment to execute certain specialised jobs, major repairs and modernisation at Powai, Mysore and other facilities, etc. have contributed to the increase in the operating cost.

To mitigate the impact of rising input costs, the Company is pursuing various cost reduction initiatives in all its major establishments. Improving sub-contractor productivity, efficient procurement processes, logistics review and redesign, value engineering, better cost monitoring systems etc. are some of the steps in this direction. The Company is continuing with programmes such as Six Sigma, Total Productivity Management, Theory of Constraints, etc. to eliminate waste, optimise cost and maximize productivity.

Staff expenses for the year 2003-2004 was higher at Rs.678 crore. The increase is on account of the long term wage settlement for the workmen at Powai, annual increments in salary & wages and additional staff welfare expenses such as medical, leave travel, contribution towards canteen expenses, etc. The increase also reflects the impact of separation of 468 persons under the Company's Voluntary Retirement Schemes during the year. Low interest rates and reduction in the corpus of the retirement benefit funds due to settlement on VRS separations have resulted in higher contribution towards leave encashment liabilities and Gratuity Funds, impacting the staff cost further.

The Company incurred Rs.929 crore towards Sales, administration and other expenses for the year 2003-2004. Increase in the number of overseas sites, new RMC sites and the decision to lease technology based equipment during the year in preference to owning has led to higher rental expense. Higher business activities have resulted in increased expenditure on travel. The growth in project business and substantial marine insurance coverage for imports on certain new jobs have contributed to the increase in insurance cost. Also, the increased level of expenditure on technical and other consultations, the cost of new software for e-Procurement, SAP production support, treasury systems, etc in line with larger volume of business during the year resulted in higher level of miscellaneous expenses. As a prudent accounting practice, the Company has also made additional provisions for non-recovery of its receivables although efforts are continuing on recovery of these dues.

There was a significant reduction in interest cost for the year 2003-2004. Pursuant to the Scheme of Arrangement under Sections 391-394 of the Companies Act, 1956, loans aggregating Rs.1733 crore pertaining to the operations of the Cement Division as on 1st April 2003 were transferred to the demerged cement undertaking. Consequently, the gross interest for 2003-2004 on a lower debt base was at Rs.92 crore while the net interest was Rs.37 crore. The reduction in the interest cost was achieved by efficient treasury operations, refinancing / repayment of debt and close monitoring of funds employed by the various business units. While the soft interest rate environment aided the effort, the Company achieved interest cost savings through judicious use of hedging tools such as interest rate swaps, efficient mix of foreign currency loans and varying debt tenors.

Consequent to the transfer of fixed and intangible assets valued at Rs.4262 crore (gross) as on 1st April, 2003 to the demerged cement undertaking, the Company had to absorb a much lower charge of Rs.85 crore during 2003-2004 towards depreciation, amortisation and obsolescence as compared to the previous year.

Profitability

The operating profit for 2003-2004 at Rs.890 crore showed a marked improvement of 38% over the previous year on a comparable basis excluding the profits from cement business. Improved operating profit combined with significant reduction in interest cost and depreciation have enabled the Company to report a higher profit before tax of Rs.769 crore for 2003-2004 against Rs.510 crore (including cement business) in the previous year. The Company has made a provision of Rs.281 crore towards current tax and has written back Rs.45 crore on account of deferred tax. The significantly higher tax provision for 2003-2004 is largely on account of non-availability of carried forward MAT credit utilized during the previous year.

SEGMENT-WISE PERFORMANCE

Engineering & Construction (E&C)

During 2003-2004, the segment booked orders aggregating to Rs.11656 crore (excluding Rs.176 crore being L&T's share of orders booked through Integrated Joint Ventures) registering an increase of 23% over the previous year. The order booking of Rs.1857 crore for project exports and supplies constituted 16% of total orders booked. The total revenues (including inter-segment revenue) of the segment increased 34% to Rs.8252 crore during 2003-2004, with export revenues improving by 2% over the previous year.

The operating margins for 2003-2004 were maintained at 8.1% despite intense competition, shorter delivery cycles and enhanced quality specifications.

The financial highlights for the segment in brief are:

	Figures in Rs. crore	
	2003-2004	**2002-2003**
Order Booking	11,656	*9,502*
Order Backlog	16,961	*13,687*
Gross Revenues *	8,252	*6,159*
EBITDA / Revenue * (%)	8.1	*8.2*
Export Earnings	1,307	*1,280*

* Includes inter-segment revenue

Electrical & Electronics

The segment booked orders valued at Rs.958 crore during 2003-2004, recording an increase of 10% over the previous year. The revenues (including inter-segment revenue) of the segment at Rs.1019 crore grew by 18% during 2003-2004, well ahead of the growth rate reported by the electrical industry as a whole. The segment's export performance for 2003-2004 has been noteworthy with revenues at Rs.62 crore having increased by 75% over the previous year. Sustained efforts to reduce cost through value engineering covering material cost, manufacturing processes, workforce optimization and retention / accretion to market share through introduction of contemporary products have contributed to the segment's improved performance.

The financial highlights for the segment in brief are :

	Figures in Rs.crore	
	2003-2004	**2002-2003**
Order Booking	958	*871*
Gross Revenues *	1019	*865*
EBITDA / Revenue * (%)	12.9	*13.2*
Export Earnings	62	*35*

* Includes inter-segment revenue

Cement

The segment included the operations of cement and ready mix concrete business upto 31st March, 2003. With effect from 1st April, 2003, the cement business has been transferred to UltraTech CemCo Limited as a going concern, pursuant to the Scheme of Arrangement sanctioned by the High Court of Judicature at Bombay on 22nd April, 2004. The cement segment of the Company for the year 2003-2004 therefore represents the results of Ready mix concrete business. The performance of the cement business for 2003-2004 will be reported in the annual report of UltraTech CemCo Limited. The ready mix concrete business reported total revenues (including inter-segment revenue) of Rs.262 crore and an operating margin of 7% during 2003-2004. With expansion underway, the RMC business is expected to report growth in revenues and profits in the years to come.

Diversified Businesses

With the business conditions showing signs of revival, the prospects for welding business have improved during 2003-2004. Revenues from sale of welding systems have increased by 16% during 2003-2004 as compared to the previous year. The Company is focusing on migration to high end solutions to stay ahead of competition.

Given the impetus for infrastructure development, the Earthmoving and Construction equipment business fared well during 2003-2004. The revenues from this business for 2003-2004 recorded a growth of 12% over the previous year. Notwithstanding heightened competition in this segment, the operating margins for this business have been maintained at levels similar to the previous year.

As a part of its strategy to exit non-value adding businesses, the Company discontinued the production of Metal Closures at Powai Works from 13th June 2003. Better price realisation and cost reduction in Glass Container business resulted in significant improvement in performance during 2003-2004.

The financial highlights for the segment are :

	Figures in Rs. crore	
	2003-2004	**2002-2003**
Gross Revenues *	470	*425*
EBITDA / Revenue * (%)	10.0	*6.3*

* Includes inter-segment revenue

Fixed Assets

The gross fixed assets as at 31st March, 2004 were significantly lower at Rs.1966 crore as compared to Rs.6089 crore in the previous year, due to the transfer of assets on demerger of the cement business. As the capital expenditure was closely

monitored, net additions to tangible fixed assets, including leased assets, was restricted to Rs.49 crore during 2003-2004. The additions were mostly normal upgradation of plant & machinery.

In line with the Accounting Standard AS(28) "Impairment of Assets", the Company tested its assets for impairment as on 1st April, 2003 and impaired certain lands & buildings as also the assets comprised in a manufacturing location. The consequent reduction in value of the assets Rs.76.72 crore (net of Rs.24.03 crore, being write back of deferred tax liability) was accounted by way of adjustment of General Reserve, as permitted by the said Accounting Standard.

Working Capital

The net working capital for the Company at Rs.2184 crore as of 31st March, 2004 reflects significant improvement over the previous year. For the year ended 31st March 2004, the net working capital represents 22% of total revenue as against 27% in the previous year on a comparable basis, excluding working capital of cement business. The Company continued to pursue its efforts in optimizing the working capital requirements during the year. Process improvements with respect to cash management systems and leveraging liquidity in the banking system to deliver vendor credit arrangements and close monitoring of cash utilization have all contributed to deliver working capital efficiencies during the year.

Financial condition and Liquidity

The Fixed Deposit Schemes and the Commercial Papers issued by the Company continue to enjoy the highest credit rating of AAA and P1+, respectively. The Company's rating for long term debt was upgraded from AA+ to AAA, consequent upon the demerger of the cement business. The Company's efforts to improve its debt equity structure resulted in a lower Net Debt (net of cash and cash equivalents) to Equity ratio at 0.27 : 1 as on 31st March, 2004. The improved debt equity position offers considerable flexibility to the Company for financing its future growth plans. The Company had accessed the markets at opportune times for raising both short and long term resources for meeting the funding / refinancing requirements. The Company manages its liquidity efficiently through its treasury management system which includes profitable investment of short term surpluses in the financial markets.

The Company's principal sources of liquidity are :

1. Existing cash and cash equivalents
2. Cash generated from operations
3. Unutilised funded limits with banks
4. Incremental borrowings

	Figures in Rs. crore	
Liquidity & Capital Resources	**2003-2004**	**2002-2003**
Cash & cash equivalents at beginning of the year	320.53	*204.48*
Less: Transfer pursuant to cement demerger	0.09	—
Add: Net cash provided / (used) by :		
Operating activities	330.41	*1,173.53*
Investing activities	200.21	*(369.90)*
Financing activities	(475.79)	*(687.58)*
Cash & cash equivalents at end of the year	375.27	*320.53*

The cash flows for 2003-2004 exclude cement operations and hence are not comparable with 2002-2003. The reduction in cash flows from operating activities is largely due to demerger of cement business.

Higher dividend earnings, reduction in loans to Subsidiaries / Associates and larger interest income have contributed to the increase in cash flow from investing activities during 2003-2004.

The cash generated from both operating and investing activities has been utilized to service debt, repay loans and distribute dividend, yielding a surplus of Rs.54.83 crore for the year 2003-2004. Consequently, the cash and cash equivalent have increased to Rs.375.27 crore as on 31st March, 2004.

The Company implemented during 2003-2004 an advanced treasury management system under ERP environment. The new system is expected to facilitate close tracking of the cashflows and its applications. The Company has necessary risk management policies to mitigate interest rate, currency and liquidity risks. Senior management in the Company review these policies at periodic intervals.

Consolidated Financial Statements

The Company has presented in this annual report the Consolidated Financial Statements for 2003-2004 prepared in compliance with Accounting Standards 21 and 23 issued by the Institute of Chartered Accountants of India. The consolidated financial statements include the financials of Larsen & Toubro Limited, 24 Subsidiary companies, 25 Associate companies and 9 Jointly controlled entities. The consolidation process involved:

- Line by line account consolidation for subsidiaries
- Equity method of consolidation for Associate companies
- Line by line proportionate consolidation of share in jointly controlled entities

- Elimination of all inter-company balances and transactions between Larsen & Toubro Limited and the entities consolidated.

The consolidated Sales and service income for 2003-2004 was higher at Rs.11107 crore as compared to the previous year despite the exclusion of revenues from the demerged cement business. The profit before tax and profit after tax for 2003-2004 at consolidated level were substantially higher at Rs.1068 crore and Rs.771 crore, respectively. The improved performance of the parent company and the subsidiaries, lower interest and depreciation cost post cement demerger have contributed to the higher profit for 2003-2004. The consolidated net debt to equity as on 31st March 2004 was lower at 0.64 : 1 against 0.97: 1 during the previous year, reflecting improved financial position.

Internal Control System

The Company has an internal control system commensurate with its size and nature of business which provides for:

- Efficient use and safeguarding of resources
- Accurate recording and custody of assets
- Compliance with prevalent statutes, policies, procedures,listing compliances, management guidelines and circulars
- Transactions being accurately recorded, cross-verified and promptly reported
- Adherence to applicable accounting standards and policies
- IT Systems, which include controls for facilitating the above.

The internal control system provides for well-documented policies, guidelines, authorizations and approval procedures. The Corporate Audit Services Department conducts periodic audits across all locations and of all functions throughout the year and brings out the compliances or deviations of internal control procedures through its audit reports. The observations arising out of audit are subject to periodic review and compliance monitoring. The significant observations made in internal audit reports, along with the status of action thereon, are reviewed by the Audit Committee of the Board on a regular basis.

Leveraging Information Technology & E-enabling of Operations

The Company has identified information technology initiatives as a key determinant of business competitiveness. The Company has an integrated framework of Information Systems consisting of ERP solutions and a host of other IT solutions supporting the business. On-line availability of vital project information has enabled superior project management. Considerable progress has been made in e-enabling operations for improvements in quality, delivery schedule and cost control.

A few major IT initiatives taken by the Company are :

e-Procurement – The procurement process including reverse auction is available on the internet. Buyers can send requests for quotation, receive proposals, conduct negotiations, send purchase orders and follow-up with suppliers on-line.

e-Connect – This internet-based collaborative platform for sharing project progress status and resolving issues helps project team members and customers to take on-line decisions to accelerate project execution. The functionality of e-connect includes on-line viewing of project status reports, query redressal system, instant messaging and live interactions, sharing of documents and drawings and customer feedback.

KnowNet – This tool for converting latent personal knowledge into organisational knowledge helps deliver a direct business advantage to the customer, through quality-improvement, avoidance of rework and faster project execution.

The Company has implemented Voice over IP (VoIP) and wireless LAN at some locations. Functionality of SAP-HR was enhanced to include Payroll, separations and leave records. Product Life Cycle Management (PLM) and CAD interface with ERP (SAP), which were implemented in the year 2002-2003 have been extended to more businesses during 2003-2004.

Employee Relations

The Employee Relations at various Works and Establishments of the Company continue to be cordial. The active co-operation of unionised employees at various locations is an important contributory factor for the cordial relations. Consequent to the decision to exit from the Packaging Business, successful reduction in manpower was achieved. Long term agreements have been finalized at Nashik Glass Works for achieving smooth and efficient operations.

CORPORATE SOCIAL RESPONSIBILITY

The Company has taken pioneering steps for promoting the welfare of its employees and the larger society. Corporate Social activities encompass a range of initiatives at its factories and offices spread all over India. The activities can be broadly classified into employee welfare activities and community welfare activities.

EMPLOYEE WELFARE ACTIVITIES

Health Care - Occupational health services and curative services are provided at factories which include general health care services, health check-ups, hospitalization and medical reimbursement schemes, health education and awareness programmes, yoga classes, blood donation camps, cancer checkup camps, diabetes and hypertension screening camps. speciality consultations are provided at the Health Centre in Mumbai for employees and family members.

Counseling services are provided for employees and family members to assist them in case of mental or emotional trauma.Developmental programmes are organized for spouses and children of employees on topics like personality development, creativity, effective study habits etc. These aim at enhancing the quality of life for the employees and their family. HIV / AIDS awareness programmes are being conducted at various units. These programmes involve creating awareness in employees, their family members and at the schools in the vicinity. The Company is one of the first companies to have a documented HIV / AIDS policy and was awarded the Business Excellence Award by Global Business Council, London for its HIV / AIDS programme in 1999. Other schemes and services - With a view to giving a fillip to education, two all India schemes are administered by Welfare Department in Mumbai. They include prizes for good academic performance and educational reimbursement for children of deceased/incapacitated employees. The latter is a unique scheme to enable the child to continue the education upto the age of 25 years in spite of the death/incapacitation of the employee. The Company has set up systems for addressing issues related to sexual harassment at workplace as per the Supreme Court guidelines for corporates. Credit society, Long service awards, In-house magazines, Sports club, Fitness center etc. are some of the other initiatives undertaken by the Company for promoting employee welfare.

COMMUNITY WELFARE ACTIVITIES

Health Care - The Health Centre in Mumbai renders several free health services for the community. They include family planning services, mother and child health care services, immunization, skin and leprosy clinic, Chest & T.B. clinic, eye checkup and cataract screening services, voluntary counseling and testing center for HIV/AIDS, counseling and health education, free training to health workers of N.G.O.s. and sonography at subsidized rates. The center has performed 40,970 sterilizations till March 2004. The Company undertakes health care programmes in the rural locations as well. Immunization, mother and child health care, nutrition, control of skin diseases, leprosy, malaria, TB, encephalitis etc. are some of the programmes conducted in the rural locations. Programmes are also conducted on sanitation, safe drinking water, hygiene and animal vaccination.

Environment - Desilting and cleaning of ponds/lakes, afforestation programmes, watershed development, canteen waste management, maintaining community gardens, horticulture and use of recycled water are some of the environment friendly activities carried out by the Company at different locations. Drinking water has been made available in the villages surrounding the Company's plants / works.

Education - The schools at the Company's factory locations are open to community children. The Company has also been providing support to village schools in terms of infrastructure, teaching aids, computers and other resources. Adult literacy classes and Balwadis are also conducted. Young girls and boys are trained in skills like tailoring, typing, screen printing, seri-culture, animal husbandry, papad and pickle making, fruit preservation, dairy and poultry training.

Disaster Management - The Company has provided help by deploying volunteers, providing construction material, medical and food supplies in addition to financial assistance in disaster relief work.

PERFORMANCE OF SUBSIDIARY & ASSOCIATE COMPANIES

Subsidiary Companies

Larsen & Toubro Infotech Limited

The Company, a wholly-owned subsidiary of Larsen & Toubro Limited provides customized software solutions for varied applications and industries. The Company is currently concentrating on four broad verticals namely :-

- Manufacturing
- Utilities
- Financial Services
- Telecom services.

During the year under review, the Company reported a total income of Rs.377.8 crore including that of its wholly owned subsidiary, Larsen & Toubro Infotech GmbH *(previous year: Rs.260.7 crore)* and a profit after tax of Rs.12.4 crore *(previous year: Rs. 12.8 crore)*. With competition continuing to be intense, the billing rates have been under pressure, resulting in lower profit margins.

60% of the Company's revenues come from onsite services and the balance through offshore development centers. The geographical spread is as under :

Region		% of software exports
USA	...	65%
Europe	...	19%
Asia Pacific	...	16%

The Company is ranked among the select Indian Information Technology service vendors with respect to multi year, multi skill global delivery annuity engagements. The Company has established an excellent track record in international markets for end-to-end package implementation including annuity O&M contracts in multiple ERPs like SAP, Oracle and Peoplesoft – JD Edwards. The Company is a vendor of choice for several Europe based mobile handset companies for solutions with critical time to market cycles.

During the year, the Company has initiated various initiatives like PCMM – Level 5, BS7799 security certification, etc. which will be completed in the coming year. Further, substantial investment has been made during the year in strengthening the sales and marketing network. These investments are expected to yield results in the next few years.

With support from Larsen & Toubro Limited, the Company has been successful in securing certain long term contracts which are expected to create strong references. The Company is confident of a significantly improved performance in 2004-2005.

L&T Finance Limited

The Company, a wholly-owned subsidiary of Larsen & Toubro Limited, is a Non- Banking Finance Company engaged in the business of providing lease, hire purchase, term loans and other financing facilities. Company's main focus segments are:

- Corporate Products
- Construction Equipment and
- Tractors.

The growth in each of these segments during 2003-2004 has provided business opportunities. The Company also provides construction-related equipment on operating lease predominantly to Larsen & Toubro Limited. The Company also holds an Internet Service Provider licence catering to the requirements of the L&T-Group.

During the year under review, three companies which were wholly owned subsidiaries of Larsen & Toubro Ltd. namely, L&T Equipment Leasing Company Limited, L&T Netcom Limited and LTM Limited and the Company's own subsidiary L&T-Trade.Com Limited were amalgamated with the Company with effect from April 1, 2003. The objective of the amalgamation was to augment the capital of the Company and thereby provide an impetus to growth.

During 2003-2004, the Company reported a higher total income of Rs.78.18 crore *(previous year: Rs.64.18 crore)* and profit after tax of Rs.13.44 crore *(previous year: Rs.6.09 crore)*. The figures for the year under review reflect the incomes and profits for the amalgamated company and hence are not comparable with those of the previous year.

Improved business environment is expected to provide necessary fillip to the Company's growth in the near to medium term.

L&T Capital Company Limited

The Company, a wholly-owned subsidiary of L&T Finance Limited, is a SEBI-registered merchant banker engaged in fee-based intermediation in Corporate & Project Advisory services, Money Market Operations and Debt Syndication.

During the year under review, the Company reported a higher income of Rs.3.3 crore *(previous year: Rs.2.5 crore)* and a profit after tax of Rs.0.8 crore *(previous year: Rs.0.5 crore)*.

The Company's money market operations performed well during the year under review. The Company bagged a few good mandates in project advisory services and is evaluating opportunities to develop the fee-based business further.

HPL Cogeneration Limited

The Company, a 51% subsidiary, is a special purpose company set up as a joint venture between Larsen & Toubro Limited and Haldia Petrochemicals Limited, Kolkata (HPL) for the purpose of owning and operating a 116MW combined cycle cogeneration power plant. The plant was built on "Build-Own-Operate" basis for supply of electric power and steam solely to HPL's Petrochemical Complex at Haldia, West Bengal.

During the year under review, the Company reported a total income of Rs.135.2 crore *(previous year: Rs.143.9 crore)* and a marginally lower profit after tax of Rs.39.7 crore *(previous year: Rs.40.4 crore).*

The Company has taken various quality initiatives and is working for ISO 14001 certification next year. Major diversification and expansion plans by some oil refineries are on the cards. Further, the State Government's industry friendly policy is attracting industrialists to Haldia. The Company is exploring possibilities of expanding its customer base.

L&T Infocity Limited

The Company, a 89% subsidiary of Larsen & Toubro Limited, is a joint venture with the Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC). It provides a wide range of services including design, construction, selling and maintenance of Information Technology Parks in Andhra Pradesh. The revenues of the Company consist of proceeds from sale / lease of floor space in addition to income from maintenance of the IT Parks.

The Company has successfully marketed the first two phases of HITEC City (Hyderabad Information Technology Engineering Consultancy City) where the occupancy level has nearly reached its full capacity. Major clientele include –

- Oracle Corporation
- Satyam Computer Services Limited
- GE Capital Corporation
- Dell Inc.
- Microsoft Corporation
- Reliance Infocomm Limited
- Convergys Corporation

The Company is currently working on Phase III 'Cyber Pearl' involving development of 5 lakh sq. ft. of office space on 5 acres of land. This project is being implemented through L&T Infocity Ascendas Ltd, a 50% joint venture with Ascendas India Pvt. Ltd. Construction on 250,000 sq.ft area is nearing completion and 25% of the space has already been committed to customers.

During the year under review, the Company leased / sold higher floor space resulting in total income of Rs.83.2 crore *(previous year: Rs.58.9 crore)* and profit after tax of Rs.36.6 crore *(previous year: Rs.8.7 crore).*

The Company is also developing IT Parks in other cities in India and abroad by forming SPVs. Some of these ventures are :

- Hyderabad International Trade Expositions Limited (HITEX) for developing Trade Fair Centre in Hyderabad
- Vizag IT Park at Visakhapatnam
- L&T Infocity Lanka Private Limited for developing IT Park at Colombo

Inspired by its success with IT Park projects, the Company is evaluating "Built to Suit" Campuses in India and in the neighbouring countries.

India Infrastructure Developers Limited

The Company, a wholly-owned subsidiary, was formed as a special purpose company to provide a 2x45 MW captive cogeneration plant on lease to Indian Petrochemicals Corporation Limited at their Gandhar petrochemical facility in Gujarat. The Company is registered as a non-banking finance company with the Reserve Bank of India.

During the year under review, the Company earned a total income of Rs.63.9 crore *(previous year: Rs.68 crore).* Despite lower total income, the Company has posted a profit after tax of Rs.4 crore, as against net loss of Rs.0.2 crore in the previous year.

The Company's earnings are expected to follow a consistent pattern during the period of the lease agreement, subject to exchange rate and interest rate fluctuations.

Tractor Engineers Limited

Tractor Engineers Limited (TENGL), a wholly owned subsidiary, is engaged in manufacture of undercarriage systems for excavators, crawler tractors, bulldozers etc. and material handling equipment like apron conveyors, spares for oil field equipments etc.

Sales and other income for 2003-2004 were Rs.60.4 crore as against Rs.39.4 crore in the previous year, aided by larger off-take of undercarriage systems by construction equipment manufacturers. The profit after tax for the year under review is Rs.3 crore *(previous year: Rs.1.5 crore).*

The new models (7T, 35T, 60T) introduced in the earlier year have stabilized. Two new variants of 6T and 20T models were developed during 2003-2004. Further, one set of frame for agricultural tractor was successfully developed as a prototype and exported to an US-based customer.

The Company discontinued its operations at Navi Mumbai Plant. Consequently, the fixed assets located there have been retired from active use and held for sale.

Over the next few years, the Company plans to introduce new models to maintain the market share and explore possibilities of increased business in the defence sector. The Company is also working to develop the export market for its existing products in order to maximize the revenues.

Narmada Infrastructure Construction Enterprise Limited

The Company, a 80% subsidiary, is a Special Purpose Vehicle with a 15 year ownership / tolling rights in respect of 2 bridges at Zadeshwar across the river Narmada in Gujarat on National Highway 8.

During the year under review, the Company reported a total income of Rs.23 crore *(previous year: Rs.23.2 crore)* and a loss of Rs.0.3 crore *(previous year: Loss of Rs.5.7 crore)*. The profitability of the Company has improved during the year. The restructuring of term loans, which was completed during the previous year, has contributed to lower interest cost.

The anticipated increase in traffic coupled with the annual tariff increase for which the proposal has already been submitted, is expected to help the Company to report improved performance in the subsequent years.

L&T Western India Tollbridge Limited

The Company, a wholly-owned subsidiary, is a special purpose company with a 10 year ownership / tolling rights in respect of a two-lane bridge across the river Watrak on the Ahmedabad-Baroda section of National Highway 8.

During the year under review, the Company earned a total income of Rs.10.5 crore *(previous year: Rs.12.2 crore)* and profit after tax of Rs.1.06 crore *(previous year: Rs.1.7 crore).*

The Company is in its third year of operations. The traffic, especially that of cars, on the bridge was low due to the diversion of traffic to the new expressway which was toll-free up to January 2004. After commencement of tolling on this route, the traffic and collection have improved. This should help improve the financials next year.

L&T Transportation Infrastructure Limited

The Company, a wholly-owned subsidiary, is a special purpose company with the ownership / tolling rights of the 28 kilometer Coimbatore Bypass Road for 31 years and that of a 2 lane bridge across river Noyyal (Athupalam) on National Highway 47 for 21 years.

During the year under review, the Company reported a total income of Rs.13.3 crore *(previous year: Rs.10.9 crore)*. The increase in revenues was on account of increased traffic and tariff revision. The Company has made a profit after tax of Rs.1.4 crore *(previous year: Loss of Rs.4.3 crore)*. The Company restructured its term loans resulting in improved profitability.

The Company expects the traffic increase to be sustained and coupled with the annual increase in tariff rates, for which proposal has been already submitted to the Government, the Company expects improved performance in the years ahead.

Larsen & Toubro LLC, USA

The Company, a U.S. based wholly owned subsidiary, markets in USA and Canada industrial valves manufactured by Audco India Limited, an associate company of Larsen & Toubro Limited.

For the year ended 31st December 2003, the Company reported a total income of USD 0.91 million (previous year: USD 0.81 million). Overall market for industrial valves was sluggish during the year due to postponement of maintenance shutdowns and deferment of projects in the Oil and Gas industry.

The Company is expecting to improve its performance during 2004-2005, given the commitment of oil refineries to implement clean fuel projects.

L&T Holdings Limited

The Company, a wholly-owned subsidiary, was formed as an investment vehicle to invest in non-power infrastructure projects. The Company has invested Rs.155.4 crore in projects to build roads, bridges, ports, airports and cyber-parks. Currently four projects are operational and the others are in various stages of implementation.

The Company reported a total income of Rs.2.2 crore *(previous year: Rs.0.03 crore)* and a loss of Rs.2.4 crore *(previous year: Loss of Rs.2.1 crore)*. The loss was mainly on account of interest cost on funds raised for investment in infrastructure projects, which are yet to yield dividends.

The projects which are operational are :

- Narmada Infrastructure Construction Enterprise Limited
- L&T Western India Tollbridge Limited
- L&T Transportation Infrastructure Limited
- Ahmedabad Mehsana Toll Road Company Limited

The other BOT projects, under execution, in which the Company has invested equity capital are :

- 40% holding in GVK Jaipur Kishengarh Expressway Private Limited, having 20 year tolling rights after widening 2-lane Jaipur – Kishengarh stretch on NH8 in Rajasthan.
- 33% holding in Second Vivekananda Bridge Tollway Company Private Limited, having 30 year tolling rights after constructing a 6.1 kms. of cable stayed bridge across the river Hooghly, West Bengal.
- 29% holding in Visakhapatnam Industrial Water Supply Company Limited, having 32 year tolling rights after construction of Godavari Pipeline and Yeluru Left Bank Canal for meeting the water requirements of various industrial consumers in Visakhapatnam.

The Government's thrust on infrastructure development provides significant business opportunities for the Company. The Company expects to achieve a diversified portfolio of profitable investments in infrastructure projects in due course.

Cyber Park Development & Construction Limited

The Company, a 51% subsidiary of L&T Holdings Limited, is a joint venture with Software Technologies Park of India (STPI). The Company has procured 4.5 acres of land on lease for a period of 66 years in Bangalore to develop a software park. The Company will be constructing 5 lakh sq. ft. of built up space with all amenities in two phases and lease/sell the space to prospective software companies. The Company proposes to complete the first phase of 3.22 lakh sq. ft. by July 2004 and the second phase within one year thereafter.

Bangalore is a prominent destination for software companies around the world, with plans to set up operations locally. Given the growth of ITES and BPO sectors, the Company is expecting a good response to the project. The revenue for the Company is expected to accrue from 2004-2005.

Larsen & Toubro International FZE, Sharjah

The Company, a wholly-owned subsidiary with limited liability was incorporated in the Hamriya Free Zone, Sharjah, for import and hire of plant, machinery and other equipment.

The Company commenced operations during the financial year ended December 2003 and reported a total income of USD 0.02 million and a profit of USD 0.01 million.

L&T ECC Construction (M) SDN.BHD, Malaysia

The Company, which is a joint venture between Larsen & Toubro Limited and local partners in Malaysia, undertakes civil, mechanical and electrical contracts and turnkey projects and is a subsidiary of Larsen & Toubro Limited by virtue of management control. The Company enjoys the status of a local Malaysian company with Larsen & Toubro Limited holding 30% equity stake.

Malaysia's GDP growth during 2003-2004 was around 4%. Construction activity however remains dull and has not got back to the pre-1997 levels. During the year under review, the Company reported a total income of Malaysian Ringitt (RM) 0.3 million *(previous year: RM 3.0 million)* and a loss of RM 0.4 million *(previous year: Loss of RM 0.1 million).*

The Company is in the process of getting registered with Pusat Khidmat Kontraktor (PKK) and Petronas. Opportunities exist in infrastructure, power, utilities & oil and gas sectors and the Company is actively looking at various options to generate revenues, including bidding for projects in consortium with local Malaysian companies.

Larsen & Toubro (Oman) LLC

The Company, a 65% subsidiary is a joint venture with Zubair Corporation LLC, and undertakes turnkey projects in civil, mechanical and electrical engineering.

During the year under review, the Company has reported increase in its revenues at Omani Riyal (RO) 12.0 million *(previous year: RO 11.1 million)* and profit after tax at RO 0.5 million *(previous year: RO 0.2 million).*

The Company has taken appropriate steps to register itself with various Ministries and Government Agencies and nurture long term business relationships with large customers.

The Company is well positioned to benefit from the industrialization drive in Oman.

L&T-Sargent & Lundy Limited

The Company was established as a joint venture with Sargent & Lundy LLC, USA for providing the entire spectrum of engineering services and solutions to projects in the power sector. The Company caters to the captive requirements of its parent entities and a few niche clients in India and abroad.

During the year the Company has become a subsidiary of Larsen & Toubro Limited.

The economic slow down in USA and the slow pace of domestic power sector reforms impacted the business opportunities during 2003-2004. The Company reported a lower income of Rs.11.9 crore *(previous year: Rs.21.5 crore)* and profit after tax of Rs.0.2 crore *(previous year: Rs.6.1 crore)*.

The Company has the potential for enhancing its business by leveraging the strengths of the parent companies. Larsen & Toubro Limited is actively pursuing power projects in select international markets, for which engineering support would be provided by this Company. In order to leverage the competitive advantage provided by the Company, Sargent & Lundy LLC, USA has decided to substantially transfer their international jobs to the Company. This would provide significant opportunities for the Company during the ensuing years.

Associate Companies

Audco India Limited

The Company, a joint venture with the Flowserve Group (USA), is engaged in the manufacture and sale of :

- Industrial valves
- Safety systems & equipment
- Pneumatic actuators and accessories.

Superior product quality, good R&D capabilities leading to faster product development, strong distribution network and brand equity are the key strengths of the Company. The quality of the Company's products has been certified by internationally accredited agencies.

During the year under review, the Company earned a total income to Rs.372.3 crore *(previous year: Rs.267.8 crore)* and a higher profit after tax of Rs.28 crore *(previous year: Rs.25.5 crore)*. Around 54% of the Company's revenues accrue out of exports.

Outlook for 2004-2005 is promising on account of a healthy order backlog. Encouraging export opportunities in the oil refinery sector and an increased off-take by Flowserve would be the key growth drivers.

Ewac Alloys Limited

The Company is a joint venture with Messer Eutectic Castolin Group and is a market leader in the business of maintenance & repair welding and welding solutions. The principal products and services offered by the Company include :

- M&R consumables
- Specification grade electrodes
- Flux-cored welding wires
- Wear plates / parts
- Welding equipment
- Tero coat lab services

Larsen & Toubro Limited markets the Company's products in India, which enjoy a market share of 46% in the maintenance & repair segment.

During the year under review, the Company reported a total income of Rs.67.9 crore *(previous year: Rs.57.0 crore)* and profit after tax of Rs.10.5 crore *(previous year: Rs.9.7 crore)*.

With brightening of prospects for user-industries like cement, sugar and steel, welding products market received growth impetus. In addition to improved R & D operations, the Company has taken various initiatives like 'New Product Development', 'Quality Improvement', 'Material Yield Improvement', 'Capacity Enhancement', 'Energy Conservation', etc. which are expected to improve performance in the years to come.

Given the growth in 2003-2004, especially in M & R electrode segment, the Company is optimistic about its improved performance during 2004-2005.

L&T-Chiyoda Limited

The Company, a joint venture with Chiyoda Corporation of Japan, is an engineering consultancy firm that offers a complete range of IT-enabled design and engineering services of international quality to the hydrocarbon sector in India and abroad. The Company has expertise in providing end-to-end solutions which include :

- Technology evaluation
- Front-end engineering
- Basic engineering
- Detailed engineering
- Procurement services
- Start up & commissioning assistance
- Project management services

The domestic hydrocarbon industry has seen brisk growth due to the refinery expansion / up-gradation projects of oil PSUs and the exploration of oil & gas reserves in various parts of India. Further, the move permitting fertilizer companies to shift from naphtha to gas based plants is likely encourage capacity expansions in the industry.

During the year under review, the Company reported a total income of Rs.31.3 crore *(previous year: Rs.22.4 crore)*. Due to effective cost control measures, the profit after tax was higher at Rs.3.1 crore *(previous year Rs.2.0 crore)*.

The Company has taken various initiatives like 'Quality Improvement', 'Capability Building', 'Cost Control' etc. in order to successfully compete with global players.

The Company received the prestigious national award for 'Excellence in Consultancy Services 2003' from the Consultancy Development Center, New Delhi in respect of an R&D project for Indian Oil Corporation Limited.

The outlook for 2004-2005 is promising. New investments are expected in petroleum refining, petrochemicals, fertilizer and oil & gas processing projects. The market for specialized engineering services particularly in the Middle East countries shall be the focus of the Company for the next few years. Competition from foreign players, however, will have an impact on the engineering consultancy business.

L&T-Ramboll Consulting Engineers Limited

The Company, a joint venture with Ramboll A/S and IFU (the Danish Industrialization Fund for Developing Countries) of Denmark, provides single point consultancy services for all formats and types of transportation infrastructure projects with proven expertise in various engineering services from concept to commissioning. The Company also pursues emerging opportunities in privatisation studies of various industries.

During the year, BOT projects bid in association with Larsen & Toubro Limited did not materialize due to severe price competition. Some of the projects in the pipeline have been deferred by the State and Central Governments due to budgetary constraints. During the year under review, the Company reported a total income of Rs.9.2 crore *(previous year: Rs.9.1 crore).* The profit after tax was lower at Rs.0.1 crore *(previous year: Rs.0.2 crore).*

The Company is looking to work closely with Larsen & Toubro Limited on a number of infrastructure related projects with private sector participation. The Company plans to bid for multi disciplinary jobs in association with Ramboll and other consultants both in India and overseas in order to improve its operational and financial performance.

L&T-Demag Plastics Machinery Private Limited

The Company, a joint venture between Larsen & Toubro Limited and Demag Ergotech GmbH, Germany, manufactures Injection Moulding Machines for the plastics industry. Its products find application in diverse industries like automobiles, electrical goods, packaging, personal care products, writing instruments and white goods.

The Company faces intense competition both from domestic manufacturers as well as cheaper imports. The Company, however, has been able to maintain leadership position amongst reputed manufacturers of Injection Moulding Machines in the organised sector and has several repeat orders from satisfied customers.

During the year, the Company manufactured and sold large tonnage equipment to cater to the automobile industry. The Company also successfully developed several new applications in plastics.

During the year under review, the Company recorded significant increase in its total income at Rs.80 crore *(previous year: Rs.57 crore)* and a higher profit after tax of Rs.1.9 crore *(previous year: Rs.1.5 crore)*.

The Company has been certified under ISO 9001-2000 Quality Assurance System by BVQI. It has also obtained CE marking and GOST-R certification to enable exports to Europe and Russia respectively. The Company's association with Demag and its own established R&D base has enabled it to customize its offerings to customers in India and abroad.

L&T-Niro Limited

The Company, a joint venture between Larsen & Toubro Limited and Niro A/S, Denmark, manufactures powder producing & processing plants for the dairy, food, pharma and chemical industries. The Company has technology partnerships with global players like Barr Rosin, GEA Wiegand, GEA Kestner etc.

During the year under review, the Company reported a total income of Rs.16.8 crore *(previous year: Rs.21.1 crore)* and a profit after tax of Rs.1.8 crore *(previous year: Rs.1.5 crore).* Despite the reduction in total income, higher profitability was achieved through effective cost reduction measures and higher income from investments.

India is being seen as a Global Food Hub/Factory by large producers of milk, tea, fruits, vegetables, grains etc. The global trend in outsourcing of engineering products should provide the Company with good export opportunities.

The Company is optimistic about its improved performance during 2004-2005 on the back of healthy order backlog and good growth prospects.

L&T-John Deere Private Limited

The Company, a joint venture between Larsen & Toubro Limited and Deere & Company, USA, manufactures and sells tractors. The Company has a manufacturing facility at Sanaswadi, Pune with an installed capacity of 30000 tractors per annum.

The Company manufactures 10 models of tractors and all the models are well received by the market. The Company is currently the market leader in the 55 HP segment. The tractor industry showed signs of revival in the second half of the financial year 2003-2004, owing to a number of positive factors like good monsoon, availability of cheaper retail finance etc. Total industry sales was at 1,73,000 tractors with the Company accounting for 7% in terms of volume.

The Company continued to expand its dealership network through entry in new markets in UP, Bihar, West Bengal and Orissa. It currently has 183 dealers covering 19 states in India and Nepal. The Company's focus on exports has yielded positive results with exports accounting for 54% of total revenues.

During the year under review, the Company reported a total income of Rs.362.5 crore *(previous year: Rs.202.7 crore)* and a loss after tax of Rs.15 crore *(previous year: Loss of Rs.36.4 crore)*. Improvement in product mix, increased volume, focus on localization, cost reduction, financial restructuring and close monitoring of net working capital contributed for the improvement in profitability.

The Company expects enhanced utilization of plant capacity and improvement in the financial performance in the coming years.

L&T-Komatsu Limited

The Company, a joint venture between Larsen & Toubro Limited and Komatsu Limited, Japan, manufactures hydraulic excavators and high pressure hydraulic systems & components. The Company's manufacturing facility is at Bangalore.

Due to impressive performances of the manufacturing, mining and construction sectors, the Hydraulic Excavator market grew by 25% (in addition to a 22% growth in the previous year) during the year under review. Despite tough competition from cheaper imported products, the Company reported higher sales of Rs.302 crore *(previous year: Rs.237.3 crore)* and a profit after tax of Rs.6.6 crore *(previous year: Loss of Rs.1.7 crore)*. Effective cost reduction measures and enhanced productivity has enabled the Company to improve its profitability.

The Company has identified new product development and technological advancement as key success factors to achieve business leadership. As a step towards achieving this goal, considerable improvements are being made in the product models to enhance their reliability. Various 'Quality Processes' are also being initiated.

The growth in the market for hydraulic excavators is dependent upon the economic growth rates. Major sectors like coal, power, cement and mining have started displaying a healthy growth trend. Continuing emphasis on infrastructure development is expected to result in increased demand for the Company's products. The Company is also pursuing various export possibilities.

L&T-Case Equipment Private Limited

The Company, a joint venture between Larsen & Toubro Limited and CNH America LLC, manufactures and sells earthmoving and construction machinery. Larsen & Toubro Limited markets the Company's products in India.

Opening up of the economy and the Government policy encouraging investment in infrastructure sectors have provided the industry considerable growth momentum. The entry of international players in domestic markets has intensified the competition. To meet this challenge, the Company has stepped up its efforts to improve productivity, upgrade technology & product design and reduce costs.

During the year under review, the Company reported a total income of Rs.113.2 crore *(previous year: Rs.112.1 crore)* and a loss after tax of Rs.2 crore *(previous year: Profit of Rs.1.1 crore)*.

Substantial increase in input costs, particularly steel, has affected profitability of the Company during 2003-2004.

With improved sales in the new model Loader Backhoe with CNH technology and the emphasis on the in-house developed Vibratory Compactors, the Company is optimistic about the performance in the coming years.

Larsen & Toubro (Saudi Arabia) LLC

The Company, a joint venture between Larsen & Toubro Limited and a Saudi entrepreneur Mr. Khalid Al-Nabet, offers turnkey solutions in civil, mechanical and electrical engineering in projects in the petrochemicals, infrastructure, buildings, factories, power transmission & distribution and telecommunication sectors.

During the year under review, the Company earned a total income of Saudi Riyal (SR) 56.0 million (previous year: SR 47.0 million) and reported a loss of SR 17 million *(previous year: Profit SR 0.9 million)*. The profitability of the year 2003-2004 was adversely impacted by rise in input costs.

The Company, with support from its sponsors has embarked on a growth plan for the next two years. It has since bagged an order for SR 108 million from M/s Marubeni Corporation for construction of a cement plant. Efforts are being made for securing other orders and to achieve reduction in operational costs.

International Seaports Pte. Limited

The Company, a joint venture with Precious Shipping Public Company Limited, Bangkok and SSA Inc., USA, was formed to provide integrated services in design, development, building and operating seaport terminals in Asia and Middle East.

The Company, through its project management subsidiary, International Seaports (India) Pvt. Ltd., has successfully bid for various port projects in Orissa, Andhra Pradesh and West Bengal, through separate project companies. The status update of these projects is as under :

The Dhamra Port Company Limited has been awarded the project for developing the existing minor port at Dhamra into a deepwater all weather port. The Project is to be taken up on a Build Own Operate Share and Transfer basis. The project suffered a setback with two of the initial promoters deciding to exit the consortium. Efforts are on to identify suitable partners to proceed with the execution. A number of international mining and metal companies have expressed interest in the development of the Port. The Company has received the necessary clearances from the Government and other regulatory agencies to go ahead with the project. The Company is working to achieve financial closure during 2004.

Kakinada Seaports Limited, a seaport development facility in Andhra Pradesh reported a total income of Rs.26.8 crore (previous year: Rs.23.6 crore) and loss of Rs.1.7 crore (previous year: Loss of Rs.1.1 crore) during the year under review. Despite improved operations, increased 'Minimum Guarantee Amount' (MGA) has adversely impacted the profitability of the Company. The railway line connectivity with the port, however, is progressing satisfactorily and the port's throughput is expected to improve considerably on its completion. The Company is confident of better performance in the coming year.

International Seaports (Haldia) Private Limited is involved in the construction and operation of Berth No. 4A at Haldia Dock Complex of Kolkata Port Trust on BOOT basis. The project was completed ahead of schedule and commercial operations commenced in January 2004. During the period under review, the Company reported a total income of Rs.7.5 crore and a loss of Rs.0.3 crore. The Company expects to achieve full berth utilization and improved financials during 2004-2005.

L&T-Crossroads Private Limited

The Company, a joint venture between Larsen & Toubro Limited and Piramal Holdings Limited, has undertaken the development and operation of a shopper-tainment-cum-parking complex at Nariman Point, South Mumbai's prime business district. The Company has entered into a sub-lease with the M.M.R.D.A. for a term of 80 years.

Construction is nearing completion and the occupation certificate and other clearances are awaited. More than 80% of the saleable area has already been sold / leased out.

Voith Paper Technology (India) Limited

The Company, a joint venture between Larsen & Toubro Limited and Voith Paper, Germany, provides to the paper industry comprehensive solutions covering the entire production process from fibre to paper. With seamless integration of products, systems and services, the Company remains the preferred process supplier for the Indian paper industry.

The Company has undertaken pioneering work in recycled fibre treatment thus conserving forest based resources. The Company has also ushered in new technologies for production of paper and board in India. Several new technology and productivity enhancement components were successfully introduced in the market.

During the year under review, the Company recorded a total income of Rs.19.8 crore *(previous year: Rs.14.3 crore)* and profit after tax of Rs.1.8 crore *(previous year: Rs.2.3 crore)*. Supported by healthy order backlog, the outlook for the Company for the year 2004-2005 is promising.