1.1 INTRODUCTION OF GLASSLINE INDUSTRY

The glassline industry has gone through tremendous changes during the last two decades. This is a fast growing industry. The glassline industry has developed as an independent sector; despite of some difficulties it paved a way for progress. Indian glassline industry now competes aggressively in foreign market also. Swiss Glascoat Equipments Limited (SGEL) and GMM Pfaudler Limited (GMM) both are shining names in the list of glassline industrial units. In a very short span of existence both these companies have showcased the true spirit of spartan by accomplishing many projects of varied nature.

SGEL and GMM are situated at Vitthal Udyognagar, Gujarat. SGEL was established in the year 1992 at G.I.D.C., V. U. Nagar and production activity commenced in December 1994. GMM was incorporated on November 17, 1962, by late Shri Jethabhai Patel at V. U. Nagar, Karamsad. In 1987 the company has entered into an investment and technical know-how agreement with Pfaudler Inc. USA, a company incorporated in the United States of America, which own 51% of total issued share capital of the company. Pfaudler Inc. is the world level company in glassline equipments. GMM is a market leader in the Glassline equipments market in India. Research has been conducted by researcher on 'Financial Statements Analysis of SGEL and GMM, Vitthal Udyognagar'. The present study is based on the data of annual reports of selected units. The period of the study is 15 years (1996-2010).

The subject, financial analysis of selected companies, is vitally important for a developing country like India. It helps in knowing financial strengths and weaknesses of the selected companies for the study under review.

I hope that this study would be useful to prospective and existing investors, creditors, management, general public and researchers to know financial position, strengths and weaknesses of glassline reactor vessels industry.
1.2  PROFILE OF GMM PFAUDLER LIMITED (GMM)

1.2.1  Introduction

GMM, Formerly Gujarat Machinery Manufacturers Limited, was incorporated in India on November 17, 1962 by Late Shri Jethabhai Patel as a private company and converted into a public company on 9th September 1963. Mr., J. V. Patel had a profound idea of setting up such unit manufacturing glassline vessels in home country. Mr. J. V. Patel has completed his studies in abroad and it is said for him that he was a genius mind. The company is a manufacturer of and dealer in various types of structural steel works, industrial machinery and glassline chemical vessels. The company is located at Vitthal Udyognagar, Anand-Sojitra Road, Karamsad.

1.2.2  History, Growth and Development of GMM

Gujarat Machinery Manufacturers Limited popularly known as GMM was incorporated in India on November 17, 1962. The company’s main manufacturing unit is located at Karamsad, Gujarat. The initial manpower was approximately 1100. The master mind behind the establishment of GMM was Mr. Jethabhai Patel, who has capability of converting an average going company into a profitable company. The company enjoys location advantages also because it is situated near the National Highway No. 8 approximately 45 kms from Baroda and 70 kms from Ahmadabad. Karamsad is the native land of Shri Jethabhai Patel. The company's principal activity is the manufacture of corrosion resistant glassline equipment used primarily in chemical, pharmaceutical and allied industries, company also manufacturer’s flouro polymer product and chemical process equipment such as agitated nutsche filters, filters driers and wiped evaporators. The company has a modern manufacturing facility on a 20 acre plot of land located at Karamsad in Gujarat state about 45 km from Vadodara.

The company has entered into an investment and technical knowhow with Pfaudler Inc. USA (Pfaudler) a company incorporated in the United States of America, which owns 51 percent of the total issued share capital of the company. Pfaudler is the world leader in Glass Lined Equipment and GMM occupies the same position in India with the market share in excess of 65% in the Glass Lined Equipment market. The company is one of the leading manufacturing of process equipments for refineries (oil and gas) fertilizers, chemicals, pharmaceuticals and allied process industries.
GMM was using its own technology for manufacturing glassline equipment but in the year 1969 they decided to produce more technological products and entered into the first collaboration with NIKES Hunger of glassline equipped. This collaboration was of five-year and ended in the year 1974. After that collaboration GMM started to search for new foreign collaboration with a well known company. In 1987, the company entered into an investment and technical knowhow agreement with Pfaudler Inc. USA. The company has also the technical knowhow agreement with Chewier Inc. USA for the manufacture of certain chemical process equipments which was ended on February 28, 2004.

Apart from the glassline equipments GMM manufactures many other process equipments for the chemical process industry. Today, throughout the world Pfaudler glass steel products are providing outstanding service in a broad range of applications in the chemical process and pharmaceutical industries. In India, 67% orders of glassline equipments are given to GMM. The company exports 10% of its turnover in Asian countries like Japan, China, Saudi Arabia, Australia etc. The company also exports to the holding companies in USA, Germany, Netherlands, Israel, Malaysia, Singapore, Indonesia and Thailand regularly.

1.2.3 Glimpse of the Company

- Name of the company : GMM Pfaudler Limited
- Year of Incorporation : 17th November, 1962
- Industry Name : Engineering Heavy
- Type of Organization: Public Limited Company
- Size of organization: Large Scale
- Email: Worksko@gmmpfaudler.co.in
- Website: www.gmmpfaudler.com

Nature of activities: GMM undertakes design and manufacture of the following equipments.
- Pressure Vessels, Heat Exchangers, Storage Tanks, Silos, Agitated Nutche Filter / Dryer, Wiped Film Evaporators, Glassline Equipments, Reactors, Storage tanks, Conical dryer, Columns, Condensers, Pipes and fittings, Mixing system which includes agitators, Reactors with agitators, Nozzle, liner, bushes etc.

Registered Office and Works: GMM Pfaudler Ltd., Vitthal Udyognagar, Karamsad - 388235, Gujarat (India).
**Main Market of the Company:** The main markets for the products of the company are in Chemical, Pharmaceuticals, Oil and Gas Refinery, Petrochemical, Agro Chemical and Fertilizers, Synthetic Fibers and Dyes.

### 1.3 PROFILE OF SWISS GLASCOAT EQUIPMENTS LIMITED (SGEL)

#### 1.3.1 Introduction

SGEL is located at G.I.D.C, Vitthal Udyognagar, near Anand. The company was incorporated on 26th August, 1991 and obtained its certificate of commencement of business on 5th March, 1992. Since its incorporation, this company has specialized in the designed and manufacture of chemical and process equipments.

#### 1.3.2 History Growth and Development of SGEL

SGEL having its registered office at H-106, GIDC, Vitthal Udyognagar, was incorporated on 26th August, 1991. It received the certificate of 1992 and actual commercial production started from September, 1994. Since its time of establishment, it was public limited firm and still up to date. The company got a license under the memorandum of agreement on 11th November, 1993.

In the beginning, the name of the company was Shri Glassteel Equipments Limited. But the company having the same name was already in the existence; subsequently the name of the company was changed to Swiss Glascoat Equipments Limited on 3rd March, 1992. The authorized share / capital of the company comprises of 5000000 equity shares of Rs. 10 each and has been issued, subscribed and paid up to the extent 5000000 shares of Rs. 10 each.

The main objects of the company is to carry on the business as manufacturers, representatives, producers, fabricators etc. of all classes, kinds, types, nature and description of glassline, exotic metals, equipments, tanks etc. The company is promoted by industrialists, businessmen and professionals.

In a very short span of the company's existence, the company has shown the real spirit of a Spartan by accomplishing many projects of varied nature. Today SGEL has emerged as a front runner of domestic glasslining / fraternity with the help of their trend selling products and services by catering to industries as diverse as from dyes to pigments, from pharmaceuticals to food processing, from chemical to pesticides, from intermediates to resins or any other conceivable corrosion prone areas in chemical processing industry.
The history of fortifying storage or process equipments with the one thing or other for different usages is more than 100 years old. SGEL was established with the technological advancement glass lining is one of the best ways that applies serves the purpose due to its inseparable characteristics. SGEL not only has a history of being a de facto leader of domestic market in design and development of reactors and vessels, but also continues to be an innovator in working out effective and efficient solution to a wide variety of applications.

To create sustain and enhance a powerful platform with a total qualitative approach, to break the monopolistic market of glassline equipments and to provide a complete range of glassline products under one roof, Swiss Glascoat equipments was established with technological development and advancement.

SGEL is managed by skillful and sensible directors who have also been its promoters having requisite expertise over their respective field which is inevitable for the success of any company SGEL is the pioneer which introduced axial propeller agitators in India. This system out performs the old style retreat curve impeller which has a lot of swirl but little mass transfer. Swiss Glascoat does not keep itself constrained to the DIN constant innovation; it tries to create its own bench mark.

Quality management system adopted by SGEL meets ISO 9001:2000 requirements. Quality management system is periodically reviewed to improve the effectiveness for commitments to constant innovations and sound business practices. Maintaining the highest standards of quality in product design, development and manufacturing, SGEL provides a unique expertise in glass lining industries. This expertise is evident in many successful Glascoat installations in various industries across the nation.

Thus, SGEL is a perfect case of alignment between quality, versatility and performance with economy.

SGEL mainly manufacturers Glassline processing equipments called reactors, storage, tanks, distillations columns, agitators, pipes and pipe fittings etc.

The company is spread across 42000 sq. m. area of fascinated landscape with an ethnic built up of administrative complex. The workshop area is encompassed within a large building which is fully equipped with the latest 'engineering facilities comprising hi-tech instruments and an advanced testing laboratory.
Today SGEL has become front runner of domestic glass lining. There are very few companies in the world who manufacture glassline reactors vessels. In India, only three companies manufacture this product. In these three GMM is the first with regard to market share and SGEL is a front runner. Since its incorporation, it has tried to increase its market share and achieve high level of efficiency and effectiveness.

1.3.3 Glimpse of the Company

- Name of the company: Swiss Glascoat Equipments Limited
- Year of Incorporation: 26th August, 1991
- Year of commencement of production: 1994
- Industry Name: Glass and Glass Products
- Type of Organization: Public Limited Company
- Size of Organization: Large Scale
- Email: marketing@glascoat.com, purchase@glascoat.com
- Website: www.glascoat.com

Nature of activities: Fabrication and glasslining of process equipment for chemical, pharmaceuticals, pesticides, dyes and intermediates food processing and allied industries.

Awards and Certificate: ISO 9001 certified by LRQA (Lloyd's register quality assurance).

Competitors and Customers: In India the company is facing competition from two competitors:

2. Navbharat India Limited, Hyderabad.

The company has customers from the field of chemicals, pharmaceuticals, petrochemicals, pesticides and fertilizers.

1.3.4 Codes and Standards

Glassline equipments are manufactured to the highest quality standards of workmanship and material. The reactors are generally as per DIN standard 28136 and manufactured in accordance with ASME code for unfired pressure vessels, section VHI Division 1. All clamps and flanges comply with ANSI / DIN standard. Equipments are also specially designed constructed to the clients own specifications.
1.3.5 Research and Development

In-house R&D department, in close association with Central Glass and Ceramic Research Institute, Calcutta, is constantly making improvements in the formulations of glass to increase its resistance to corrosive chemicals, thermal shock and abrasion.

A new version of fluorine resistance glass has also been developed. With more and more process being performed under unusual conditions, newer formulation of glass has been developed to accommodate these processes. The recently developed NUCLEA GEL-4000 exhibits exceptionally good resistance at elevated temperature. As compared to the standard glass GEL-2000 and GEL-2200, which can withstand temp up to 200°C, NUCLEA GEL-4000 has been formulated specially keeping in view unusual temperature conditions. Another significant part of a reactor is the mixer drive. The excellent design and consistent accuracy of drive component offers true running of shaft for many years. Each and every component of the drive is step mounted having machined matching faces. This facilities is quick and easy assembly / disassembly without disturbing the alignment. They are intake sense user friendly convenient to install, use and maintain.

Glascoat is the pioneer in introducing axial agitators in India. These agitators provide true axial flow for better top to bottom mixing. These outperform old style retreat curve impellers which have a lot of said but little mass transfer. The advance drive and more efficient agitator together results in lower energy consumption and reduced process time. A recent introduction has been flange mounted beaver tall baffle. These can be conveniently stalled through a nozzle from the top, without entering into the vessel or moving the contents. Flange mounting eliminates the need of stuffing box and glands. Hence, the possibility of leakage through gasket or packing is eliminated. Such baffles provide another advantage in terms of lower indium sensing volume. With constant innovation, SGEL is creating its benchmarks. Besides standard reactors, SGEL also manufacturers, air condition equipment to suit specific service conditions and to enable hassle free maintenance as per own design.

1.3.6 Quality Policy and Objectives

Glascoat's quality policy is implemented by adopting following quality objectives.

1. Offering prompt delivery and services exceeding customer expectations.
2. Meeting accelerated growth to become a market leader.
3. Adopting innovative manufacturing processes.
4. Imparting training to every employee and sub vendor of the organization to do the job 'first time the right way'.
5. Enhancing established quality standards through benchmarking.

1.3.7 Quality Objectives:

1. To manufacture & promote "Glass lined Process Equipment" for chemical, pharmaceutical, pesticide & food processing industries.
2. To provide our customers with products & services that exceeds their expectation.
3. To establish, implement and review quality management system for continual improvement to manufacture world class quality glassline equipments.
4. To ensure that the profits are shared by all those contributing to the growth of the organization.
5. To provide healthy working environment to employees & vendors.

The implementation of QMS will be reviewed periodically to improve the effectiveness of their commitment to constant innovation & spice sound business ices.

1.3.8 Products of Organization

A range of company includes glassline processing equipment such as reactors, storage tanks distillations columns, agitators, pipes and pipe fittings etc. A wide range of process equipment in glassline ion is manufactured for evaporation, crystallization, suffocation,illation, condensation, filtration, nitration and other process involving erosive chemicals.

1.4 PROFILE OF NAVBHARAT INDUSTRIAL LINING AND EQUIPMENT PRIVATE LIMITED (NILE)

1.4.1 Introduction

NILE is an ISO 9001 certified company manufacturing the world class Glassline Equipments Pressure Vessels, Lead and Lead Alloys. Nile has emerged as a leader in achieving customer satisfaction by delivering quality products, with a fervent desire to convert every customer’s relationship into a prospective partnership.

- Nile's Glass Lining and pressure vessel division is located at Nacharam Industrial estate, Hyderabad, with a covered area of 8700 sq.m. The totally integrated fabrication, machining and glass lining facilities ensure timely delivery of quality products.
• Nile has two non-ferrous plants, located at Choutuppal, near Hyderabad and Tirupathi. The combined capacity of these two plants is 32000 tons per annum.
• Nile's 2 MW Wind Farm is located at Ramagiri, Ananthapur district.

1.4.2 NILE Company History

NILE was originally incorporated as a private limited company with the name Navabharat Industrial Linings and Equipment Private Limited on 18th May, 1984 and was later converted to a public limited company with the name Navabharat Industrial Linings and Equipment Limited. The name of the company has been changed to NILE Limited with the approval of the Central Government vide fresh certificate of incorporation dated 16-09-1994.

The Company commenced commercial production in July, 1987 and has been engaged in the primary objective of manufacture of glasslining of equipment for use in the bulk drug, pesticide, insecticide, dyestuff, chemical and fine chemical industries.


Nile Ltd has appointed Sri. V Ashok as an Additional Director in the Board, with effect from July 26, 2008, who will hold the office up to the next Annual General Meeting of the company.

1.4.3 Glimpse of the Company:

• Name of the company: Navbharat India Limited.
• Year of Incorporation: 1984.
• Industry Name: NILE Limited
• Type of organization: Public Limited Company.
• Size of organization: Large Scale


1.4.5 Codes and Standards: The Board of Directors has laid down a “Code of Conduct” for all the board members and the senior management of the Company, and the
Code of Conduct has been posted on the web site of the Company. Annual declaration is obtained from every person covered by the Code of Conduct.

**1.4.6 Research and Development:** NILE Limited is an India-based company engaged in the manufacturing of glassline equipments pressure vessels, lead and lead alloys. The Company is organized into three operating divisions: Glasslining, Wind energy and Lead. The Glasslining division produces a range of glass-lined equipment. Glassline equipment is primarily used in pharmaceutical, specialty chemicals, agro chemicals and other similar industries. The Windmills generate electrical energy and the Lead division produces lead and lead alloys. Lead and lead alloys are mainly supplied to manufacturers of Lead Acid batteries, plastic stabilizers, and metal oxides. Wind energy generated is sold to Andhra Pradesh Power Coordination Committee.

**1.4.7 Quality Objectives:**

1. We are committed to achieving customer satisfaction by providing products and services that fully meet customers' needs.
2. We will strive for growth and profitability by continual improvement of our processes, products and systems with the active involvement of all employees.

**1.4.8 Products of Organization:**

Agitated Nutch Filter, CE Reactor Assembly, Condenser (Shell In Shell), Conical Dryer, Plate Type Condense, Pressure Filter.

**1.5 PROFILE OF ADOR WELDING LIMITED (AWL)**

As a pioneer of welding products, AWL has strived since 1951 to serve Indian Industry and the global market with the finest range of Welding Consumables and Equipments. We ensure the highest level of customer satisfaction via our "state of the art" manufacturing plants, knowledge based centers of excellence and a comprehensive sales & distribution network. AWL has also made large investments in Project Engineering Business.

AWL was incorporated in 1951 with an objective to offer the finest range of welding consumables and equipments. AWL has also made large investments in project engineering and manufacturing of power generators and alternators.
AWL is a total solutions provider offering an up-to-date suite of welding and cutting consumables, power sources and accessories besides a full package of soft skills and knowledge development for welding and fabrication excellence.

The company operates three divisions through which it channelizes solution based engineering experience. They are as follows:

- **Metal Joining Processes And Solutions** – This division covers the entire spectrum of metal joining processes. This includes welding, cutting and allied applications for all kinds of metals and every single industry and application.

- **Project Engineering Division** - The Project Engineering Division offers customized solutions to multi-disciplinary projects and contracts in the area of combustion engineering, thermal engineering and fabrication engineering.

- **Energy Solutions** – The Electrical or Energy Management Solutions Division offers high-end configuration of hardware and software solutions to end-users and GOEMs in power, infrastructure, telecom and other sectors.

AWL has four manufacturing plants for the production and supply of welding consumables, power sources, welding automation systems, cutting products and accessories.

The company’s three welding consumables plants are ISO 9001:2000 standard certified for quality management systems and ISO 14001:2004 standard (for environment management systems) while its equipment plant at Chinchwad is certified to ISO 9001:2000 standards.

Further, the company operates 26 area and territory offices and nine field offices. It also has strong market presence in region like the Gulf/Middle East, South East Asia and Africa.

### 1.6 PROFILE OF BHARAT BIJLEE LIMITED (BBL)

BBL is one of the leaders in the electrical engineering industry in India. A multi-product, multi-divisional organization, its main business segments are Transformers, Projects, Electric Motors, Elevator Systems and Drives.

The company's manufacturing facilities are located on a 1, 93,000 square meters campus, with a working area of approximately 50,000 square meters, in Airoli (Navi Mumbai).
Headquartered in Mumbai, BBL has branches in thirteen Indian cities. Building on diverse engineering and managerial capabilities, BBL has maintained a strong growth path, consistent with its philosophy of keeping customer and quality as key business drivers.

Its position as a pioneer and a leading indigenous manufacturer of electrical and related equipment in India has been well protected through a combination of astute strategic planning and cutting edge technology.

Technology breakthroughs, anticipating marketing needs, keen customer focus and uncompromising thrust on product quality remain the driving forces for future growth and expansion.

It is our emphasis on quality that enables us to have one of the highest levels of "repeat-orders" in the industry.

BBL was born in 1946 with a small investment, few people, big dreams and colossal determination to succeed. The impetus was to substitute the import of electric motors with indigenous manufacture. The spirit that would guide and propel future success was inherent in all decisions taken this point on. In 1954 BBL started the manufacture of power transformers. These would become in time one of the company's key competencies. Transformer production begins.

Laying the foundation of this critical competency was a comprehensive technical collaboration for the manufacture of transformers and motors finalized with Siemens AG, in 1958. In 1965, with technical help from Siemen's BBL set up its new, sophisticated manufacturing plant at Airoli (Navi Mumbai) to produce transformers and motors. 1973 saw BBL diversifying into the manufacture and installation of Olympus elevators. In 2004, this business was divested to a subsidiary of Kone Elevators India Pvt. Ltd. It served however to give us the knowhow and experience in vertical transportation that would later help us build new business on the back of this. The transformation from a functional to a product divisional organization fosters business focus and market-orientation. The first 220 kV transformers have been delivered. Commencement of Projects Division to undertake turnkey electrical projects involves EHV-substations and industrial electrification.

In 1985, inherent synergies and the growing engineering skills in power equipment manufacture led to the formation of an independent Projects Division to design, install
and commission High Tension electrical switchyards and distribution systems on turn-key basis. The millionth motor is sold. Schindler collaboration: Ten-year collaboration for elevators is formed with the Swiss Schindler group. Golden Jubilee: Fifty years of enterprise, focus and dedication in putting technology to work. Divestment of Elevator operations: The Elevator field operations business is divested to a subsidiary of Kone Elevators (India) Pvt. Ltd. PWRLX: A world class facility for Transformers is commissioned tripling manufacturing capacity and increasing the range. BBL receives the coveted Forbes Asia's 'Best under a Billion' Company Award.

1.7 PROFILE OF CARBORUNDUM UNIVERSAL LIMITED (CUMI)

CUMI was founded in 1954 as a tripartite collaboration between the Murugappa Group, The Carborundum Co., USA and the Universal Grinding Wheel Co. Ltd., U.K.

The company pioneered the manufacture of Coated Abrasives and Bonded Abrasives in India in addition to the manufacture of Super Refractories, Electro Minerals, Industrial Ceramics and Ceramic Fibers. Today the company's range of over 20,000 different varieties of abrasives, refractory products and electro-minerals are manufactured in ten locations across various parts of the country.

With state-of-the art facilities and strategic alliances with global partners, CUMI has achieved a reputation for quality and innovation. CUMI is one of the five manufacturers in the world with fully integrated operations that include mining, fusioning, wind and hydro power stations, manufacturing, marketing and distribution.

Almost all of CUMI's ten manufacturing facilities have received the ISO 9001:2000 accreditation for quality standards. A well connected marketing and distribution network of offices and warehouses in India and abroad ensure that service to customers is given prime importance.

CUMI's constant innovation and product upgradation, through in-house R&D and strategic alliances with global leaders in grinding technology, have not only ensured its market leadership in India and abroad, but also international recognition as a manufacturer of quality abrasives and a provider of total grinding solutions.

CUMI's products are being exported to 43 countries spread across North America, Europe, Australia, South Africa and Asia.
1.8 PROFILE OF CROMPTON GREAVES LIMITED (CG)

As one of the world’s leading engineering corporations, Crompton Greaves provides end-to-end solutions, helping its customers use electrical power effectively and increase industrial productivity with sustainability. CG was established in 1937 in India; and, since then the Company has been a pioneer and has retained its leadership position in the management and application of electrical energy.

Its unique and diverse portfolio ranges from transformers, switchgear, circuit breakers, network protection & control gear, project engineering, HT and LT motors, drives, lighting, fans, pumps and consumer appliances and turnkey solutions in all these areas; thus enhancing many aspects of industrial and personal life. This portfolio has been structured into 3 SBUs - Power Systems, Industrial Systems and Consumer Products. For details please refer to the panel on the right.

Since 2005, CG has embarked upon an ambitious globalization strategy, growing both organically and inorganically, drawing into its fold leading international companies such as Pauwels, Ganz, Microsol, Sonomatra, MSE and PTS. Consequent to this globalization, CG now enjoys manufacturing bases in Belgium, Canada, Hungary, Indonesia, Ireland, France, UK and US, in addition to more than twenty manufacturing locations in India, employing more than 8000 employees worldwide with diverse nationalities and cultures. A worldwide marketing network of more than 150 representatives spans the globe, offering the entire range of CG’s products, solutions and services.

CG has been aggressively investing in R&D, product certifications, product quality, productivity enhancement and operational excellence. CG’s Global R&D centre, located in India, has been recognized for its innovation and received the prestigious "National Award for the Best R&D Efforts" for its outstanding achievements in the Electrical Engineering Sector in 2008. CG’s R&D strategy aligns with the Company’s Global Vision, and focuses on creating platform technologies, shrinking product development cycle time and enhancing CG’s Intellectual Property capital.

To unify global focus, all CG facilities across the world have taken actions to ensure that customers receive consistent "One World Quality", for all CG products and solutions in all parts of the world.
1.9 PROFILE OF ELECON ENGINEERING COMPANY LIMITED (ELECON)

ELECON was established in the year 1951. Since then it has been cast in the mould of a pioneer, setting trailblazing standards of technical excellence scaling new heights in its determination to deliver the best from elevators, conveyors and gears to material handling plants. For over 5 decades, ELECON has supplied hi-tech equipment to major core sectors such as steel, fertilizers, cement, coal, lignite and iron ore mines, sugar, power stations and port mechanization in India and abroad.

Established in 1951, ELECON, India, pioneered breakthrough innovations in the manufacture of material handling equipment, industrial Geared Motors (Products of PBL) and reducers, mining equipment, casting processes etc. ELECON is one of the largest manufacturers of MHE and Industrial gears in Asia. ELECON's recent acquisition of Benzlers - Radicon Group of businesses from David Brown Gear Systems Group adds to the expertise in manufacturing customized gearboxes for Steel Mills, High speed Turbines, satellites for Indian Space Research Program and Naval aircraft carriers.

During the span of 6 decades, ELECON has encompassed all the major core sectors through its supplies of highly sophisticated equipment bearing ample testimony of the symbolic mark of ELECON's unbeatable technology. ELECON has thus with its marketing network and execution capabilities, made its presence felt through consistent and satisfactory performance of its equipment and successful delivery of projects in core sectors as fertilizer, cement, coal, power generation, mining, chemical, steel, port mechanization, minerals & metals processing, etc.

ELECON has expanded its skills and expertise to execute EPC contracts and has successfully executed several EPC projects in India. ELECON has transformed into a fully integrated EPC company in areas of its specialization. Soon after India’s independence, ELECON starting making its presence felt in industrial scenario in the most productive and enriching manner. This process has its root as far back as 1951.

A small beginning that was destined to have a glorious present and spectacular future was made in 1951 in Bombay by a dynamic visionary late Shri Ishwarbhai B. Patel. A small firm indigenously manufacturing conveying equipments started spreading its wings in the area so far unexplored, resulting in valuable savings in foreign exchange outflow. With
obvious increase in business operations, it was converted into a Private Limited Company on 11th January 1960.

On formation of a separate Gujarat State in May 1960, with a view to contribute towards the development of home-land Gujarat, ELECON shifted its base to Vallabh Vidaynagar, and became a Public Limited Company soon after.

1.10 PROFILE OF ESSAR STEEL LIMITED (ESSAR)

The Essar Group is a multinational conglomerate and a leading player in the sectors of steel, oil and gas, power, communications and business process outsourcing (BPO), shipping, ports and logistics, projects, and minerals. With operations in more than 25 countries across five continents, the group employs 75,000 people, with revenues of USD 17 billion. With manufacturing facilities in India, Indonesia, Canada and North America, ESSAR is a global steel producer with a capacity of 14 million tones. The company is fully integrated, from iron ore mining to steel retail. It operates specialized plants to manufacture value-added products like plates and pipes. It is also a leader in cold rolled, galvanized and pre-coated steel products. ESSAR operates a global steel retailing and processing network that spans India, Indonesia, UAE and the UK.

**Essar Oil** is an end-to-end player in the oil and gas sector from exploration to refining to retail. It owns a portfolio of 17 onshore and offshore oil and gas blocks in Asia, Africa and Australia. The company is a leader in the exploration of coal bed methane gas. Essar Oil has 300,000 barrels per stream day (bpsd) refinery at Vadinar in Gujarat, India. This refinery is being expanded to 405,000 bpsd, with the complexity being enhanced by almost double. The company has a 50 percent stake in an 80,000-bpsd refinery in Kenya. Essar Oil is also among the leading oil retailers in India with over 1,370 outlets, which is being expanded to 1,700 outlets.

**Vision:** We will be a respected global entrepreneur, through the power of positive action.

**Our mission:** We are committed to innovative growth, through our personal passion, reinforced by a professional mindset, creating value for all those we touch.

1.11 PROFILE OF JINDAL STEEL AND POWER LIMITED (JSPL)

JSPL is one of India’s major steel producers with a significant presence in sectors like Mining, Power Generation and Infrastructure.
With an annual turnover of over US $2.9 billion, JSPL is a part of the about US $ 15 billion diversified O. P. Jindal Group and is consistently tapping new opportunities by increasing production capacity, diversifying investments, and leveraging its core capabilities to venture into new businesses. The company has committed investments exceeding US$ 30 billion in the future and has several business initiatives running simultaneously across continents.

Mr. Naveen Jindal, the youngest son of the legendary late Shri. O. P. Jindal spearheads JSPL and its group companies. The company produces economical and efficient steel and power through backward integration from its captive coal and iron-ore mines.

From the widest flat products to a whole range of long products, JSPL today sports a product portfolio that caters to varied needs in the steel market. The company also has the distinction of producing the world’s longest 121 metre rails and introducing large size parallel flange beams in India.

JSPL operates the largest coal-based sponge iron plant in the world and has an installed capacity of 3 MTPA of steel at Raigarh in Chhattisgarh. With a 0.6 MTPA wire rod mill and a one million tone capacity bar mill at Patratu, Jharkhand and a medium and light structural mill at Raigarh, Chhattisgarh, JSPL will shortly be commissioning a plate mill to produce upto 5.00 metre wide plates at Angul, Odisha. The company aims for a fast-paced growth so as to contribute substantially to India’s long term prosperity.

An enterprising spirit and the ability to discern future trends have been the driving force behind the company’s remarkable growth story. The company has scaled new heights with the combined force of innovation, adaptation of new technology and the collective skills of its 15,000 strong, committed workforce.

And the recognition it has received only further lends credence to this. JSPL has recently been rated as the second highest value creator in the world by Boston Consulting Group; 11th fastest growing company in India by Business World; included in one of the Fab 50 Companies by Forbes Asia, 2009 and 2010; one of the Best Blue Chip companies as well as the Highest Wealth Creator by the Dalal Street Journal. It has also been ranked fourth as per Total Income in the Iron and Steel sector by Dun & Bradstreet.
1.12 PROFILE OF REMI METALS GUJARAT LIMITED (REMI)

Founded in 1960, REMI has diversified into a multi-product group involved in the manufacture of Alloy, Stainless Steel Tubes and Pipes.

With a huge manufacturing base and extensive distribution network, REMI is capable of technically supporting and providing expertise to its valued customers. Having diversified manufacturing activities REMI always stood firm in its commitment to provide real value-for-money to its customer. REMI is the only integrated facility for making steel and seamless pipes/tubes in India at Jhagadia near Bharuch (Gujarat) having steel making capacity of 1.55 Lacs Mt per annum and seamless tube manufacturing capacity of 50000 TPA. REMI is equipped with the latest Testing and R&D facilities.

It may be noted that Welspun Group has done a strategic investment with REMI in 2008. We are currently producing forging quality and engineering grade steel, Carbon and alloy Steels used mainly for Auto-manufacturing / auto components, Oil and Gas, Energy and other engineering applications as per IS, BS, AISI/SAE, DIN, JIS,GOST specifications or as per customer’s specific requirements.

Vision: REMI would like to be the world class Quality Manufacturer of high end Alloy & Stainless Steel products and - Alloy & Stainless Seamless Pipes and Tubes.

Mission: We would Continuously reinforce our position through our multi-faceted innovations and customer centric satisfaction and supplying our products in diversified value added segments both in Domestic and Export Markets and thus would live upto the expectations of all our stake-holders.

1.13 PROFILE OF GEE LIMITED

The Year 1969 witnessed the formation of an ambitious venture in the welding industry, GEE Limited in technical collaboration with M/s Greisheim GmbH, Frankfurt, Germany. The welding electrode manufacturing plant at Thane marked the formation of a global brand. Innovation being the commitment, contributions made by GEE Limited towards the advancement of welding industry was phenomenal in terms of welding technology and metallurgy. This future ready approach was recognized with the ISO 9001:2000 certification and numerous other approvals on standard and quality. A result of inspiration to transform the brand equity into a new progressive identity, GEE Limited is proud to present GWELD. GWELD takes pride in the rapid strides in terms of product portfolio,
expansion, production, sales and support services in a reasonable period of time. An in-house R&D, global networking and documentation systems solve any welding problems. GWELD electrodes, wires and fluxes benefit from a global presence because of its innovative approach and uncompromised quality standards. GWELD looks ahead with a commitment to provide welding solutions to our rapidly expanding industries. Our endeavor is to contribute to the country's consolidation as an industrial superpower in the world map.

1.14 PROFILE OF STEEL AUTHORITY OF INDIA LIMITED (SAIL)

SAIL is the leading steel-making company in India. It is a fully integrated iron and steel maker, producing both basic and special steels for domestic construction, engineering, power, railway, automotive and defence industries and for sale in export markets. SAIL is also among the five Maharatnas of the country's Central Public Sector Enterprises.

SAIL manufactures and sells a broad range of steel products, including hot and cold rolled sheets and coils, galvanized sheets, electrical sheets, structural’s, railway products, plates, bars and rods, stainless steel and other alloy steels. SAIL produces iron and steel at five integrated plants and three special steel plants, located principally in the eastern and central regions of India and situated close to domestic sources of raw materials, including the Company's iron ore, limestone and dolomite mines. The company has the distinction of being India’s second largest producer of iron ore and of having the country’s second largest mines network. This gives SAIL a competitive edge in terms of captive availability of iron ore, limestone, and dolomite which are inputs for steel making.

SAIL’s wide ranges of long and flat steel products are much in demand in the domestic as well as the international market. This vital responsibility is carried out by SAIL’s own Central Marketing Organization (CMO) that transacts business through its network of 37 Branch Sales Offices spread across the four regions, 25 Departmental Warehouses, 42 Consignment Agents and 27 Customer Contact Offices. CMO’s domestic marketing effort is supplemented by its ever widening network of rural dealers who meet the demands of the smallest customers in the remotest corners of the country. With the total number of dealers over 2000, SAIL's wide marketing spread ensures availability of quality steel in virtually all the districts of the country.
SAIL’s International Trade Division (ITD), in New Delhi- an ISO 9001:2000 accredited unit of CMO, undertakes exports of Mild Steel products and Pig Iron from SAIL’s five integrated steel plants.

With technical and managerial expertise and know-how in steel making gained over four decades, SAIL’s Consultancy Division (SAILCON) at New Delhi offers services and consultancy to clients world-wide.

SAIL has a well-equipped Research and Development Centre for Iron and Steel (RDCIS) at Ranchi which helps to produce quality steel and develop new technologies for the steel industry. Besides, SAIL has its own in-house Centre for Engineering and Technology (CET), Management Training Institute (MTI) and Safety Organization at Ranchi. Our captive mines are under the control of the Raw Materials Division in Kolkata. The Environment Management Division and Growth Division of SAIL operate from their headquarters in Kolkata. Almost all our plants and major units are ISO Certified.
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