



GODREJ & BOYCE MFG. CO. LTD

Pirojshanagar, Vikhroli – Mumbai (Maharashtra)

COMPANY PROFILE

What's in a name, you might ask. Until you come across one that evokes pride and confidence in the heart of every Indian, seemingly blessed with a rare, almost magical, power.

It is the name **GODREJ**.

Company celebrated its centenary in 1997. This indomitable force was born in 1897, when a young man called **Ardeshir Godrej** gave up law and turned to lock making. He was the first Indian manufacturer to displace well-entrenched foreign brands from the market.

The word Godrej, etched into the metal of his locks, became a symbol of self reliance for the generations that followed. With each new product Ardeshir changed perceptions about industries in India. He produced the finest security equipment, and then stunned the world by creating a soap from vegetable oils. What started as a dream had become a movement. But it was left to another man to carry it forward.

Ardeshir's brother, **Pirojsha Godrej** laid the foundation for throbbing enterprise at a sprawling industrial garden township (ISO-14001-certified) outside Mumbai. It was here that the Godrej vision took concrete shape & became a vibrant, multi-business enterprise. In latter years its extent and scope was expanded greatly by his sons – Burjorji and Naoroji.

To this day, products that compete with the best in the world continue to emerge from the gates of Pirojshanagar. Godrej touches the lives of millions of Indians every day. To them, it is a symbol of enduring ideals in a changing world. Every product, every new concept gives shape to their visions of tomorrow. The Godrej name wields powerful influence even in today's rapidly transforming social and economic environment. As it strides ahead confidently, discovering diverse new roles for itself, it gives direction to others. Godrej. It is the bridge between the future and hundreds of years of history. **It is a living code of ethics for Indian industry as it races ahead.**



MISSION

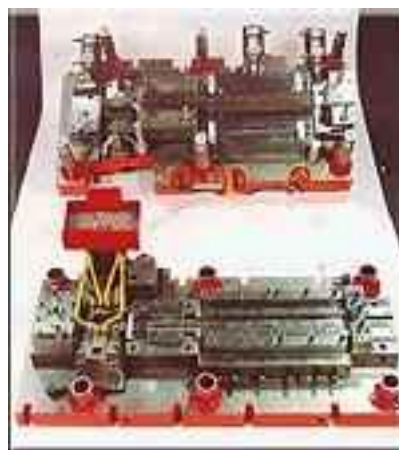
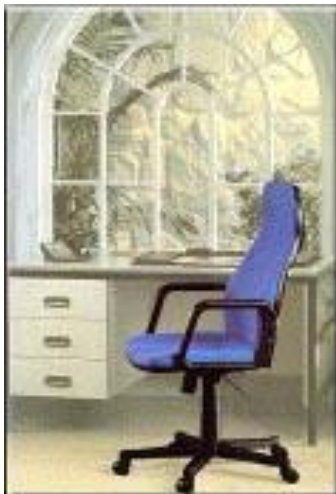
Enriching Quality Of Life Everyday Everywhere

VALUES

Integrity, Trust, To Serve, Respect, Environment

VISION

Godrej In Every Home And Work Place



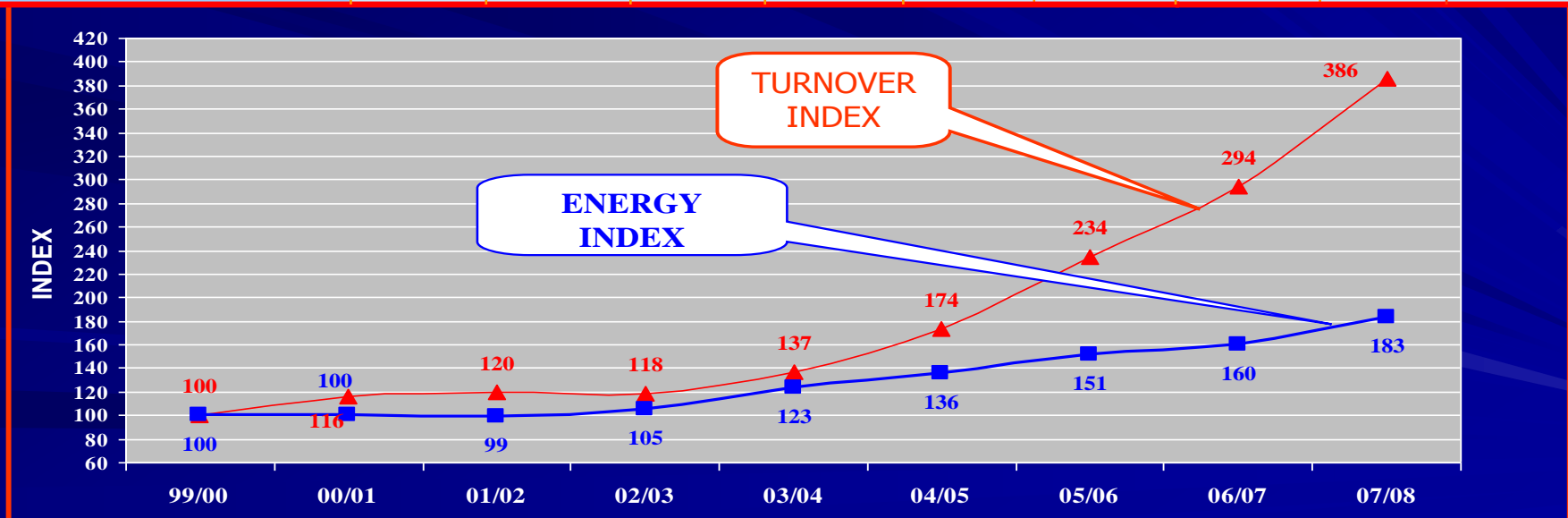
BUSINESS PROFILE

DIVISION	PRODUCTS
Appliances	Refrigerators & Washing M/Cs.
Furniture & Interiors	Off. & Home Furniture, Off. & Home Storewels, Seating And Desking Systems, Personal/Industrial Lockers, Filling Cabinets Etc.
Locks	Padlocks, Cylindrical Locks, Electromechanical Door Locks And Related Hardware
Storage Solutions	Multiples & Heavy Duty Storage Systems Etc.
Prima Communication Solutions	Multimedia, Slide & Overhead Projectors, Video & Teleconferencing Equipment, Fax, Photocopiers, Vending M/Cs. & Typewriters
Industrial Products	Precision Toolings, Spms Etc.
Process Plant & Equipment	Pressure Vessels, Columns, Reactors, Electro Polished Reactors, Shell & Tube Heat Exchangers
Material Handling Equipment	Forklift Trucks Etc.
Consruction & Real Estate	Ready Mix Concrete, Const. Projects, Horticulture & Envirotech Services
Electrical & Electronic Services	Electrical Power Distribution System, Compressed Air Control System, Electronic Technology Solution Provider (Hardware, Software, Retrofitting Etc). Energy Conservation and Green Building Commissioning, Facilitation & Energy Modeling

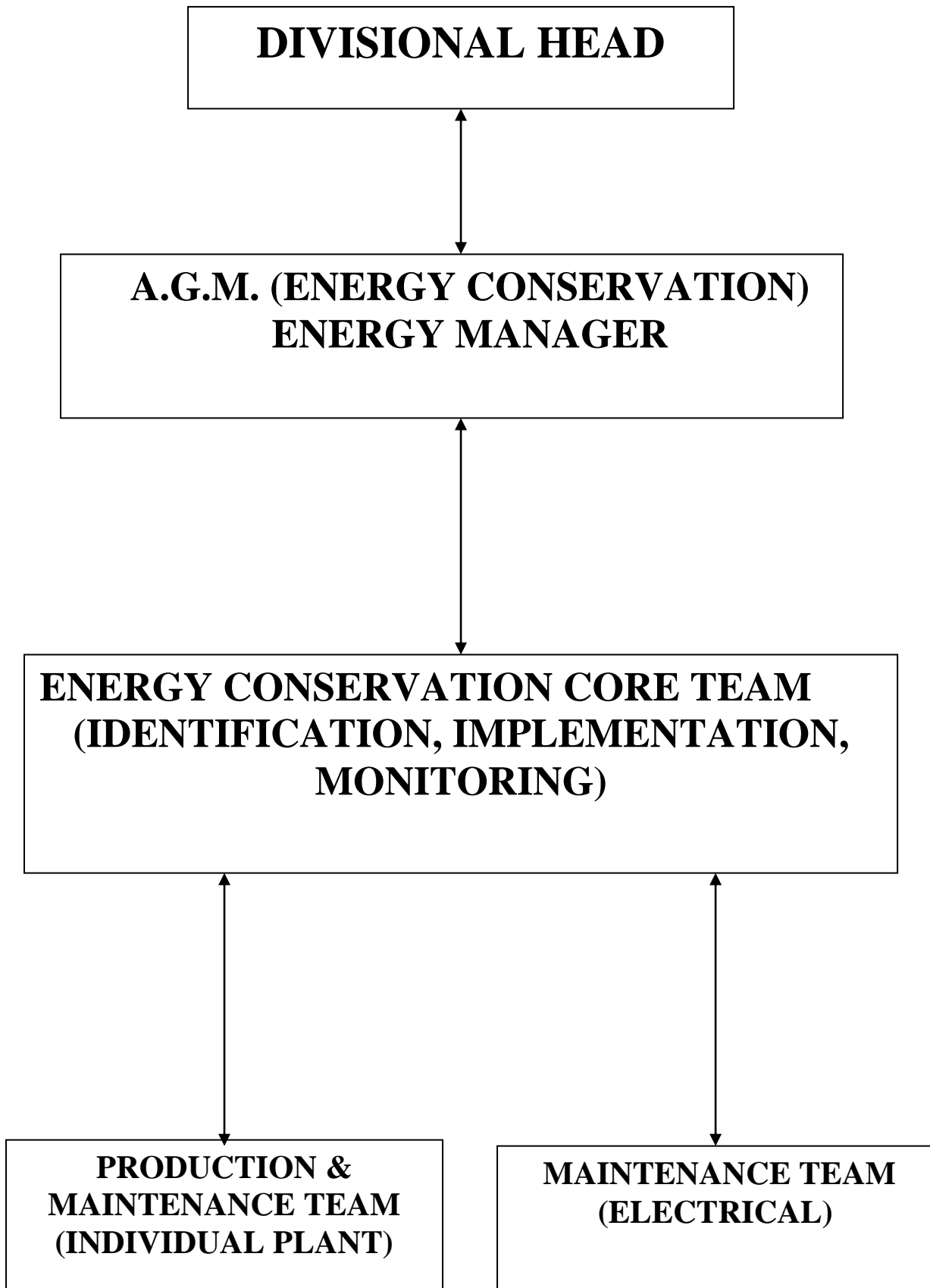
AN OVERVIEW OF SPECIFIC ENERGY CONSUMPTION

ANNEXURE A5

YEAR	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08
TURNOVER (Rs. Crores)	670	779	805	793	921	1165	1568	1970	2583
TURNOVER INDEX	100	116	120	118	137	174	234	294	386
ENERGY CONSUMED (MWH)	22803	22871	22684	23836	28000	30931	34359	39419	41741
ENERGY INDEX	100	100	99	105	123	136	151	160	183



Energy Conservation Team Structure





GODREJ & BOYCE MFG. CO. LTD.

Pirojshanagar, Vikhroli, Mumbai 400 079

CORPORATE ENERGY POLICY

GODREJ is committed to energy conservation, environmental protection, and profitable growth through sustainable development. We are in the business of manufacturing, marketing and servicing a wide range of appliances and other consumer durables, industrial products, high-precision components, electrical and electronics products, and property development. We are committed to continuously improve the Energy performance in all our activities, products and services. We will continue to ensure that our operations comply with all local, state and central statutes, rules and standards, relating to energy efficiency and energy conservation.

We will continue to inculcate energy awareness amongst our employees, business partners and local communities through the process of communication, education and participation, and we will strive for:

- Adoption of appropriate energy conservation technologies.
- Greater efficiency in in-house energy generation, and distribution.
- Adoption of appropriate technologies to enable our customers to benefit from higher energy performance standards of our products and equipment.
- Adoption of appropriate energy-efficient technologies, equipment and processes for all new projects.
- Closely monitoring and controlling energy consumption by more effective energy management systems.
- Benchmarking of energy consumption levels in different businesses with the best-in-class.
- Maximizing the recovery of waste energy.
- Periodic internal and external energy audits to identify and communicate opportunities for improvements and energy conservation.
- Recognizing and rewarding the efforts of our employees in energy conservation initiatives, and sharing and enriching our experiences in energy conservation within the Company and the Group.

We are committed to reduce our specific energy consumption by at least 1% every year till 2010.

July, 2005

J.N. GODREJ
Chairman & Managing Director

Details about one innovative project implemented in last 3 years

1. Tool Room Division has CNC machines which are housed in Central Air conditioned space.

For Accuracy and reliability of machining Air Conditioning play is very critical to its operation. Operation is 24 x 7 basis. Expansion of operation took place in phase manner hence even the AC systems was added in phase manner and is more than 20 years old.



We consider execution of the said Project to be unique and innovative because

1. Post Energy Audit, Existing AC System being very old could have scrapped and gone in for entire new system, because of the financial constrains it was decided to reuse whatever is possible and optimize on Energy keeping in mind the financial implications.
2. Changed over from DX-System to Chilled Water System without shutdown affecting the Process.

Meticulous Planning, Co-ordination with HVAC contractors, Electrical Contractors, Piping Contractors was done By ENCON section.

3. Retained all High Value items like, Existing Compressors (Compressors were overhauled in-house), Electrical Motors, Condensers, Air Handling units & Cooling Towers.
4. Only New Chillers and Electrical Controls for the same were purchased & installed.
5. Entire Design of PCC, MCC, Programming of PLC, installation, Commissioning, Testing of allied Controls was executed by ENCON section.
6. VFDs for AHUs, Pumps also incorporated to enhance the Energy Saving measures

Apart from Energy Savings additional Benefit derived from the New System

1. Enhancement of Reliability of equipments and ease of Maintenance of the system.
2. Improvised Controls and Protection of the equipment
3. Ease in fault-finding
4. Flexibility in operation of the system
5. Redundancy in case of failure of one of the Compressor

7. Project: In-house development of 'Real Time Switch with Light Sensing Feature'

Overhead Lights on the Shop-floor remain on even when there is sufficient light on the shop-floor. It is very difficult to police the entire process of shutting off the lights on the shop-floor when not required.

Suggestion: Developed a Real Time Switch which operates on combination of Principle of Real Time & Day Light Sensing.

Implementation: Input given to the Vendor, Prototype unit developed, Trial taken, Debugging of the Program done and Field Trial taken by installing the unit on Shop-floor.

We had to convince, train the people not to bypass the unit but give time to time feedback on the performance of the unit.

Fine tuning of sensing device, its location etc was done at site with help of the Vendor and inputs from Shop-floor Team members.

Successfully installed 5 units at different Locations.



Some major projects done in year 2007-2008



RECIPROCATING CHILLER IN HVAC SYSTEMS WERE REPLACED BY SCREW TYPE CHILLERS FOR ALL THE NEW AC PROJECTS.

Energy Savings per annum: 710,000 kWh.

Energy Savings (In Rupees): Rs. 4,743,317.

Investment: Rs. 1 Crores



REPLACEMENT OF 250WATT HPSV BY 4X36 WATT TUBE LIGHT FIXTURE

**Energy Saving per Annum:
9,600kWh**

**Energy Savings (In Rupees): Rs.
62,400**

**Investment: Rs.
60,000**

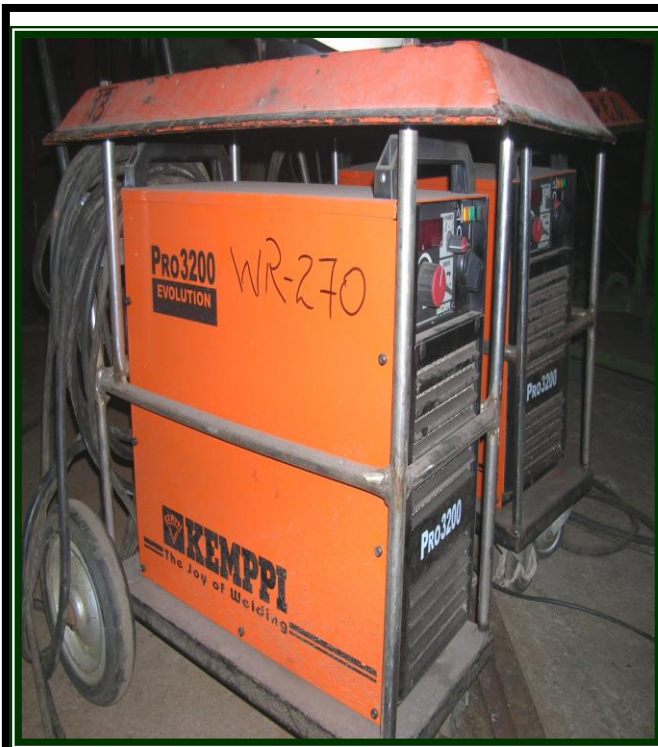


**ENERGY SAVING BY INSTALLATION
OF VARIABLE FREQUENCY DRIVES
ON LOWERS & PUMPS.**

Energy Saving / Annum: 95,300 kWh

Energy Savings (In Rs): Rs. 619,463

Investment: Rs. 335,000



**REPLACE THYRISTOR BASED
WELDING MACHINE BY INVERTER
BASED WELDING MACHINE**

Energy Savings / annum: 17,230 kWh.

Energy Savings (In Rs): Rs. 100,000

Investment: Rs. 111,995

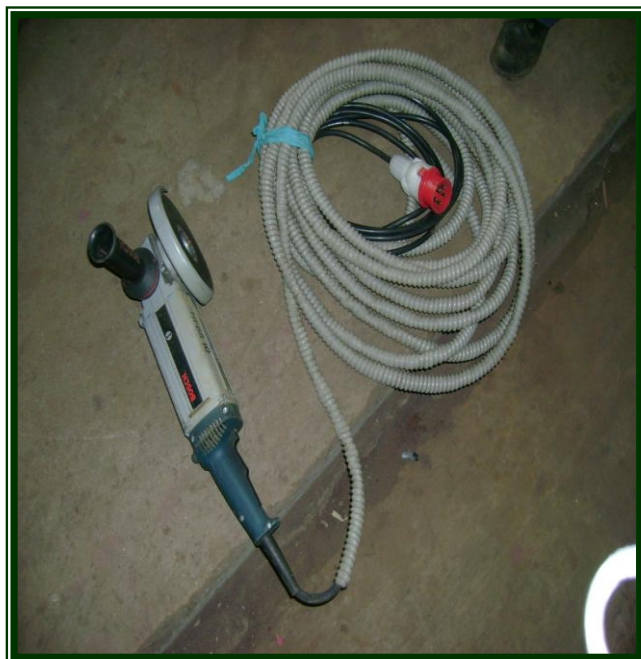


**REPLACEMENT OF 250WATT HPSV BY
METAL HALIDE LAMPS**

Energy Savings / annum: 47,399 kWh.

Energy Savings (In Rs): Rs. 308,094

Investment: Rs. 300,000



**REPLACEMENT OF PNUMATIC
GRINDER BY HIH FREQUENY GRIDER**

Energy Savings /annum: 52,564 kWh.

Energy Savings (In Rs): Rs. 341,666.

Investment: Rs. 500,000

8. Project: In-house Development of BMS for HVAC application
 There are more than 60 HVAC Centralized systems operational in Godrej.
 HVAC system is Chilled water type and DX type.

There was a need to integrate the entire system (Temp. Pressure, Status, Timing control etc) and have a central control for operating these system.

Temp. & Pressure Controllers and Digital I/O Converters were developed having a feature of RS485 port and Modbus protocol.

Indusoft Software was purchased and custom made screens were developed.
 Software was interfaced with Controllers and Converters to acquire the data and also send back the same.

