

**ANNEXURE TO THE DIRECTORS' REPORT**

Information under section 217 (1) (e) of the Companies Act, 1956 read with the Companies (Disclosure of Particulars in the Report of Board of Directors) Rules, 1988 and forming part of the Directors' Report for the fifteen months period ended March 31, 2010.

**I. CONSERVATION OF ENERGY:**
**(1) Energy conservation measures taken:**

The Company has for many years now been laying great emphasis on the Conservation of energy and has taken several measures including regular monitoring of consumption, reduction of transmission losses and improved maintenance of systems. Some of the more significant projects implemented on a continuous basis are:

- Ejector system to generate vacuum for separation of capsules in Capsule filing machine instead of compressed air.
- Cooling tower fan operation with thermostatic control.
- Commissioning of Condensate Recovery System
- Effimax system installed for boiler resulting into fuel savings.
- Frequency drive installed at air compressor.
- CT Ensaver installed on process & utility tower fan.
- Motors taking less than 50% load and having low factor are switched from delta to star connection.
- PLC based Automation system for Chilling plant implemented.
- Installed separate cooling tower for utility with low head pumps.
- Energy Saving Device and temperature controllers installed for optimizing the running time of the cooling towers.
- Installation and commissioning of variable frequency drive for equipments like Reactors etc.
- Installation of energy saving lights & Street light auto control on timers.
- Replaced cooling tower (conventional casting) blades with ABS (Acrylo Nitrile Butyl Styrene) blades.
- Installation of Pressure Reducing Valve (PRV) Station for Low pressure Steam Headers.
- Automation of Vacuum System with Solenoid Operated Valves and Steam Lines with Ph Meters.
- Maintained power factor at 0.99.

**(2) Additional Investments and proposals being implemented for reduction of energy consumption.**

- Express Feeder Project (continuous water supply) being implemented at the Company's manufacturing unit at Waluj. This will reduce consumption of HSD 700 DG set and there would be uninterrupted water supply.

**(3) Impact of measures taken at (1) and (2) above**

The adoption of Energy Conservation measures of the type indicated above have resulted in significant savings, which have been reflected in the cost of production over the years.

**(4) Total energy consumption and Energy Consumption per unit of production:**

	Fifteen months Ended 31-03-2010	Twelve Months Ended 31-12-2008
<b>A. Power &amp; Fuel Consumption</b>		
<b>1. Electricity</b>		
a. Purchased		
Units (in million)	51.89	44.59
Total Amount ₹ in millions	258.24	196.40
Rate/Unit in ₹	4.98	4.40
b. Own Generation		
(i) Through Diesel Generator		
Units (in million)	1.07	2.34
Units per litre of Diesel oil	3.20	3.26
Cost/Unit in ₹	10.99	11.77

	Fifteen months Ended 31-03-2010	Twelve Months Ended 31-12-2008
(ii) Through Gas Generator Units (in million)	7.99	8.52
Units per M <sup>3</sup> of Gas	2.99	2.92
Cost/Unit in ₹	4.59	3.94
<b>2. Furnace Oil, LSHS, LDO &amp; HSD</b>		
Quantity (Kilo-litres)	2,981.23	2,891.00
Total Amount ₹ in millions	63.20	89.83
Average Rate (in litres)	21.20	31.07
<b>3. Natural Gas</b>		
Quantity (Unit NM <sup>3</sup> )(in million)	2.67	2.91
Total Amount ₹ in millions	87.41	59.42
Average Rate (₹/100NM <sup>3</sup> )	1,374.00	1,152.00

#### B. Consumption per unit of production:

The consumption per unit depends on the product mix since it consists of different types of products. Hence, there is no specific standard.

## II. TECHNOLOGY ABSORPTION:

### Research & Development (R&D)

#### 1. Specific areas in which R & D is carried out by the Company:

##### Spearheading Research & Development

Innovation is a hallmark at Wockhardt. Today the company has a multi-disciplinary, multi-location R&D programme of global dimension with more than 500 scientists, including 100 doctorates applying their technical expertise in a variety of research endeavour.

##### Biotechnology & Genomics Research

- First mover in India in Biotechnology & Genomics Research. Its growth in the field of biotechnology has been unrivalled in pace and dimension.
- With increasing concern for diabetes in India, Wockhardt is first in Asia and also first outside US and Europe to manufacture and market its own recombinant Human Insulin-Wosulin. Wosulin has been approved in 27 countries and is also available in the form of reusable and disposable pen, an innovative delivery device patented by the Company, for the convenience of diabetic patients.
- Yet another breakthrough in the field of biotechnology for the company is the development and launch of the long acting insulin analogue glargine, under the brand name Glaritus in India. The Company is first in the world after innovator, to have developed and launched this product.

##### New Drug Discovery Programme

The New Drug Discovery programme of anti-infectives is progressing well as WCK 771 has completed Phase II human clinical trial and the oral pro drug WCK 2349 has very recently undergone successful Phase I human clinical trial. Besides, the company also has in the pipeline new lead molecules for pre-clinical studies, particularly noteworthy is WCK 4873 which is undergoing regulatory IND enabling toxicology studies.

### Novel Drug Delivery Systems

Wockhardt has developed and introduced in India several products based on Novel Drug Delivery Systems [NDDS]. The technology ensures better release pattern, greater effectiveness and better patient compliance.

### Research Efforts for Unique ANDAs Pipeline

Wockhardt invests heavily in its R&D, particularly for the US market, the potential of which is very significant. The company actively pursues its research activities in filing Abbreviated New Drug Applications (ANDAs) for US FDA approvals. Differentiation is one of the rudiments that success thrives on and the company strategically selects difficult to develop, high technology products and niche products to get ANDA approvals. This becomes one of the important growth drivers for the company in the United States. Moreover, this facilitates in gaining significant market shares in the specialised therapy and has relatively less competition. Wockhardt is amongst Top-5 companies globally to have received highest number of ANDA approvals in a single year. During the fifteen months period ended March 31, 2010 we received 21 approvals from the US FDA. Currently the Company markets over 60 products in the US.

### Patents

The Company's efforts in innovative research globally is well reflected in the number of patents filed so far, which is 1,225. During the period under review, the Company filed 94 Patents. As of now, 72 Patents have been granted.

**Technology Improvement in Fermentation, Chemical and Pharmaceuticals:** Major technology improvement on a continuous basis is undertaken, which has resulted in cost saving.

#### 2. Benefits derived as a result of above R&D:

Manufacturing process developed in in-house R&D have commercialised at various manufacturing factories of the Company. R&D efforts have resulted in import substitution of various high value bulk drugs as well as formulations.

#### 3. Future plan of action:

- Development of formulations on new molecules belonging to various categories.
- Research in the field of herbal medicines will enable the Company to introduce herbal Ayurvedic drugs in the treatment of diseases for which allopathic treatments are not available or side effects are too many.

#### 4. Expenditure on R&D:

	Fifteen Months Ended 31-03-2010	Twelve Months Ended 31-12-2008
(₹ in million)		
<b>Wockhardt Limited – Standalone</b>		
(a) Capital	799.58	804.95
(b) Revenue	399.08	299.68
(c) Total	1,198.66	1,104.63
(d) Total R&D expenditure as a percentage of total turnover	6.42%	7.65%
<b>Wockhardt Limited – Consolidated (including subsidiaries)</b>		
(a) Capital	954.75	908.10
(b) Revenue	667.63	512.66
(c) Total	1,622.38	1420.76
(d) Total R&D expenditure as a percentage of total turnover	3.60%	3.95%

### III TECHNOLOGY ABSORPTION, ADAPTATION AND INNOVATION:

#### 1. Efforts in brief, made towards technology absorption, adaptation and innovation:

The Company sets target for technology improvement based on global competition criteria. Wockhardt scientists undertake specific time-bound programmes to improve technology, which has upscaled gradually until desired results are achieved at the manufacturing level. The Research Scientists work in close relation with the manufacturing team to ensure smooth transfer of technology. Appropriate documents are created for quality control and this is monitored both by Wockhardt Quality control department and the Corporate Quality Assurance team.

#### 2. Benefits derived as a result of above efforts:

- Cost reduction in an inflationary environment.
- The development of several new products and line developments.
- Substitution of imported raw materials and finished products.
- Product quality improvement and better stability.
- Export of intermediates and finished products.

#### 3. Imported Technology (imported during the last 5 years reckoned from the beginning of the financial year):

The Company has not imported any technology.

### IV. FOREIGN EXCHANGE EARNINGS & OUTGOING:

The export income for the current year amounted to ₹ 6,864 million (previous year – ₹ 5,233 million). The major export markets in which the Company is represented is America and Western European countries.

(₹ in million)

	Fifteen Months Ended 31-03-2010	Twelve Months Ended 31-12-2008
(A) Foreign Exchange used		
(i) On input of raw materials, spare parts & capital goods	2,245.47	2,001.54
(ii) Expenditure in foreign currency for business travels, books and periodicals membership subscription, commission on sales & R&D expenses	705.91	619.35
(B) Total Foreign Exchange Earned	7,162.52	5,636.68

For and on behalf of the Board

**H. F. KHORAKIWALA**  
Chairman

Mumbai, May 20, 2010