



INFORMATION AS REQUIRED UNDER SECTION 217(1)(e) READ WITH COMPANIES (DISCLOSURE OF PARTICULARS IN RESPECT OF BOARD OF DIRECTORS) RULES, 1988

I. CONSERVATION OF ENERGY:

- (a) Energy conservation measures taken:
- i) Installation of energy efficient pumps.
 - ii) Installation of VFD motors at various locations.
 - iii) Redesigning of chilled water systems to make these more energy efficient.
- (b) Additional investment proposals, if any, being implemented for reduction of consumption of energy:
- i) Replacement of sodium vapour lights by LEDs.
 - ii) Increased use of VFD motors in identified areas.
 - iii) Redesigning of hot and cold water operating systems.
 - iv) Energy audit of manufacturing operations.
- (c) Impact of measures at (a) & (b) above for reduction of energy consumption and consequent impact on the cost of production of goods:
There has been a reduction in the consumption of coal and electricity per unit of production in certain business areas.
- (d) Total energy consumption and energy consumption per unit of production as per Form "A" is appended.

FORM 'A'

FORM FOR DISCLOSURE OF PARTICULARS WITH RESPECT TO CONSERVATION OF ENERGY

(A) Power and Fuel Consumption

	Current Year	Previous Year
(1) Electricity		
(a) Purchased Units (in lac)	1112.57	1419.95
Total Amount (₹ /crore)	58.26	68.99
Rate/Unit (₹)	5.24	4.86
(b) Own Generation		
(i) Through Diesel Generator		
Units (in lac)	44.41	107.21
Units per Ltr. of diesel oil	3.52	3.54
Cost/Unit (₹)	10.07	9.41
(ii) Through Steam Turbine/ Generator		
Units (in lac)	6216.59	7160.01
Unit per Kg. of Coal	1.00	1.01
Cost/Unit (₹)	3.86	2.95



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(2) Coal (Grade B, C, D, E, F, Steam/ Slack, ROM, Lignite and Grade A Steam Coal used in Boiler Houses, calcining of raw meals, firing of Kiln and gas plant) Quantity (MT/lac)	14.55	17.16
Total Cost (₹ / crore)	671.01	581.09
Average Rate/MT (₹)	4613.28	3385.97
(3) Furnace Oil		
Quantity (K.Ltrs.)	772.07	3016.09
Total Cost (₹ / crore)	3.31	9.27
Average Rate/Ltr. (₹)	42.92	30.73
(4) Others		
i) HSD Oil		
Quantity (K.Ltrs.)	274.02	291.72
Total Cost (₹ / crore)	1.05	1.03
Rate/Ltr. (₹)	38.45	35.44
ii) Gas		
Quantity (MT/lac)	.027	.026
Total Cost (₹ / crore)	15.83	12.92
Rate/Ltr. (₹)	57.24	50.47
iii) Diesel Oil		
Quantity (K.Ltrs.)	1255.94	3000.78
Total Cost (₹ / crore)	4.45	9.97
Rate/Ltr. (₹)	35.46	33.21
iv) Bagasse		
Quantity (MT/lac)	0.02	
Total Cost (₹ / crore)	0.47	
Rate/Kg. (₹)	2.15	
v) Wood Chip		
Quantity (MT/lac)	0.01	
Total Cost (₹ / crore)	0.16	
Rate/Kg. (₹)	1.83	
vi) Rice Husk		
Quantity (MT)	167.00	
Total Cost (₹ / crore)	0.08	
Rate/Kg. (₹)	4.64	



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(B) Consumption per Unit of Production	Production Unit	Standards if any	Current Year	Previous Year
1. Electricity (kwh)				
Vis. Filament Rayon Yarn	M.T.		4257	4188 (b)
Transparent Paper (Cellulose Film)	M.T.		2079	2167 (a)
Sulphuric Acid	M.T.		41	40 (b)
Caustic Soda	M.T.			3903
Purified Hydrogen Gas	M ³			0.42
Sodium Hypochloride	M.T.			45
Carbon di Sulphide	M.T.		1077	1071 (c)
Sodium Sulphate	M.T.		105	97 (b)
Sodium Sulphide	M.T.		285	285
Cement	M.T.		77	79 (a)
Tyres, Tubes & Flaps	M.T.		1328	1180 (f)
2. Coal				
Vis. Filament Rayon Yarn	M.T.		4.13	3.95 (d)
Transparent Paper (Cellulose Film)	M.T.		7.18	6.94 (d)
Carbon di Sulphide	M.T.		0.49	0.35 (d)
Sodium Sulphate	M.T.		0.46	0.45 (d)
Cement	M.T.		0.13	0.15 (a)
Tyres, Tubes & Flaps	M.T.		1.13	0.97 (f)
3. Furnace Oil				
Tyres, Tubes & Flaps	K.L.		0.005	0.016 (e)
4. Others				
i) Gas				
Tyres, Tubes & Flaps	M.T.		0.017	0.014 (f)
Reasons of variation:				
(a) energy conservation measures taken.				
(b) lower production.				
(c) difference considered normal.				
(d) inferior quality of coal.				
(e) lesser use.				
(f) due to variety in product mix.				

Note : Previous year's figures have been re arranged, where necessary.

II. TECHNOLOGY ABSORPTION :

Efforts made in technology absorption disclosed as per Form B appended.



FORM 'B'

1. Research & Development (R&D)

(a) Specific areas in which R&D carried out

Viscose preheating to control ripening index. Reduction of agitation speed in viscose tanks and trial of polycarbonate funnels in spinning machines. Increased utilisation of fly ash in PPC production and grinding aids used to increase output of Cement. Development of truck radial (tubeless) tyres and new products in the existing range of truck radial and two wheeler tyres.

(b) Benefits derived as a result of above R&D

Improved yarn quality by reducing broken filaments. Improvement in quality of Cement.

(c) Future Plan of Action

Modifications in textile machines and tensioner adjustment for uniform tension and oil pick up. Installation of Waste Heat Recovery Systems and utilisation of alternative fuels for Kiln. Introduction of passenger radial tyres, two wheeler (tubeless) tyres. Development of cost effective truck radial tyres specially for export markets.

d) Expenditure on R&D

(₹ /crore)

(i) Capital

0.82

(ii) Recurring

2.74

(iii) Total

3.56

(iv) Total R&D expenditure as a percentage of total turnover

The Cement Business has incurred the above expenditure. In addition, a Cess @ ₹ 0.75 per tonne of cement despatched is payable to the Development Commissioner for Cement Industry, Government of India, who in turn financially assists the National Council of Cement & Building Materials to carry out Research & Development Programmes for the Cement Industry. During the Financial Year 2011-12, the Company paid ₹ 0.37 crore on this account.

2. Technology Absorption, Adaptation and Innovation

(a) Efforts, in brief, made towards technology absorption, adaptation and innovation

Motor less vane type exhaust fan and 'D' canter type centrifuge in place of bucket centrifuge. Replacement of existing Cement Mill 3 ESP Bag House and automisation of 1 & 2 fly ash feeding arrangements for Cement Mills.

(b) Benefits derived as a result of the above efforts e.g. product improvement, cost reduction, product development, import substitution etc.

Improvement in the quality of yarn. Reduction in power consumption, improvement in quality & optimum capacity utilisation.

3. In case of imported technology (imported during last 5 years reckoned from the beginning of the financial year), following information may be furnished :

(i) Technology imported

(ii) Year of import

Not Applicable.

(iii) Has technology been fully absorbed ?



III. FOREIGN EXCHANGE EARNINGS & OUTGO:

1. Activities relating to exports, initiatives taken to increase exports, development of new export markets for products and export plans.

Exports were focused on value added products of VFY. Transparent Paper exports to regular countries were maintained and new markets in New Zealand, Portugal, U.K., Yemen etc. are being explored. Tyre Exports were made to several countries during the year and efforts are being made to increase volume of exports by exploring new markets.

2. Total Foreign Exchange used and earned
Used
Earned (on F.O.B. realisation basis)

₹ 1067.04 crore

₹ 511.87 crore

B. K. Birla | *Chairman*

K. G. Maheshwari
P. K. Choksey
Amitabha Ghosh
P. K. Mallik
Manjushree Khaitan
Vinay Sah
K. P. Khandelwal | *Directors*

K. C. Jain
Wholesale Director

Gautam Ganguli
Company Secretary

Place: Kolkata
Date : 28th April, 2012