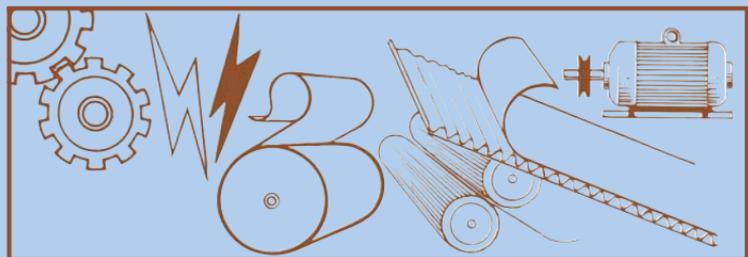
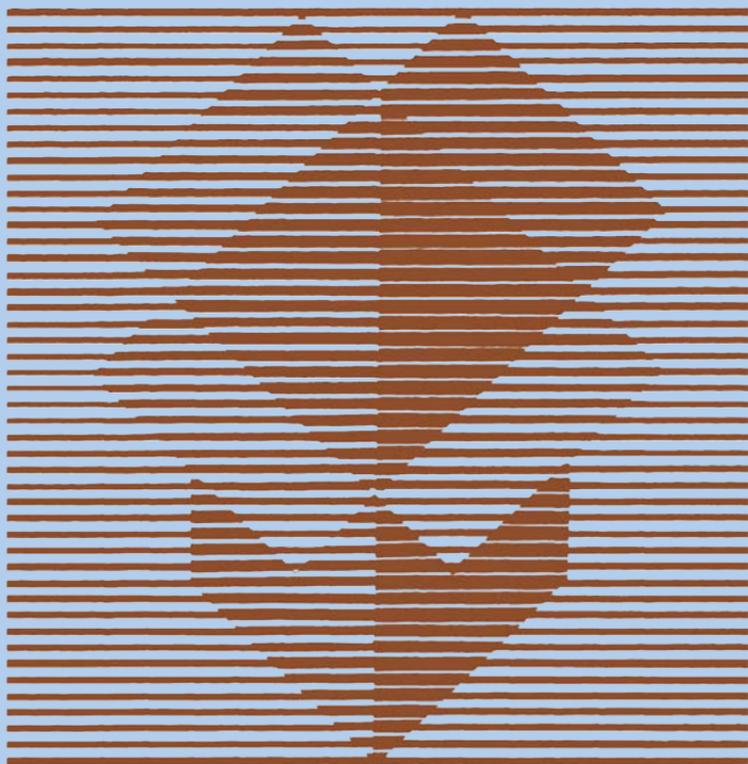


TECHNICAL INFORMATION BOOKLET

FOR PRIVATE CIRCULATION ONLY

FCBM 33:05

2004 INDUSTRY SURVEY



**FEDERATION OF CORRUGATED BOX
MANUFACTURERS OF INDIA**

Research & Development has been one of the vibrant activities of FCBM. The R&D Committee of FCBM has taken up and successfully completed Research projects in the last few years. The Committee has also been consistently publishing Practical Standards and Technical Information Booklets for the benefit of the members and others connected with the corrugated packaging industry.

The Industry Survey, which started in 1996, is conducted during the Annual Conference of FCBM as part of the Technical Sessions.

Findings of the Industry Survey have been useful in analyzing and predicting the trends in the industry and also identifying the priorities.

This booklet – ‘Industry Survey 2004’ is a compilation of data collected during the 33rd FCBM Conference.

I do hope you will find this booklet useful and informative.

I congratulate the R&D Committee for its dedicated efforts.

I am sure under the Chairmanship of Shri Ram Kumar Sunkara, the FCBM R&D Committee will accelerate its activities and bring out more useful publications during this year.

Harish Madan

President

***Federation of Corrugated Box
Manufacturers of India***

This booklet of 2004 Industry Survey is based on the survey conducted during 2004 Conference held at Agra and also gives comparative figures of the 2003 survey at Khajuraho Conference, 2002 survey at Mumbai Conference, and 2001 survey at Chennai Conference.

Some highlights of this survey are:

1. Raw Material Category

- a. Consumption of 14 BF paper is reducing while that of 22 BF or more is on increase.
- b. Consumption of 100 GSM or less paper is reducing while that of 120 GSM and more is on increasing trend.

2. Product Category

- a. There is almost 50% drop in production of 7 and 9 ply Boxes.
- b. The production of 3 ply and 5 ply boxes has increased and is now at 85% of the total production.

3. Productivity

- a. The average single facer per participant has increased from 1.8 to 2.4 indicating 1 participant out of 3 has added a new single facer last year.
- b. Average production per day has increased by 35%.
- c. There is no change in average production per day per single facer and productivity per person per day.

4. Market Profile

- a. Around 50% growth in process food and consumer durables segment.
- b. Substantial drop in textile and yarn segment.
- c. The market profile for other segments remains unchanged.

Conclusion:

The trend is toward usage of higher BF and higher GSM paper. This is due to drop in number of plies being used. The weighted average of number of plies has dropped from above 5 to below 5 in the last four years, showing that more boxes in 3 and 5 plies are being produced than 7 or more plies. If this trend continues then we will see more of 5 ply automatic plants coming into production in near future.

The engineering goods segment, which was traditionally using wooden crates is showing an increased usage of corrugated boxes. Members should take up this opportunity and push this segment for replacing wooden crates with corrugated boxes.

Although the productivity of per person per day has increased from an average of 40 kgs in 1988 to 100 kgs in 2004, it is still way below any international standards. Members should look in to ways of increasing productivity by installation of industrial automation.

Ram Kumar Sunkara

*Chairman,
R&D Committee*

2004 INDUSTRY SURVEY

THE LEGEND

Column A : Survey conducted during
33rd FCBM Conference held at Agra
in December, 2004

For Comparison Purpose

Column B : Survey conducted during
32nd FCBM Conference held at Khajuraho
in December, 2003

Column C : Survey conducted during
31st FCBM Conference at Mumbai
in December, 2002

Column D : Survey conducted during
30th FCBM Conference held at Chennai
in December, 2001

Table 1

PRODUCTIVITY

	A	B	C	D
No. of participants in the survey	80	87	160	90
No. of Single Facers used	192	161	291	155
Average Single Facer per participant	2.40	1.85	1.82	1.72
Average production per day per Single Facer (in kgs)	2423.0	2206.7	2816.0	2328.0
Average number of people employed per participant	56.5	45.3	50.0	51.0
Average production per day (in kgs)	5815.5	4083.7	5122.0	4008.0
Productivity kgs/person/day	102.9	90.1	102.0	78.0

Columns B, C and D are for comparison purpose only.

Table 2**PRODUCT CATEGORY**

Number of plies	A	B	C	D
2-ply	1.0%	1.1%	2.0%	2.0%
3-ply	28.0%	20.4%	27.0%	23.0%
5-ply	57.0%	52.0%	50.0%	45.0%
7-ply	13.0	22.6%	17.0%	25.0%
9-ply	1.0%	4.0%	4.0%	5.0%
	<u>100.0%</u>			
Weighted Average	4.77	–	4.88	5.18

CORRUGATED BOARD – GSM

Weighted Average	821	–	818	848
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Columns B, C and D are for comparison purpose only.

WASTAGE

Process Waste (%)	A	B	C	D
Average wastage during manufacture (Not including trim, slots or punch scrap)	4.49%	4.01%	3.34%	4.01%

Columns B, C and D are for comparison purpose only.

Table 4

RAW MATERIAL CATEGORY – GSM

GSM	A	B	C	D
80 gsm	3.0%	1.7%	1.0%	1.0%
90 gsm	1.0%	3.0%	3.0%	1.0%
100 gsm	15.0%	20.1%	18.0%	17.0%
120 gsm	18.0%	18.1%	20.0%	25.0%
140 gsm	20.0%	17.3%	13.0%	12.0%
150 gsm	12.0%	17.0%	16.0%	18.0%
170 gsm	2.0%	1.4%	4.0%	2.0%
180 gsm	13.0%	14.0%	10.0%	9.0%
200 gsm	4.0%	3.8%	6.0%	12.0%
Other	12.0%	3.5%	9.0%	3.0%
	<u>100.0%</u>			
Weighted Average	151	–	147	144

Columns B, C and D are for comparison purpose only.

Table 5

RAW MATERIAL CATEGORY – BF

Grade	A	B	C	D
14 BF or less	10.0%	17.6%	9.0%	19.0%
16 BF	18.0%	18.8%	8.0%	20.0%
18 BF	9.0%	12.0%	18.0%	13.0%
20 BF	19.0%	16.5%	13.0%	11.0%
22 BF	19.0%	16.5%	11.0%	10.0%
24 BF	6.0%	6.8%	14.0%	6.0%
25 BF or more	14.0%	6.2%	19.0%	14.0%
Duplex	4.0%	3.5%	5.0%	4.0%
Imported	1.0%	1.5%	1.0%	3.0%
Other	< 0.5%	0.5%	2.0%	–
	<u>100.0%</u>			
Weighted Average	19.0	–	21.0	19.0

Columns B, C and D are for comparison purpose only.

Table 6

MARKET PROFILE

Segment	A	B	C	D
Pharmaceuticals	4.0%	5.6%	7.0%	12.0%
Processed Foods	18.0%	9.6%	13.0%	13.0%
Fresh Fruits/ Vegetables	2.0%	1.1%	3.0%	3.0%
Poultry	1.0%	3.0%	2.0%	2.0%
Soaps/Cosmetics	6.0%	6.0%	9.0%	6.0%
Beverages	3.0%	6.9%	4.0%	6.0%
Distillery	3.0%	5.5%	6.0%	5.0%
Tobacco/Cigarettes	2.0%	3.5%	1.0%	1.0%
Textiles/Yarns	12.0%	19.6%	15.0%	18.0%
Electricals/Lamps	4.0%	3.5%	6.0%	2.0%
Electronics	8.0%	10.8%	3.0%	1.0%
Glass	3.0%	2.9%	3.0%	2.0%
Engineering Goods	8.0%	3.1%	7.0%	9.0%
Consumer Durables	15.0%	7.2%	10.0%	10.0%
Defence	2.0%	0.8%	1.0%	1.0%
Miscellaneous	10.0%	10.9%	10.0%	9.0%
	100.0%			

Columns B, C and D are for comparison purpose only.

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