
CASE 1 INSULATOR INDIA LIMITED

Introduction

“Are we going to lose sales on insulated and non waterproof tapes forever? “asked the marketing manager Mr. Balsara to the production manager Mr. Parasuram. "We are unable to cope up with the demand of these products as the supply of raw material is inadequate." Was the reply of the production manager. "The raw materials should be purchased in greater quantities so as to maintain adequate inventories. This is how we can take care of the fluctuating needs of the market", he further added.

The INSULATOR. INDIA LIMITED was a small manufacturing and marketing company located in western India. The company manufactured and marketed four types of industrial tapes primarily to pharmaceuticals, textiles and engineering industries. These were: '(a) insulation tapes (b) waterproof cloth tapes (c) non waterproof cloth tapes and (d) double sided cloth tapes,

The company was suffering from a credit squeeze in the market. It was unlikely that the company would be able to spend more in buying raw materials. The credit squeeze and its possible consequences on the financial position of the company were likely to continue for months and' as a result the emphasis should be on effective utilisation of resources. Keeping this in view the Board of Directors appointed a management consultant Mr. Mazumdar to look for the priority in manufacturing and marketing areas.

Marketing

The consultant examined the sales record of the company for the last few years. The sales performance of the first three types of tapes had been quite encouraging. The trend further indicate that the sale of these types of tapes were likely to grow in future.

The double sided cloth tapes had, however, a limited market. Its price as well as its replacement rate was high. The company had, however, a firm order of supplying double sided cloth tape for the next three years with the following monthly requirement to Associated Mills Limited.

750 rolls of size 55 meters x 60 cms

625 rolls of size 55 metres x 50 cms

500 rolls of size 55 metres x 40 cms

It was unlikely that the company would be able to sell double sided cloth tapes by any significant amount apart from the confirmed order of Associated Mills Limited.

It was also observed by Mr. Mazumdar that the company manufactures cloth rolls of standard sizes 5000 metres x 125 cm. The price paid by its customers was based on the number of standard rolls required by its consignment. The actual number of rolls of various dimensions was subsequently arrived at by slitting these standard rolls, Mr. Balsam also complained that the manufacturing unit had been concentrating excessively on waterproof tapes as a result of which the company was losing sales on insulated and non waterproof tapes.

Manufacturing

Mr. Mazumdar then met Mr. Parasuram to discuss the various problems in the area of manufacturing. The production manager complained about inadequate supply of raw material. The raw materials required for the four types of tapes were rubber, gum resin, nitrocellulose, zinc oxide, fillers, petroleum solvent, acetone and cloth rolls (5000 metres x 125 cms.). The proportions in which the above materials were mixed and the number of coating given on the cloth decided the type of the tape. The proportions of raw material mix, raw material availability and the time taken for the production of each of the four tapes are presented in Table 1, Table 2, and Table 3 respectively.

Case prepared by Prof. C.K. Mustafi, Indian Institute of Management, Calcutta. Case Material has been prepared to serve as a basis for class discussion. Cases are not designed to present illustrations of either correct or incorrect handling of managerial problems,

Table 1: Raw material mixing specifications and monthly availabilities

	Non Waterproof Tape Standard Size (5000 m x 125 cm)	Insulated Tape Standard Size (5000 m x 125 cm)	Waterproof Cloth Tape Standard Size (5000 m x 125 cm)	Double Sided Tape Standard Size (5000 m x 125 cm)
Acetone (litres)	3.0	1.0	0.0	3.0
Fillers (kgs)	3.0	2.0	0.0	2.0
Gum Resin (kgs.)	2.0	1.0	2.0	1.0
Rubber (kgs.)	1.0	3.0	6.0	3.0
Nitrocellulose (litres)	0.0	2.0	2.0	0.0
Zinc Oxide (kgs.)	1.0	0.0	1.0	0.0
Petroleum Solvent (litres)	4.0	2.0	4.0	2.0

Table 2: Monthly availability of Raw material

Raw Material	Unit	Availability
Acetone	litre	140
Fillers	kg	120
Gum Resin	kg	70
Rubber	kg	145
Nitrocellulose	litre	140
Zinc Oxide	kg	40
Petroleum Solvent	litre	130

Table 3: Labour Requirement for Manufacture

Variety	Mandays Per Standard Size (5000 m x 125 cm) Roll
Non waterproof tape	4
Insulated tape	8
Waterproof tape	6
Double sided cloth tape	8

The company had 600 available mandays per month and it was highly unlikely for the organisation to hire any additional personnel. The tapes were manufactured per day on 60 crills for 25 days a month. Each crill had a capacity of 200 metres.

The company was following a monthly production target of 5 rolls of non waterproof tape, 10 rolls of insulated tape, 15 rolls of waterproof cloth tape and 10 rolls of double sided tape. The demand of the first three types of tape had been quite high and there was no problem of selling these products. In particular, there was a substantial amount of potential lost sales of insulated and non water proof tapes according to the Marketing department. Mr. Parasuram was, however, utterly helpless in this matter with the available levels of various raw materials. He was not even very sure whether this monthly production target can actually be achieved as it so happened that every month he fell short of the target quantity in spite of his best effort. He was assured by Mr. Mazumdar who promised to look into this matter.

Mr. Parasuram also pointed out a related problem faced by him for quite sometime. When the standard rolls (5000 m x 125 cm) were trimmed according to the specification of the customers certain amount of wastage was

unavoidable. However, in the absence of a definite plan wastage rate was sometimes as high as 40%, The production manager was of the opinion that there was ample scope for reducing this wastage although he was not sure how to achieve it. "Can you recommend any method by which we can reduce the wastage?" he asked Mr. Mazumdar.

Costing

The data collected from the Financial Controller indicated the Cost of Production of different tapes. These figures along with the selling price indicated the profit (contribution) per standard rolls

Table 4: Cost of Production and profit in Rs. per roll

	Non waterproof tape	Insulated tape	Water proof tape	Doable sided tape
Raw materials	8250	3200	10250	14000
Labour	750	250	750	1000
Packing	1000	250	1000	1000
Variable cost of production	10000	3700	12000	16000
Selling price	16000	8700	21000	28000
Contribution	6000	5000	9000	12000

At this stage, Mr. Mazumdar felt that he had collected all the relevant information to analyse the problem.