

VE Activities for Material Purchasing at Matsushita Electric

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A. Motive Behind the VE Approach for Material Purchasing

It was only several years ago that Matsushita Electric employed VE as a management technic for the improvement of material purchasing.

Over 2,000 employees are engaged in material purchasing and approximately \$20 million are spent for it annually. The expenses have been increasing every year and opportunity loss has not been decreasing. The main cause of this is that the purchasing work has become more and more complicated and at the same time people have thought it to be a relatively unimportant job which does not directly produce profits.

We started a drive to find better functions of material purchasing, and we closely examined material purchasing in order to better recognize its ultimate objective. This drive was named "Goal-pursuing Drive."

B. VE Approach

Before setting out on VE activities, we specified how to measure the functions and stated the target of the improvement of material purchasing.

VE aims at increasing value. In VE, value is measured by two factors—function and cost; and increasing value, therefore, requires function improvement and cost reduction.

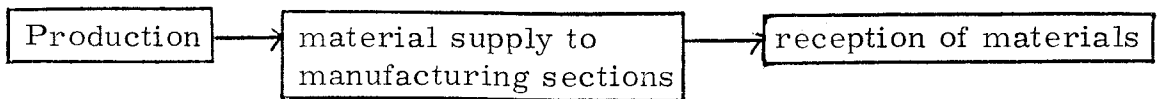
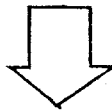
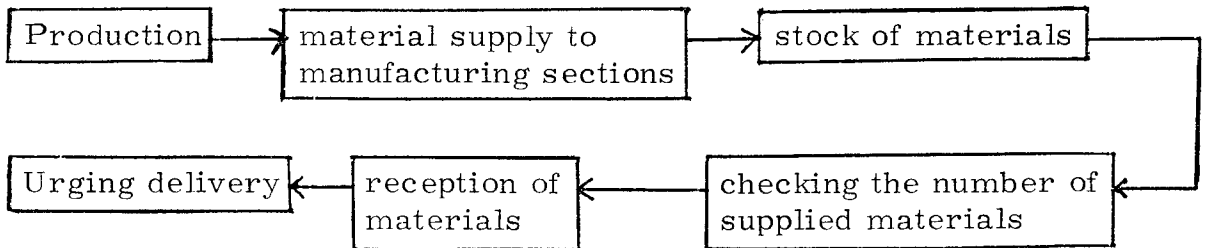
Material purchasing consists of the following two major functions:

- 1) Reduction of material costs
- 2) Smooth material supply to the manufacturing section

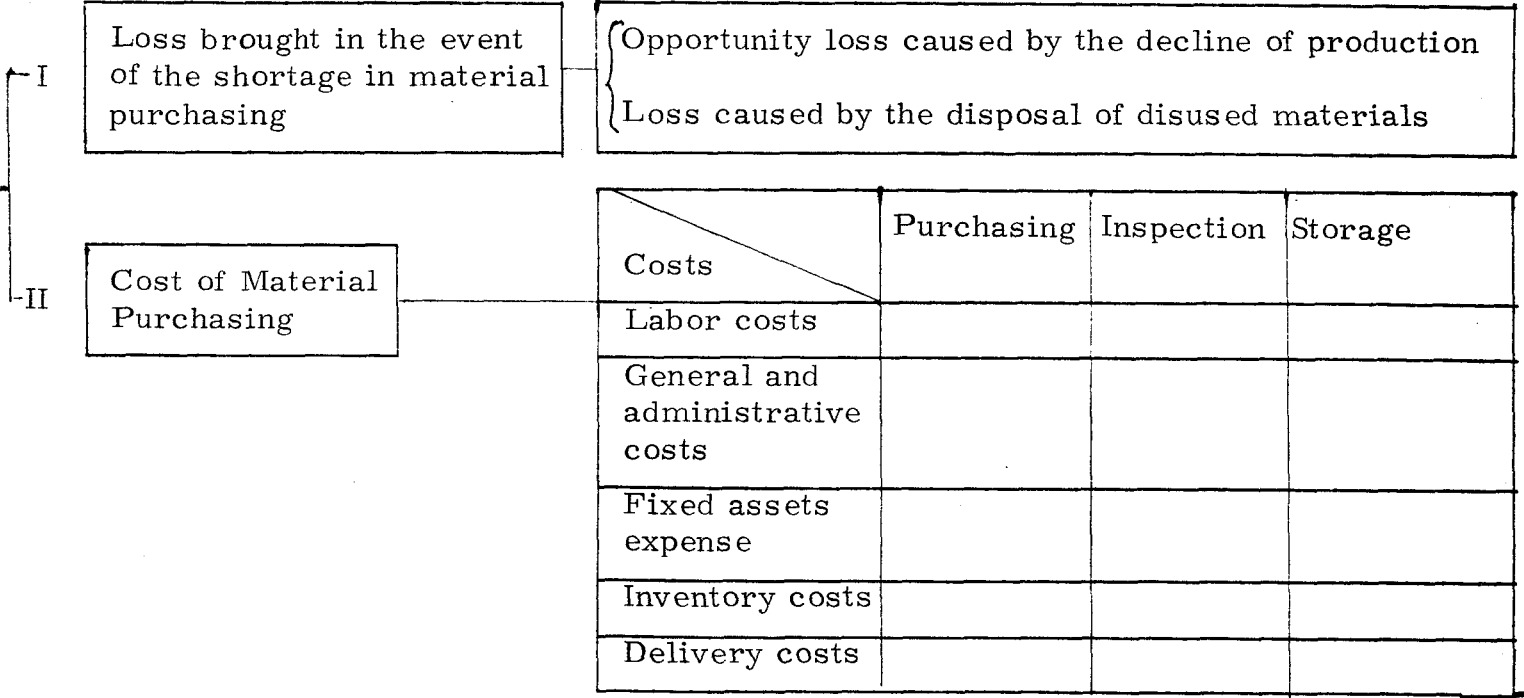
In accordance with the reasons we mentioned in the preceding section, our VE activities will be concentrated on (2), or cost reduction of material purchasing. The function of material purchasing can be evaluated by the amount of costs. Therefore the real cost of material purchasing is calculated in chart B-1, and Function Evaluation can be shown as the total cost of Cost I and Cost II. If material purchasing is carried out completely, Cost I should be zero. In that case, the lower the cost of material purchasing (Cost II), the greater the increase in Function Value. But Cost ^III has to be considered in connection with the total material costs. Therefore, chart B-2 can be a measure of the Function Evaluation.

B-1 Cost of Material Purchasing
(shown at page 3)

B-3 Conception



Real Cost of
Material Purchasing



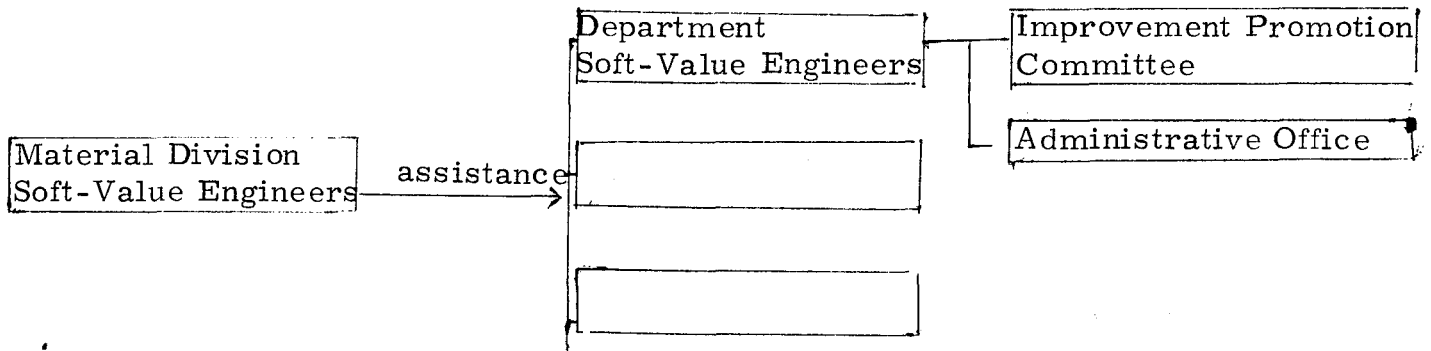
B-2 Measure for the Results at ^III

$$\text{Material Purchasing Cost Ratio} = \frac{\text{Cost of Material Purchasing}}{\text{Total Material Costs}}$$

C. Organization for VE Activities

The Company operates 42 manufacturing departments which each have material purchasing sections. Each material purchasing section has soft-value engineers who lead others in negotiating with other sections concerned and promote the improvement of VE in material purchasing work. In many cases, each department organizes an improvement promotion committee with the group managers of the sections concerned, and the soft-value engineers carry out the administrative functions. The soft-value engineers at the Value Service Department in the Material Division extend assistance to other departments for the improvement of their VE.

Fig. C-1 Organization for VE Activities



Since very recently we have held soft-VE study meetings once a month at the head office, giving us the opportunity to exchange views between soft-value engineers of manufacturing departments and of the Material Division. In addition we have held result-presentation meeting once a year on the results of VE performed by each department.

D. Example of results of improvement by VE performed by a departme

The VE activities explained above has been practiced in all departments. We have designed a non-technical explanation of this sort of VE activity to attain the fullest understanding of the many employees who are participating in this program with the result that the program has been proving more and more successful.

The following is an explanation of the results of improvement by VE activities performed by a small department in 1972.

Product: Home Appliances

Number of Employee: 500

Annual Production: \$18,880,000

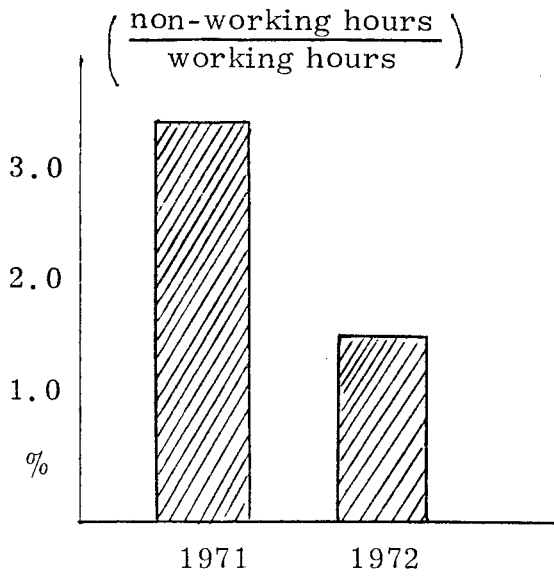
Fig. D-1 Effect by the Improvement of VE

In thousands of US dollars

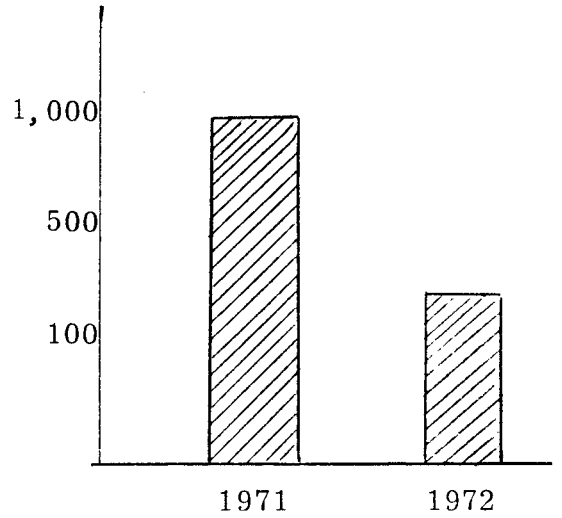
		1971	1972	Amount of Retrenchment
I	Opportunity loss caused by the decline of production	158	68	91
	Loss caused by the disposal of disused materials	49	4	45
II	Material Purchasing Costs	482	287	194
Total		689	359	330

Note: There is no outstanding change in output and material cost between 1971 and 1972.

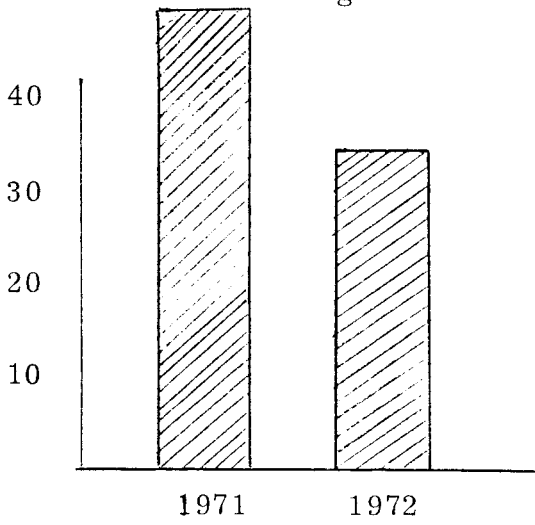
D-2 Ratio of Opportunity Loss Hours



D-3 Material Inventory
(In thousands of US dollars)



D-4 Number of Employees for Material Purchasing



D-5 Hourly length of overtime work

