

our efforts towards self-reliance for spares

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Efforts so far made at J. K. Paper Mills (Orissa) to reduce imports of engineering spares and components are detailed. Making more such goods at local workshop and outside workshops, devising ways to make alternative arrangements and taking steps to ensure maximum utility of Imported goods are the salient points. Brief experience has shown encouraging results.

As a result of economic pressure when the availability of foreign exchange very appreciably dwindled during the last part of 1965, the problems of self-reliance was forced on the nation and we in the Paper Industry had to share the brunt. Upto the year 1964, Import Licences were issued to the tune of Rs. 40/- per ton of paper produced in the country amounting to a total of about Rs. 3 crores. The position in 1965 was desperate and the prospect of procuring imported items to keep the mills running looked bleak. Earning of foreign exchange by exporting paper was considered the only solution. Placed in such critical situation, individual mills intensified their internal efforts to meet the challenge. The Development Council of Paper, Pulp & Allied Industries, seriously turned their attention to consider the problem. So also the Indian Paper Mills Association and Paper Makers Association discussed the problem among their members.

We, at J. K. Paper Mills, formed a Panel for revitalising our activities in this direction. In order to reduce the dependence on foreign suppliers, we tried to tackle the problem from their aspects, namely :

1. To make similar articles ourselves and see if others in the Country can make them ;
2. To try to use some substitute which should do the job without impairing efficiency ; and
3. To ensure best use of Imported goods by looking after their storage, preventive maintenance and controlled consumption.

These three main heads were further divided and efforts were diverted by the Panel to achieve the objectives in view. A brief description of the activities is given below and it relates to only spares and components and does not cover other areas of Import Substitution such as Raw materials, consumable capital goods and technical know-how.

I. INDIGENOUS MANUFACTURE OF ARTICLES—(a) Fabrication at mill's workshop.—Ordinarily Workshop facilities provided in a Paper Mill are just enough to undertake maintenance jobs including repairs and fabrication of small items. The tendency in Indian Paper Mills has been to increase these facilities to save cost and time. Mills situated near Industrial Centres have considered it uneconomic and superfluous to invest on workshop tools and instruments ; but the sites of Pulp & Paper mills being nearer to forests and away from places having engineering fabrication works, many have set up fairly good workshop in their mills. The new mills, however, have found it difficult to allot funds for the purpose and we are no exception. We had to get more equipment and gear up our policy in running the workshop. Our aim of having a separate section in the Workshop with adequate staff and workers to concentrate on major fabrication jobs has so far not been fulfilled. However, with the existing facilities, we have been able to render very useful service.

Among the many items we have been able to make, mention may be made of few such as Chipper and rechipper knives, conveyor chains wheels, bleach filter wear plates, baily plates and main furnace

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door of L.F. Boiler, pump casings, impellers and other spares of all categories, vacuum pump roter, felt conditioner, hydra foil, shredders for pulper, screw conveyors, Ramdeashe arms, gears, couplings and pulleys etc.

If the availability of suitable engineering items from indigenous sources was easy in respect of price, quality and delivery emphasis in mill workshop would not be required, but placed as we are at present, the mills have to take the initiative in building up sizeable and serviceable workshops to meet the diverse needs. Not only adequate workshop machines are to be provided, but the workshop is to be manned by suitable staff and workers. Designing and some research work have to form part of the programme. All of us suffer from some handicap and it is for the mill engineers to take the lead and prove to the management that money and energy spent in this direction are amply rewarded.

(b) *Getting imported articles made outside the Mill in other workshop.*—In order to assess the position, we made out a list of all the items we import at present. It was done section-wise with details regarding specifications and material of construction. Records of Indigenous manufacturers were prepared—one party-wise and the other material-wise for ready reference. News Papers, Magazines, Trade Notes and manufacturers bulletine, directories are screened to collect information. Drawings were made for individual items. Equipped with such basic requirements, contact was established with various manufacturers to get their views and offers. Specific cases where success was achieved in getting engineering goods obtained from indigenous sources are many and out of them, the following may be mentioned.

Voith Stock Pump & Refiners, Polythene centri-cleaner body and parts, Maurer couplings, table rolls, rubber covered rolls, pump spares, white metal bearings and s.s. castings, carbon brushes, compensating cables for thermo couples.

Unfortunately, mass production of individual articles required for the Pulp & Paper Industry is not in vogue in the country. Even the manufacturers of Pulp and Paper Mill machinery in India have found it impracticable. For our requirements, we have to

approach them or other engineering workshops, who are to be properly guided with drawings and specifications to appreciate our specific needs. The task is far from easy one. It has been so difficult to develop close co-operation between the mill and outside suppliers of parts and components. We have all complained on various occasions that the country made goods are not sound in workmanship, material of construction is not suitable, prices exorbitant and delivery is uncertain. They have no doubt their own difficulties but we have to bring out the points so that our combined efforts should achieve the national goal of self-sufficiency. The Seminar on Import Substitution will serve useful purpose in discussing such matters of mutual interest.

II. SUBSTITUTION OF IMPORTED ITEMS BY ALTERNATE ARRANGEMENT.—It is found in many cases that parts and components identical to imported varieties can not be made in mill workshop nor can be obtained from indigenous sources. In such cases, skill, experience and talent are required to evolve alternative arrangement. Not only good co-operation between the process and engineering sections is a must for this purpose but it imposes an extra burden on the engineers i.e., the understanding of the process techniques. In a developing country like ours, deep vacuum are there in our alround activities. We, the Engineers in the Paper Mills have to strain our nerves to make up our deficiencies. Our attempts at J.K. Paper Mills have so far been able to scratch the very fringes of the problem. For instance, when we are faced with the difficulties regarding smooth running of variable speed motor at cross cutters, we tried to replace it by changing the drive system to hydraulic and succeeded. Another example is the brass tube rolls which are now replaced by ebonite covered one from indigenous sources.

III. MAXIMISING UTILITY OF IMPORTED GOODS.—It is to be admitted that with best results in the fields of making similar imported goods in the country and providing alternative arrangements in place of imported article, there will be some items which have got to be obtained from outside India. In order to run the mills as well to run them efficiently, we have to find the exchange in some way or other. But, the less number of such items surely better. We should also ensure to get the maximum out of the Imported goods.

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The steps which are taken by us in this direction are as under :

(a) *Storage of Imported goods :*

Proper care is taken to store the goods at safe and convenient sites. Parts and components although methodically stored and recorded, require checking at intervals specially in case of precise articles. Some may require cleaning, others may require greasing and still some others may require repacking. These are done with good supervision by experienced hands. It is a common sight in the mills to see the boiler tubes lying in the open and Dandys are haphazardly stored, which result in bringing down their life expectancy. Space has got to be provided for them and care has got to be taken. In our case, stores Buildings have been amply extended.

(b) *Issue of Imported articles :*

Whenever any imported article is required for us thorough scrutiny is made by the Chief Engineer to make sure that the necessity for the article is genuine and imperative before he endorses the requisition slip. Moreover, the position of stock and steps taken to have sufficient stock are examined in each and every case. It is further seen that whether this particular item is available from indigenous market and what action has been taken to locate the source and the progress made in obtaining the article when the source is already known. Thoughts are also directed to consider alternative arrangements which can possibly replace the item. We all know it is easy to plan things and so difficult to implement

them. It is a strenuous job requiring alertness, perseverance and devotion to duty.

(c) *Preventive Maintenance :*

We all know that a stitch in time, saves nine. We have prepared a schedule for regular maintenance of various items in use. By following it strictly we find that the utility of the item is really enhanced. Preventive maintenance alone is not enough, careful operation of plant and machinery contributes a good lot for maximising the utility of parts and components. The process people are made aware of its implication and efforts are made to have co-ordination between the process and maintenance sides.

(d) *Reuse of Imported articles :*

Imported articles whenever taken out from the plant due to any reason, are carefully stored in the Workshop. The engineers examine them to see what repairs are required to make them available for re-use. In case any article is found irreparable it is seen if any of its parts can be taken out and utilised.

In conclusion, we have to add that our preliminary attempts have yielded encouraging results. There has been a considerable reduction in the consumption of the imported spares and components, during the present year as compared to the previous year—on a rough calculation the reduction works out as 30% in terms of money in spite of the fact that the imported goods have registered an increase during 1966.