

Cost Savings in Cutting Section – Apparel Industry



*By: H.S. Hanumantha Naik, Dr.
S.S.Ramatal & D.Sargunamani*

Cost Savings in Cutting Section – Apparel Industry

By: H.S. Hanumantha Naik, Dr. S.S.Ramatal & D.Sargunamani

Abstract

Cost related to quality or wastage reductions have significant effect on overall profit for any industry. Internal cost spent by a company and savings made by reducing internal throughput time or rework or any type of wastages are important for management to keep the industry economically in good health. Keeping this in mind an attempt has been made to study and eliminate waste i.e., Non Value added (NVA) activities in cutting section so as to save time and cost and reduce internal throughput time. Vendor evaluation for proper supplier is also identified to reduce rework. Results showed that considerable amount can be saved.

Introduction

Cost is an important factor in any industry as most of the industries focus on more profit. Though, there are different costs involved cost reduction internally spent by an industry by finding wastage, preventing and correcting defective work would result in huge savings. Value added (VA) activities focus on any activity that customer is willing to pay for. Non Value added (NVA) activities describes that the customer does not consider as adding value to his product (For eg. waiting, inspection etc.,). One of the ways to reduce wastages can be reduce/eliminate NVA that can result in reduction in time, cost and lead time. Lead time means Duration/Time required between first receipt of a customer order and customer receipt of the product or service. It varies with the purpose of analysis. As it is known that time is money, if more time is required in a product or service more money is involved. By reacting quicker to make a product as per customer demand the company can invest less money and more savings. Vendor evaluation for supplier performance is the materials management division's objective to maintain and improve the quality of status of vendor base. Therefore a study was carried out in a garment industry located at Bangalore specifically at cutting section about the process flow to identify NVA so as to

eliminate them for saving time, cost and improve internal throughput time (lead time) as well Vendor performance was analyzed for cost savings and details have been presented in this paper.

Materials and Methods

Fabrics consisting of 6 different styles to produce garments having length X width of 6 m x 1.45 m to produce 220 nos. of garments in each style were considered. Stop watch method used to study the time required in each step of process involved in cutting and initial and final time was noted. Total time required for the process is sum of difference between initial and final time of each step.

The steps considered in the process are as follows;

Fabric received in cutting from stores → spreading → Marker sheet spreading → Cutting parts → Numbering → Shade and panel Checking → Fusing → Bundling → Cut auditing.

Value added and Non Value added an activity in each step wherever found was identified for the above process for each style and the time in minutes is noted. Data collected from the industry for 3 months fabric rolls received in metres was used to evaluate Supplier's performance.

Results and Discussion

Table 1 shows the total time taken for each garment to complete the process of operation from fabric received in cutting till cut audit operation and the same Table shows segregation of value added and non value added activities.

Table 1: Value and Non Value added activities in cutting section

Style No.	Time (min) taken	Time (min) VA activities	Time (min) NVA activities
1	730	541	189
2	617	490	127
3	585	480	105
4	675	540	135
5	740	580	160
6	685	560	125

which are due to waiting, negligence of operators, no proper identification, zigzag movement due to improper lay out, no standard operation followed by operator etc., Some of the improvements required to reduce waiting are sufficient no.s of measurement tape can be provided for measuring layers, pressure bar and stand for all spreading table should be provided, stickers can be used for identification, cutters show no. of plies and manual counting is not required, Correct roll, shade, length, width of the fabric should be issued by proper identification, CAD sheet and slip to be same, proper allocation of manpower is necessary, books to note production to be given to all panel checkers as one common book is used, the cut audit parts needs proper identification style wise.

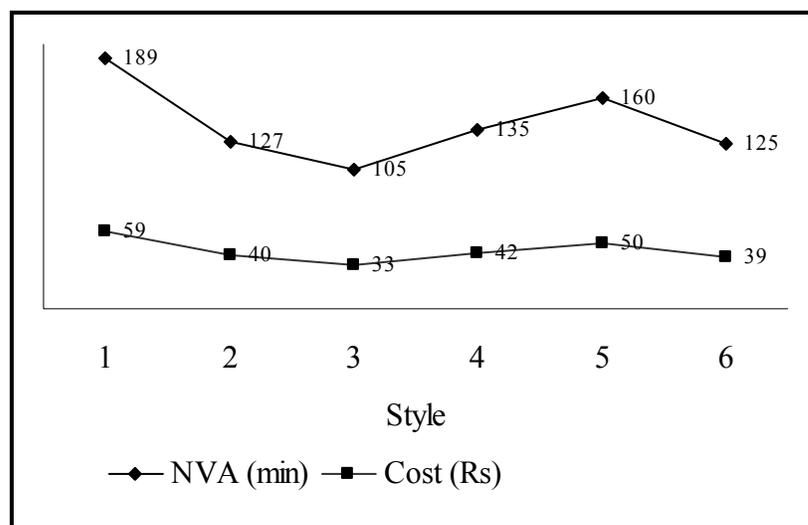


Figure 1: Style, Cost Savings & NVA.

These recommendations were implemented in the cutting section. It was observed that time was saved and cost related to time is utilized properly (reduced by eliminating NVA) as shown in Figure 1.

The average cost savings/month: $\text{Rs } 43.82^{\#} \times 25 \times 26 = \text{Rs } 28483$

Appx. cost/worker/month is 0.3125, (eg. for style 1,189x0.3125= Rs 59)

(avg. no. of lays/day = 25 and no. of working days=26)

Cost save/annum = Rs 3,41,796

Figure 2 shows the vendor evaluation report based on supplier performance. Acceptance and rejection of fabrics is done based 4-point system inspection which is generally carried out in garment industry. It can be observed that some of the companies

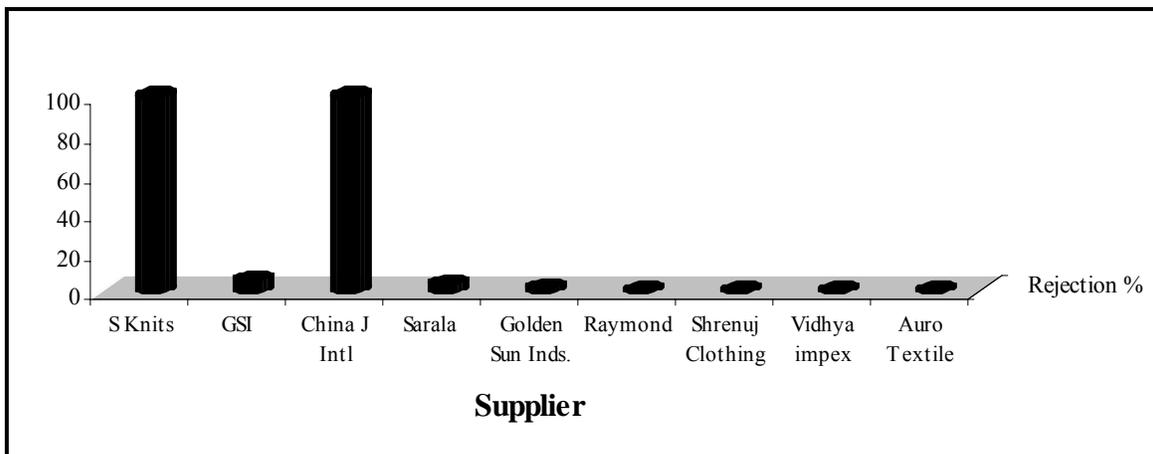


Figure 2: Supplier v/s Fabric Rejection

are supplying (i.e., Raymond, Auro textile etc) good quality of fabrics compared to other companies. This indicates that rework on these fabrics are nil resulting in save of time and cost.

Conclusion

The study clearly indicates that by eliminating NVA activities in cutting section time as well as cost are saved and also improves internal throughput time. Vendor's evaluation to identify proper supplier to get 0 % rejection of fabrics is vital to save cost.

References

1. www.fiber2fashion.com
2. www.asiantextilejournal.com
3. Saroj Bala, Factors influencing costing of woven fabrics, Indian textile journal – June 2003
4. Dr.P.Khanna-work study, time and motion study (P.21)

Image Courtesy: 123rf.com

H.S. Hanumantha Naik and S. S. Ramatal are associated with the Dept. of Textile Technology, GSKSJTI, K. R. Circle, Bengaluru, Karnataka & D. Sargunamani is associated with Textile Testing Laboratory, CSTRI, CSB, Varanasi, U.P, India