

Increasing the Power of your Vendors

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In many multinational companies as well as local companies most of the components are outsourced from vendors (suppliers) locally available. So it is paramount to train them, help them and make technical around whenever it is felt a little knowledge of quality control and inspection is required to reduce rejections. Some companies even provide financial assistance so vendors so that they can supply in time and keep consistent quality.

I. INTRODUCTION

In present scenario in India, we see that most of parts are outsourced and their specifications and drawings are provided by courtesy of our collaborators in advanced countries for example America, Germany, England, France, and Japan etc. To meet their stringent quality parameters it is very imperative that vendors must be given adequate training and assistance so as to make their supplies per standards required for reliability .This paper gives briefly within its scope, tips how to achieve this.

II. DETAILS

Following are the points described below which will help to get quality components and timely deliveries from vendors (suppliers)

Infra-structure: Suppliers should be selected to have at least minimum infra-structure to deliver goods per requirement e.g. machineries, inspection equipment's etc.

Staff: It should be seen that the engineer-incharge is well conversant to understand intricate drawings and specifications e.g. importance of tolerances on dimensions.

Training: When it is felt that further training is required it is always better to train the vendor's engineers and technical staff by showing them the importance of their components e.g. semi-elliptical laminated springs. Also it is vital they know where these components or assemblies are going to be fitted. It will help them to comprehend the full picture of use of these components and their applications. It may be noted that it does not require much time about four hours per two/three months are enough. Training should be imparted by production & inspection / quality control engineer together.

Inspection of components: Sometimes, the vendors do not know how a particular dimensions can be maintained and inspected for example T.I.R(Total Indicated Reading) of a circular shafts having two- three steps and a precision hole .In such cases they should be advised that a poppy dial mounted on height gauge, will to the whole job which requires only a good V Block or inside groove in a tabular components ,

special "GO & NO" dimensions taken into account the wear allowances should be given to them.

Finance: If the vendors are well trained and understand the requirement of the companies but unfortunately not prepared to invest in material and labour due to due to poor financial conditions. Then timely funds can be loaned which can be recovered in coming payment in future by deducting the agreed amount "NEVER KILL THE GOOD SOURCE IF IT IS REALLY WORTH ".After all the vendor will then be able to supply good quality components assemblies well in time(or Just In Time-JIT).

Material Requirement: If vendor is unable to produce certain material (alloy) for a particular component e.g. Monel or Incoloy, then the company with the aid of its vast resources can help them by giving right address of material supplier also advise how they can ascertain if the constituents of alloy are of right specifications. This is very easy, these days lot of Analysis Labs & Testing labs is there with spectra scope and many facilities. So an address of nearest laboratory can be furnished to them.

Statistical Quality Control: Company should make them aware the benefits of S.Q.C is unavoidable to check many dimensions of say 1200 Nos of components so S.Q.C is necessary to save time.

Needless to say that sometimes if the lot of very costly items is very small (say 20 no.) then it becomes important to check all dimensions & parameters. During actual use of components, the few which are defective can be put aside in a bin by assembly department and vendor can be asked to replace the same by right ones.

The companies who fail to understand the importance of good suppliers (lacking only in few areas) keep on switching over from one to another and waste lot of production hours resulting in duplication of work and loss of money. Engineering emphasizes to achieve targets in developing products. It is understood that it is very difficult to manufacture by the company everything on its own. For example an automobile company will have to outsource many items such as forgings, springs, upholstery, electric lamps, plastic components, gears, hardware like nuts bolts- circlips etc. So evidently a good vendor is an asset. The company must realize its importance and its purchase department and inspection department must educate them& maintain cordial relations for timely deliveries and quality products. It must be

stressed that there are three major elements of the supplying management process be optimized:-

- Product development /specifications
- Sourcing
- Contract execution

1. Product development /specifications :

If these three elements are implemented to full advantage, companies can achieve dramatic improvements in productivity and substantial cost saving. A major designer and manufacturer of mechanical equipment can reduce its operating cost in excess of rupees 45 crores a year through improved supply management (e.g. Automobile industry). In electronic fields a company with sales of approximately Rs. 5000 crore may reduce 10 % operating cost.

Sony of Japan Slashed its operating cost by between Rs. 10000 crore toRs. 1000 crore a year. Manufacturing typically wants to maintain constant utilization levels in production facilities using suppliers to absorb fluctuations of market whereas purchasing prefers to keep suppliers (vendors) production levels stable so that they can minimize the changeover costs and pass the savings on to the company.

In product development and specification leading companies select their suppliers before designing a new product so that they can become an integral part of the product development team; such suppliers typically provide assemblies rather than components, reducing the complexity of managing a vast supplier base and multiple components. To make this feasible, company need to help their suppliers develop and maintain advanced technical capabilities. Suppliers should be encouraged to invest in technology, but should be prepared as a last resort to take on new suppliers when their existing ones are not able to keep pace with developments despite all assistance from the companies. Traditionally when a company develops a new product, the engineering department would design is single handling & pass the final blue print on to purchasing for quotations .By then the company had created the definitive design so if supplier changes that would reduce costs, engineering departments of companies were reluctant to make them Because the design neglected to take supplier's capabilities into account, the company would paying a premium for a new part.

But today many companies have changed how they work with suppliers in new product design. They now select them before drawing a single line on a plan. Suppliers are specifically chosen by cross-functional team from engineering, manufacturing, purchasing and quality control. Responsible for the design and development of the new product the team discusses it assembly by assembly and piece by piece and selects suppliers on the basis of past price, quality and delivery performance. The team ensures that each component has a single internal or external supplier that will be used for the life of the part during both development and production As well as selecting suppliers, the team sets the target prices for each component, drawing on its member's previous experience with similar parts. Using target prices ensure that a company will be able to produce that is acceptable and competition in the market .The team than meets the selected suppliers to discuss specifications and costs.

After the meeting, the suppliers respond to the target prices. If they think a given target is unattainable, the price can be adjusted. If the cost of one component is allowed to increase a corresponding saving must be found in another component.

The ability to develop target pricing is critical in the success of this approach. Companies that handle it will have costing groups capable of developing target pricing on global benchmarks. They compare data from the world's leading suppliers for the critical manufacturing processer using this bench – marks to work out a target cost for new components.

If there is any disagreement over cost supplier and company together review their respective cost estimates item by item until a discrepancy is found and the difference is resolved. If for some reason the supplier's quote is higher than the target price but correct, an alternative means of the cost must be found or a compensatory saving made in another component.

Corporation a major supplier of high end audio systems to the automation industry has taken the process a step further. Bose identified several key suppliers which now have offices actually on the company's premises. The supplier's staff works with the company's premises. The supplier's staff work with the company's design and manufacturing engineer's during the conceptual stage of new product development. Honda has also taken a similar approach by building 50 offices in it engineering and new product development department's to house representatives of major suppliers who work with the company during new product design. Therefore locating supplier & company together benefits both parties. It increases communication between them and minimizes the possibility of designing a part that is difficult to manufacture or that does not take advantage of supplier's manufacturing capability and leverages supplier's knowledge to the advantage of company's product.

2.Sourcing

In this element of sourcing, companies their suppliers, determine the number they will work with and define the type of contractual experiments that will exist. Best practice shows that companies should make great efforts to avoid duplication of capabilities between their suppliers and themselves. Where there is an emphasis on single sourcing of parts, a strong relationship with supplier can be developed, founded on multi years, contracts and part ownership for life contracts tend to be simply based on trust that has been built over the years Companies concerned to improve their supply management are following single-sourcing and thereby consulting their supplier base. Consolidation though does not provide a competitive advantage. The advantage comes when limited resources can be focused on a manageable number of supplier's which can then receive the attention they used to achieve top performance, similarly supplies receive enough volume from the company to warrant investing their own internal resources to maximize their production process and thus produce a component at a more competitive price.

Companies that have traditionally used vast numbers of suppliers have successfully made the transition to best practice in supply management by reducing their supplier's base by 60 percent approximately.

3. Contract Execution

In this elements which concerns how companies work with their supplier's on a day-to-day basis. Leaders in supply management such as Honda emphasis continuous development and improvement. Honda has dedicated teams working with supplier base to reduce costs. Once achieved, cost saving are shaved equitably so that each party gains.

To promote continuous improvement, some successful companies have implemented supplier rating system that are used to improve performance by identifying problem areas and developing methods to eliminate or mitigate any difficulties, but they are not used as a tool for penalizing weak performance. High performing company's also stress establishing and achieving to schedules. In the past, many companies merely informed their suppliers of any scheduling instability and expected them to respond. Today the focus is on stabilizing internal schedules and working with suppliers to achieve just in time (JIT) delivery.

Successful day to day collaboration between a company and its suppliers relies on supplier evaluation, investment for improvement, integration of suppliers, effective use of transportation and open communication.

III. EVALUATING SUPPLIERS

The supplier should be evaluated for mainly following qualities:

1. Manufacturing facilities with good technical knowledge, aptitude for research and quality.
2. Capital: They should have enough money to deliver the assembler or components in time of good quality as per specifications desired by company.
Of course, if supplier is really very capable but little short of capital, the company must assist him. The money invested in suppliers can easily be received by deducting fixed amount as per agreement in each supply.
- 3 .Location: Suppliers should be near to company (say within 20 km) or if possible company can house them in their own premises depending on availability of space of company's end.
4. Organization: It is very imperative for quality and timely deliveries that they are very well organized and work is done in a systematic way and infrastructure and departments .

Above all open communication between suppliers and company plays a very important role for example if certain specification on material or tolerance is to be relaxed within permissible limit, the supplier should be able to get a final approval from company in least time possible OR company if wishes to achieve to their stringent specification should communicate how the problem can be resolved.

REFERENCES

- [1] Purchasing and supply management by Victor H. Pooler.
- [2] Supply Chain Management by Chopra and Meindl.
- [3] Purchasing and supply Chain Management by Robert M.Monczka, Robert B. Handfield, Larry C.Giunipero, and James L. Patterson.
- [4] Negotiating Agreement without giving in by Roger Fisher.
- [5] Transportation: A supply chain Perspective by John J. Cople.
- [6] Essential of Supply Chain Management by Michael H. Hughes.
- [7] Collaborative Planning, Forecasting & Replacement by Dirk Seifert.
- [8] Essential of Inventory Management by Max Muller.
- [9] Purchasing and supplying by Michael R.Leenders.
- [10] The supply-Based Advantage by Stephan C. Rogers
- [11] Entrepreneurship Development Small Business Enterprise – Charantsnath Pearson.
- [12] Entrepreneurship –Hisrich, P.Peters, Shepherd –Mogrew Hill.
- [13] Entrepreneurship Bringer Island –Pearson.