

A Study on Application of Activity Based Costing in Sheet Metal Industry at Belagavi, Karnataka

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Abstract

Manufacturing of Sheet Metal Pressed Components for Alternator, Motor, Automobile Parts and items required by customers to their required specifications. Their specialty being the deep drawn components, they cater the electrical, elevator, home appliances automobile industry. From the study of application of activity based costing at Sheet metal industry, it is observed that the industry is making good amount of profit by manufacturing metal products. To estimate the cost of the metal products, five different products were chosen. All the products have different costs as per traditional costing method and after comparing those products with Activity Based Costing method there is a difference in the price of same products, which indicates that product is over cost and under cost.

Keywords: Activity based costing; Metal product; Cost pool; Cost driver

Introduction

Sheet metal is metal formed by an industrial process into thin, flat pieces. Sheet metal is one of the major forms used in metal industry and through which it can be cut and bent into a different shape. Thicknesses can differ accordingly, the thinnest sheets are considered foil or leaf and pieces thicker than 6 mm are considered plate.

Corrugated iron is obtainable in horizontal section. The loops are organizing by functioning of sheet of metal through a round slitter. There are lot of varieties in metals which can be convert it into corrugated iron such as aluminium, steel, latten, copper, tin, nickel and rutile. For ornamental purpose some essential metals contain gold, silverware and a heavy valuable metallic element.

Sheet metal is used mostly in automobile and truck segment, aircraft fuselages and van, tables required in hospitals, shelters for buildings and different applications. Sheet metal of iron and different materials along with high attractive absorbency, which is called as cover brace central possess approach in transformers and automatic gadget.

Types of Materials in Sheet Metal Industry

Stainless steel

There are mainly three grades in stainless steel material that is grade 304 is the most common of the bracket. It offers good favoured resistance while carrying formability and weld ability. Grade 316 possesses more corrosion resistance and strength at elevated temperature than 304. It is mainly used for chemical apparatus, pumps and valves. Grade 430 is more favoured grade, low cost option, this is used when high attrition resistance is not a primary benchmark.

Aluminium

It is another popular metal used in sheet metal because of its flexibility, wide range of options, cost effectiveness, and other properties. The four most ordinary atomic number category accessible as sheet metal are 1100-H14, 3003-H14, 5052-H32, and 6061-T6.

Literature review on Activity Based Costing

Nara medianeira Stefano [1] activity based costing will help the health care administrators to improve over the conventional costing

system, which will help the hospital management to compare with standard costing.

Mitchell [2] study is conducted to analyze the different uses of activity based costing that is, to verify how the communication has been happen through activity based costing, how it has formulated and all.

Gunasekaran and Sarhadi [3] activity based costing improve the quality management and it helps to improve productivity in manufacturing organization.

It tells that the adoption of one innovative technique that is activity based costing. It is more transferable than any other technique that is traditional costing. Changes in manufacturing of different metal industry will lead to change in the activities [4].

In service industry activity based costing plays role of controlling, planning, and decision making. It gives exact costs to their activities rather than products which gives the accurate cost production.

Objectives

To identify activities involved in manufacturing of different product

To find cost pool for each activity

To identify cost driver of each activity

To compare the cost price of product with traditional costing method and activity based costing.

Research Methodology

The data is collected from the company's financial report.

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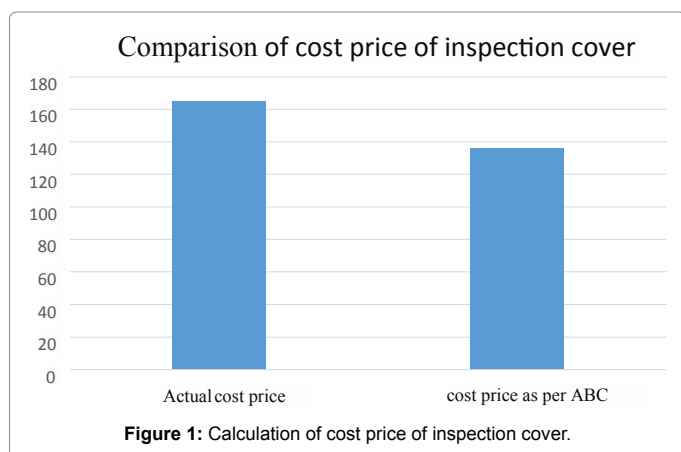
Some information is collected from company’s website.

Statistical tool: MS Excel.

Results

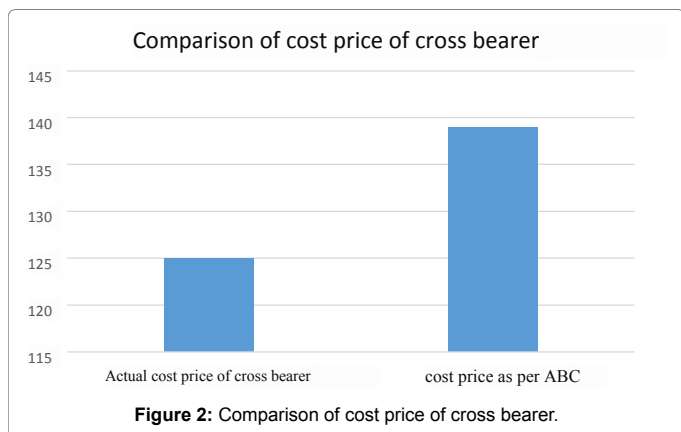
Interpretation 1

Figure 1 shows that the cost price of inspection cover is showing difference in price by comparing traditional costing system with activity based costing. Cost price of the product as per traditional method is Rs. 165/- and as per activity based costing is Rs. 136/-, i.e., there is a difference of Rs. 29/- (Tables 1 and 2).



Various charges	Shearing activity	Cut-out	Notching	Bending	Fabrication	Deburring
Electricity	10.00	0.07	0.07	0.42	0.52	0.35
Depreciation	12.02	0.10	0.03	0.27	0.08	0.07
Labor Charges	75.00	0.42	0.42	3.33	4.17	0.83
Fuel & Lubricants	0.63	0.01	0.01	0.04	0.05	0.02
Repairs & Maintenance	1.49	0.02	0.02	0.10	0.12	0.05
Total charges	99.141	0.622	0.549	4.161	4.951	1.320
Total cost						
Pool	110.745					
Prime cost	25.22					
Total cost						
Price	136					

Table 1: Calculation of cost price of Inspection cover as per ABC.



Product Name	Inspection Cover
Prime cost	25
Factory cost	98
Other cost	42
Total cost	165

Table 2: Calculation of cost price of Inspection cover as per traditional costing.

various charges	Shearing activity	Cut-out	Bending	Inspection	Packing
Electricity	10.5	0.1	0.1		
Depreciation	12.0	0.1	0.1		
Labor charges	75.0	0.4	0.4	0.4	2.1
Fuel & lubricants	0.6	0.1	0.1		
Repairs & Maintenance	1.5	0.2	0.2		
Total charges	99.6	0.9	0.9	0.4	2.1
Total cost pool	103.9				
Prime cost	35				
Total cost price	138.9				

Table 3: Calculation of cost price of cross bearer as per ABC.

Product name	Cross bearer
Prime cost	63.3
Factory cost	40.7
Other cost	21
Total cost price	125

Table 4: Calculation of cost price as per traditional costing method.

Interpretation 2

Figure 2 shows that, the actual cost price of the cross bearer is less than cost price estimated as per activity based costing. It explains that company is allocating more expenses cross bearer. The cost price as per traditional method is 125/- and as per activity based costing it is Rs. 139/- (Tables 3 and 4).

Conclusion

From the various calculation of activity based costing method of different products it is clear that the activity based costing method is showing accurate and exact cost of the product compare to traditional costing method. Some products that are chosen for estimating activity based costing are over costed whereas, the two products are under costed compare to other products. It shows over costing, when the estimated cost price of the product is greater than the real cost price, whereas it shows the under costing when the estimated cost price is less than the real cost price.

It is concluded that this method of estimating cost will give accurate or exact cost of each and every cost activity that is involved in manufacturing metal products, which will help the company to earn more profit.

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