

A STUDY ON ACTIVITY BASED COSTING IN BESCAL STEEL INDUSTRIES PVT LTD

Submitted in partial fulfillment of the requirements for the award of Degree in
MASTER OF BUSINESS ADMINISTRATION

by

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**DEPARTMENT OF BUSINESS ADMINISTRATION
SCHOOL OF MANAGEMENT STUDIES**

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE
JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119**

MAY 2023



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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **SABAREESH.M 41410258** who carried out the project entitled "**A Study on Activity Based Costing in Bescal Steel Industries Pvt Ltd**" under my supervision from January 2023 to March 2023.

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I **SABAREESH.M (41410258)** hereby declare that the Project Report entitled “**A Study on Activity Based Costing in Bescal Steel Industries Pvt Ltd** ” done by me under the guidance of **Dr.S.DHIVYA BHARATHI** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

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A handwritten signature in black ink, appearing to be 'S/M' or 'S/R' with a horizontal line underneath.

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ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my sincere thanks to **Dr. G. Bhuvaneswari, MBA., Ph.D., Dean - School of Management Studies** and **Dr. A. Palani, M.Com., M.B.A., Ph.D., Head - School of Management Studies** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide **Dr.S.DHIVYA BHARATHI** for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **School of Management Studies** who were helpful in many ways for the completion of the project.

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A STUDY ON ACTIVITY BASED COSTING IN BESCAL STEEL INDUSTRIES PVT LTD

ABSTRACT

Activity-Based Costing (ABC) is a new but potential important emerging concept in the Management Accounting domain. It has gained greater importance in developed economies to a huge extent. The present trend suggests companies to adopt ABC even in developing economies of the world. Activity-Based Costing emphasizes the need to obtain a better understanding of the behaviour of overhead costs. The project titled "A study on Activity based costing" conducted in Bescal Steel Industries Pvt Ltd helps to formulate an Activity-Based Costing system for the company, to identify the impact of implementing ABC in the organization.

The need for doing this project is to use ABC costing for calculating the cost of a particular product in the company namely, '60S IRON ', to provide suggestions to the company, relating to the cost attached to the various business activities and To find out the likely lag in the various business functions of the organization

Better understanding in the view of how much is ABC superior to the traditional process costing system followed in the company for controlling cost. Fixing up responsibilities for the executives who control the activities with authority and also making them accountable. Setting of standards for value adding and non-value adding activities. A study into the scientific method that can classify cost drivers and activities. Make a complete study on the whole organizations functions and allocation of administrative and selling and distribution overheads to the cost of the product.

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CHAPTER 1 INTRODUCTION TO THE STUDY

ACTIVITY-BASED COSTING

Activity-Based Costing (ABC) is a systematic cause and effect method of assigning the cost of activities to products, services or any other cost object. It is based on the principle that “products consume activities”. It states that the activities consume resources which are the cost drivers. It provides for the understanding of this relationship since it is critical for the successful management of overheads. It is a system that attempts to link the cost of each business activity in an organization to the products which benefit from the activity.

Earlier costs were first collected for production departments and service departments and finally the costs of production departments were absorbed by jobs or processes. Traditional costing systems were designed decades ago, when most companies manufactured a narrow range of products and direct labour and direct material were dominant factory costs. Overhead costs were small and thus inappropriate overheads allocations were insignificant. The allocations were always volume-related measures, such as direct labour hours or machine hours.

There are certain resources exist for activities that are unrelated to physical volume. The volume-related activities consist of support activities such as material handling, material procurement, performing set-ups, production scheduling and first item inspection activities. The traditional system assumes that products consume all resources in proportion to their production volumes, thus reporting distorted product costs.

Job costing and process costing are two basic methods of cost accounting. Activity-Based Costing is not a distinct method of costing like ‘job costing and process costing’. It is only a new practice in the process of attribution of costs to jobs or processes. Now in the context of Activity-Based Costing, the costs are collected according to activities such as material ordering, material handling, quality testing, machine set-ups, customer support service, etc. and jobs and processes for which cost collection is being attempted are loaded with costs of these activities rationally.

FACTORS PROMPTING THE DEVELOPMENT OF ABC

- ❖ Growing overhead costs because of increasingly automated production.
- ❖ Decreasing costs of information processing because of continued improvements, and increasing application of information technology.
- ❖ Increasing market competition, which necessitated more accurate product costs.
- ❖ Increasing product diversity to secure economies of scope and increased market share.
- ❖ Traditional costing fails to capture cause and effect relationship.
- ❖ Traditional costing often fails to highlight inter-relationship among activities in different departments.
- ❖ Growing dissatisfaction among the working executives regarding traditional costing, which is based on averages and estimates.
- ❖ Overhead costs are no longer a mere burden to be minimized. Overhead functions such as product design, quality control, customer service, production planning and sales order processing are as important to customer as physical processes on the shop floor.

ACTIVITY-BASED COSTING METHODOLOGY

Activity-Based Costing emphasizes the need to obtain a better understanding of the behaviour of overhead costs and thus it seeks to ascertain

- 1) What causes costs?
- 2) How they relate to product or services?

ABC recognizes that in the long run most costs are not fixed and seeks to understand the forces that cause overhead costs to change over time. It focuses on activities, as the activities cause costs. ABC systems assume that cash outflows are incurred to acquire a supply of resources (i.e., labour, material and resources), which are consumed by activities. In other words, activities cause cost and products create demand for activities. A link is made between activities and products by assigning costs to products based on individual product's consumption or demand for each activity. Therefore, ABC system is based on understanding of the following:

- 1) Identifying major activities that take place in an organization
- 2) Creating a cost pool / cost centre for each activity or costing activities
- 3) Determining cost driver for each major activity

4) Assigning cost of activities to products based on product's consumption or demand for activities

1) IDENTIFYING ACTIVITIES

The first stage is to identify the major activities in the organization like machine-related activities, direct labour-related activities and various support activities such as ordering, receiving, material handling, parts administration, production scheduling, Assembling and despatching. This step requires the management accountant to acquire a familiarity with what is happening in the indirect areas of the organization. This has to be done systematically and involves examining physical plans of the work place (to identify how all space is being used) and payroll listings (to ensure that all relevant personnel have been taken into account). This examination normally has to be supplemented by the observation of work and particularly by a series of interviews with staff involved.

A number of criteria underlie the choice of activities. The activities should be at a reasonable level of aggregation. To break down activities into actions and tasks is usually too detailed for product costing. Such actions and tasks are normally combined into large purpose-oriented activities. Final choice of activities (i.e., aggregation of actions and tasks will be judgemental in any organization).

In the beginning, at the time of introduction of ABC, activity cost pools ran into hundreds. Now-a-days it is felt that 20 to 30 cost pools have become common. The choice is between information details and cost of setting up and operating the system. The benefit of this would be more detailed profits of cost reported to management and a possible increase in the homogeneity of the costs in each activity cost pool.

2) CREATING A COST POOL / COST CENTRE

The second stage requires that a cost centre (also called a cost pool) be created for each activity. In other words, after establishing the activity structure for the system, it is necessary to identify the resources consumed by each individual activity during the relevant period. This provides a basis for identifying level of costs in each pool. Both allocation and apportionment will be involved at this stage. In the absence of time records, labour and equipment usage will

have to be identified in broad terms by observation and measures of resource consumption (i.e., space occupied) should be used. Thus some amount of approximation and estimation is inherent in even ABC systems.

The activity cost information generated on this pattern is very useful. It represents what is often called, a novel profiling of overhead cost for management rather than analyzing cost in terms of inputs (labour, supplies, and equipment depreciation). It indicates how resources have been applied in the business. This type of analysis gives a particular visibility to overheads incurrence. It details why and how overheads have been incurred. It allows an assessment of relative magnitude and will permit time-periods and inter-plant comparison at a detailed level. In addition, supplementary analysis of activities into value-added / non-value-added categories or core support activities can assist management in designing policies aimed at cost containment or cost reduction.

3) DETERMINING COST DRIVERS FOR EACH ACTIVITY

Next step is to identify the factors that influence the cost of a particular activity. The term 'cost driver' has been used to describe the events or forces that are significant determinants of the cost of activities. A cost driver is a variable, which determines the work volume or work load of a particular activity. It would provide the justification for amount of resources consumed by an activity and hence its cost. Due to this causal relationship it will be a significant measure of activity cost variation. To permit its practical application in an ABC system, it must be conveniently measurable and readily attributable to individual products.

Most cost drivers will reflect the transactions, which underlie the activity under consideration. Sometimes characteristics chosen represent factors, which primarily determine the number of activities undertaken and for this reason they are used as cost drivers. For example, numbers of customers, number of suppliers and number of component parts have all been used as cost drivers. These are all situational factors, which one would expect to influence the volume of transactions and hence the cost respectively, of the customer order processing, procurement and scheduling activities.

Special attention should be directed toward cost causality in determining cost drivers. The ascertainment of cost drivers will normally involve repeat interviews with personnel involved in

the specific activities. The focus remains on identifying what causes a particular activity to consume resources and so incur cost. The end result of the questioning will be a typical set of cost drivers for each sub-activity.

Therefore in order to link activity costs to product or service output, a cost driver has to be identified with each cost pool. As historical data are sometimes not available to undertake statistical testing of the relationship between the cost driver and the behaviour of cost in the cost pool, the choice of cost driver may require the exercise of judgement. In practice, four alternative types of cost driver are to be found:

- a) **Pure volume cost drivers:** They are most common and represent a reasonable homogeneous measure of the output of the activity concerned.
- b) **Weighted volumes cost drivers:** These cost drivers are used, where the output of activity is clearly non-homogeneous.
- c) **Situational cost drivers:** Sometimes situational characteristics of the activity can be important in determining its work load and thus hold credence as its cost driver.
- d) **Motivational cost drivers:** These cost drivers are used when the intention is to motivate cost-conscious behaviour rather than produce product cost information in the most accurate manner. This type of cost driver may lack some of the qualities mentioned above but its selection may give prominence to one particular aspect of operations and influence managerial behaviour in a desired manner.

COST DRIVER ANALYSIS

Companies engage in many activities that consume resources and thus cost cause to the incurred. All activities have cost drivers, i.e., the factors having direct-cause effect relationship to a cost. Cost drivers can be volume-related (such as machine hours or labour hours) and non-volume related, which generally reflect the incurrence of specific transactions (such as set-ups, work orders or distance travelled). There is a tendency to identify greater number of cost drivers that can be used for cost accumulation or activity elimination. It is an important function of management to ensure that cost drivers selected are limited to a reasonable number. Care should also be taken to ascertain that the cost of measuring the driver does not exceed the

benefit of using it. A cost driver should be easy to understand, directly related to activity being performed and appropriate to performance measurement.

Cost have been traditionally accumulated into one or two cost pools (total factory overhead or variable or fixed factory overhead and one or two cost drivers (direct labour hours and / or machine hours) have been used to assign costs to products. However, the use of single cost pools and single drivers may produce illogical products or services cost for internal management use in complex production (or service) environment. The accounting system must first recognize that costs are created and incurred at the following different levels:

- ❖ **Unit-level cost:** Traditionally, cost drivers were viewed only at the unit level. These drivers create unit-level costs meaning that they are caused by the production or acquisition of a single unit of product or the delivery of a single unit of service.
- ❖ **Batch-level cost:** Costs that are caused by a group of things being made, handled or processed at a single time are referred to as batch-level costs. Using a batch-level perspective indicates the commonality of the cost to the units within the batch is more indicating of the relationship between the activity (set-up) and the driver (different production runs).
- ❖ **Product-level (process-level) cost:** A cost caused by the development, production, or acquisition of different items is called a product-level (or process-level) cost. These costs may include engineering change orders (ECOs), equipment maintenance, product development and scrap, if related to product design.
- ❖ **Facility-level cost:** Some costs cannot be related to a particular product line. These are, instead, related to providing a facility.
- ❖ **Organizational level cost:** Certain costs are incurred at organization level for the single purpose of supporting continuing facility operations. These organizational level costs common to many different activities and products and services can be prorated among services and products on an arbitrary basis only. Organizational level costs are not product-related. Thus, they should be subtracted in total from net product revenues instead of an arbitrary and illogical apportionment.

4) ASSIGNING COST OF ACTIVITIES TO PRODUCTS

The last step involves tracing the cost of the activities to produce according to product's demand (using cost driver as a measure of demand) for these activities during the production process. A product demand for the activities is measured by the number of transactions it generates for the cost driver. The best way to complete the final step is to apply cost driven rate to individual products. Here it is important to state that if a cost driver rate is to be practical the variable chosen must be measurable in a way which permits its identification with individual products. The requirement may represent one of the significant costs of ABC, especially where a new system has to be established to collect the cost driver information, both in total and for each product. The ability of a cost driver to meet this requirement should, therefore, be considered, when the cost driver is being chosen.

OUTGROWTH OF ABC

The original reason for implementing ABC systems was to correct over or under-costing through more accurate assignment of indirect cost. The introduction, however, results into some important benefits, which can be termed as valuable outgrowth of ABC systems.

(i) NON-VALUE ADDED ACTIVITIES: The identification of non-value added (NVA) activities were an important additional benefit of introduction of activity based costing system. An NVA activity represents the work that is not valued by external or internal customer. NVA activities do not improve the quality or function of a product or service but they can adversely affect costs and prices. Identification of such activities can instigate efforts to eliminate or reduce NVA activities. It should be kept in view that even if an activity is classified as NVA, it is not necessarily completely non-essential. The implementation of ABC analysis can also point out non-essential components of so-called value added activity, which can be classified as NVA. The organization should be on the watch to:

- a) Identify activities or efforts not required at all or can be eliminated.
- b) Ineffectively accomplished and can thus be reduced or redesigned.
- c) Identify the activities required to sustain the organization and, therefore, cannot be eliminated.

(ii) PROCESS IMPROVEMENTS: ABC primarily focuses on costing activities.

The initial intention was to improve the assignment of costs to products or services. Later, the identification of activities and their cost drivers was recognized as valuable for organizations that were trying to continuously improve processes and not just activities within departments. Process Value Analysis (PVA) has been developed to complement ABC in cost management endeavours. PVA has been defined as a methodology for reducing costs and improving processes by identifying resource consumption within a process and the underlying root causes of cost, i.e., cost drivers. PVA is a systematic way to identify VA and NVA activities. PVA supports ABC by seeking to improve the identification of activity cost pools, the casual factors of activities. PVA steps include:

- a) Prepare flow chart to document the activities in the processes of organizations.
- b) Define activities as VA and NVA.
- c) Identify the cost drivers and the casual factors of each activity.
- d) Identify improvement possibilities based on PVA and ABC information.

USES OF ABC

- 1) Effectively appraises a distribution channel and helps in reconfiguring or eliminating certain channels in order to improve overall levels of profitability.
- 2) Effectively compares inter-plant performance.
- 3) Provides reliable data for decision-making such as make or buy.
- 4) Helps to collect benchmark costs by using internal ABC analysis.
- 5) Determines the cost of each activity.
- 6) Helps to charge optimum price for the products.
- 7) Helps to make right products to be sold by determining which products have low or negative returns or yield such low margin volumes that they are not worth keeping.
- 8) Helps in identification of non-value added costs which can be used to make significant improvements for profitability.
- 9) Helps to identify areas where cost reduction is possible.
- 10) Helps to provide feedback information related to product design.
- 11) Identification of areas where process improvements or waste elimination is possible.
- 12) Helps to identify most profitable customers.

In brief it helps managers to:

- i. Identify and mention significant technological cost.
- ii. Trace many technology costs directly to products.
- iii. Promote achievement of market share through use of target costing.
- iv. Understand the impact of new technologies on all elements of performance.
- v. Translate the company goals into activity goals.
- vi. Analyse the performance of activities across business functions.
- vii. Promote standards of excellence.
- viii. Helps to introduce business process re-engineering (BPR).

IMPLEMENTING AN ABC SYSTEM

Given below is a list of standard implementation steps for ABC system.

a) Obtain high-level support: An ABC project involves the procurement of funding and dealing with multiple departments. To make these chores easier, it is necessary that there should be a high-level supporter of the project on the management team, who can give enough 'push' through the corporate bureaucracy to ensure that project is completed in time.

b) Obtain a project schedule and budget: The project team leader should work with the high-level project sponsor to obtain a project schedule and funding that is sufficient for completion of the project.

c) Assemble the ABC team: In view of the wide array of knowledge required to formulate an ABC system, it should include employees from the engineering, marketing, materials management, computer services and production departments.

d) Train the team: Many team members may have heard of ABC before and they may be having only a passing familiarity with it. An in-house expert or a consultant can be brought in to conduct an intensive review session with the team.

e) Gather information: The project team requires collecting data to identify activities, costs, relationships between activities and costs and types of cost drivers.

f) Conduct modelling and analysis: With all information in hand, the team should use flow charting to determine how activities occur and flow through departments to determine the resource drivers, cost pools and activities.

g) Select and purchase a software package: It may be necessary to purchase a third-party ABC software package, which typically makes it easier to conduct analysis and ad hoc enquires. It also makes it easier to control the systems since all ABC-related files are kept in one place.

h) Create a software linkage: It may be possible to create automated linkages between ABC system and other systems such as general ledger that allows one to save time by streamlining the flow of information into the ABC system by ensuring dependability.

i) Test the software: The team should create a set of sample ABC transactions and run them through the ABC software. This step is designed not just to see if the software works as advertised, but also to ensure that the team understands how the ABC system works.

j) Design reports: An ABC system usually requires an entirely new set of reports. These may be constructed with ABC package's report writer or customized or written with the aid of a third party's software package. The team should create sample reports with test transactions to be certain that reports function as planned.

k) Design policies and procedures: Once the software is determined to be acceptable, the team must prepare a set of policies and procedures to integrate the operation of the ABC system and software into existing operations of the accounting department. These should be tested with the people who will be using the system and retested after the system has been installed to ensure that they are constructed correctly.

l) Implement the system: The team should co-ordinate the training of all ABC system users just prior to the "go line" date, be present on the date the system is made operational.

m) Follow-up on the installations: An ABC system or so to say any system rarely works exactly as expected. It is common to come across problems, caused by improper or inadequate training, missing procedures or faulty analysis. These problems can be documented and corrected by proper follow-up. Further reviews can be spread out over longer periods as the new system gradually 'settle down'.

CRITICISM OF ABC

Activity-Based Costing typically provides better information than traditional overhead allocation process. Still it is not the presence for all managerial problems. Following criticism has been levelled against the ABC system:

1) ABC system implementation requires significant amount of time and cost.

2) An environment of change must be created for implementation of ABC system. It requires overcoming a variety of individuals, organizational and environmental barriers as follows:

i) Fear of unknown and shift in status quo.

ii) Potential loss of status.

iii) A necessity to learn new skill.

3) Top management must be involved and support the implementation process. Lack of commitment or involvement of top management will make any meaningful progress slow and difficult.

4) Employees and managers must be educated in some non-traditional techniques that include new terminology, concepts and performance measurements.

5) Additional time will be required to analyse the activities taking place in the activity centres, trace cost to those activities and determining the cost drivers.

6) ABC does not conform to Generally Accepted Accounting Principle (GAAP). ABC would suggest that some non-product cost (such as those in research and development) be allocated to products whereas certain traditionally designated product cost (such as factory building depreciation) may not be allocated to products.

7) ABC does not promote Total Quality Management (TQM) and continuous improvement. Activity-based prescriptions for improved competitiveness usually entails steps that lead to selling more or doing less what should not have been done in the first place. It does not make company a long-term global competitor.

ACTIVITY-BASED MANAGEMENT (ABM)

The early adopters of Activity-Based Costing (ABC) used it to produce more accurate a product (or service) costs but it soon became apparent to the users that it could be extended beyond purely product costing to a range of cost management applications. The terms Activity-Based Management (ABM) or Activity-Based Cost Management are used to describe the cost management application of ABC. ABM is a discipline that focuses on the management of activities as the route to improving the value received by the customer and the profit achieved by providing this value. This discipline includes cost driver analysis, activity analysis, and performance

measurement. ABM draws on ABC as its major source of information. In a way, it can be said that ABC supplies the information and ABM uses this information in various analysis designed to yield continuous improvements.

ACTIVITY-BASED BUDGETING (ABB)

Activity-Based Budgeting (ABB) is the process of planning and controlling the expected activities of the organization to derive a cost-effective budget that meets forecast workload and agreed strategic goals. ABB is a quantitative expression of the expected activities of the organization reflecting management forecast of workload and financial and non-financial requirements to meet agreed strategic goals and planned changes to improve performance. The three key elements of ABB are type of work to be done, quantity of work to be done and cost of work to be done.

CHAPTER II INDUSTRY PROFILE

Introduction

India was the world's third-largest steel producer in 2020.@ The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. Consequently, the steel sector has been a major contributor to India's manufacturing output.

The Indian steel industry is very modern with state-of-the-art steel mills. It has always strived for continuous modernisation and up-gradation of older plants and higher energy efficiency levels.

Indian steel industries are classified into three categories such as major producers, main producers and secondary producers.

Market Size

India's finished steel consumption grew at a CAGR of 5.69 per cent during FY08-FY18 to reach 90.68 MT.

India's crude steel and finished steel production increased to 102.34 MT and 104.98 MT in 2020-18, respectively.

In 2020-18, the country's finished steel exports increased 17 per cent year-on-year to 9.62 million tonnes (MT), as compared to 8.24 MT in 2019-17. Exports and imports of finished steel stood at 0.99 MT and 1.22 MT, during Apr-May 2021.

Investments

Steel industry and its associated mining and metallurgy sectors have seen a number of major investments and developments in the recent past.

According to the data released by Department of Industrial Policy and Promotion (DIPP), the Indian metallurgical industries attracted Foreign Direct Investments (FDI) to the tune of US\$ 10.56 billion in the period April 2000–December 2020.

Some of the major investments in the Indian steel industry are as follows:

- Vedanta Star Ltd has outbid other companies to acquire Electrosteel Steels for US\$ 825.45 million.
- Tata Steel won the bid to acquire Bhushan Steel by offering a consideration of US\$ 5,461.60 million.
- JSW Steel has planned a US\$ 4.14 billion capital expenditure programme to increase its overall steel output capacity from 18 million tonnes to 23 million tonnes by 2022.

- Liberty House Group, a UK based business, is aiming to acquire Bhushan Power and Steel which will help the conglomerate to enter the Indian market.
- Tata Steel has decided to increase the capacity of its Kalinganagar integrated steel plant from 3 million tonnes to 8 million tonnes at an investment of US\$ 3.64 billion.

Government Initiatives

Some of the other recent government initiatives in this sector are as follows:

- Government of India's focus on infrastructure and restarting road projects is aiding the boost in demand for steel. Also, further likely acceleration in rural economy and infrastructure is expected to lead to growth in demand for steel.
- The Union Cabinet, Government of India has approved the National Steel Policy (NSP) 2020, as it seeks to create a globally competitive steel industry in India. NSP 2020 targets 300 million tonnes (MT) steel-making capacity and 160 kgs per capita steel consumption by 2030.
- The Ministry of Steel is facilitating setting up of an industry driven Steel Research and Technology Mission of India (SRTMI) in association with the public and private sector steel companies to spearhead research and development activities in the iron and steel industry at an initial corpus of Rs 200 crore (US\$ 30 million).

Road ahead

India is expected to overtake Japan to become the world's second largest steel producer soon, and has envisaged achieving 300 MT of annual steel production capacity by 2030.

Steel consumption is expected to grow 5.7 per cent year-on-year to 92.1 MT in 2021.

India is expected to become the second largest steel producer in the world by 2021, based on increased capacity addition in anticipation of upcoming demand, and the new steel policy, that has been approved by the Union Cabinet in May 2020, is expected to boost India's steel production.* Huge scope for growth is offered by India's comparatively low per capita steel consumption and the expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors.

Exchange Rate Used: INR 1 = US\$ 0.0155 as on March 30, 2022.

Steel plants

There are two types of steel plants - mini steel plants and integrated steel plants.

Mini steel plants are smaller, have electric furnaces, used steel scrap and sponge iron. They have re-rollers that use steel ingots as well. They produce Carbon steel and Alloy steel of certain specifications. There are around 650 mini steel plants in India.

Integrated steel plants are large, handle everything in one complex - from putting together raw material to steel making, rolling and shaping. Iron ore, coke, and flux are fed into the blast furnace and heated. The coke reduces the iron oxide in the ore to metallic iron, and the molten mass separates into slag and iron. Some of the iron from the blast furnace is cooled, and marketed as pig iron; the rest flows into basic oxygen furnaces, where it is converted into steel. Iron and steel scrap may be added to both to the blast furnace and to the basic iron furnace. There are about five integrated SAIL plants in India.

Structure

The iron and steel industry in India is organised into three categories: main producers, other major producers, and secondary producers. In 2004-05, the main producers i.e. SAIL, TISCO and RINL had a combined capacity of around 50% of India's total steel production capacity and production. The other major producers — ESSAR, ISPAT and JVSL — account for around 20% of the total steel production capacity.

National steel policy

National steel policy – 2005 has the long-term goal of having a modern and efficient steel industry of world standards in India. The focus is to achieve global competitiveness not only in terms of cost, quality, and product-mix but also in terms of global benchmarks of efficiency and productivity. The Policy aims to achieve over 100 million metric tonnes of steel per year by 2022-20 from the 2004-05 level of 38 mt. This implies an annual growth of around 7.3% per year from 2004-5 onward.

The strategic goal above is justified because steel consumption in the world, around 1000 million metric tonnes in 2004, is expected to grow at 3.0% per annum to reach 1,395 million metric tonnes in 2018, compared to 2% per annum in the past fifteen years. China will continue to have a dominant share of the demand for world steel. Domestically, the growth rate of steel production over the past fifteen years was 7.0% per annum. The projected rate of 7.3% per annum in India compares well with the projected national income growth rate of 7-8% per annum, given an income elasticity of steel consumption of around 1.[3]

Subsequent steel policies have been drafted each year. The Indian Ministry of Steel has released draft National Steel Policy (NSP), 2020. The problems identified in this sector include:

- Steel companies are plagued with huge debts.
- Lack of domestic demand.
- Low quality of metallurgical coke for blast furnace iron making.
- High input costs.
- Cheap imports from China, Korea and other countries are also a matter of concern for domestic producers.

The aim of the draft NSP is to develop a self-sufficient steel industry that is globally competitive. The policy proposes setting up Greenfield Steel Plants along the Indian coastline under the Sagarmala Project. This has been proposed in order to tap cheap imported raw materials such as coking coal and export the output without incurring huge cost burden. The policy has also proposed the idea of gas-based steel plants and use of electric furnaces in order to bring down the use of coking coal in blast furnaces. The policy targets to achieve production of 300 million tonnes by 2030-31.

Production

The steel industry in India was delicensed and decontrolled in the years 1991 and 1992 respectively. In 2017-15, production for sale of total finished steel (alloy + non-alloy) was 91.46 Million Tonnes, a growth of 4.3% over 2013-14. Production for sale of Pig Iron in 2017-15 was 9.7 million tonnes, a growth of 22% over 2013-14. India is the largest producer of sponge iron in the world with the coal-based route accounting for 90% of total sponge iron production in the country. Data on production for the sale of pig iron, sponge iron and total finished steel (alloy + non-alloy) are given below for last five years.

Steel prices

Price regulation of iron and steel was abolished on 16 January 1992.[4] Since then steel prices have been determined by an interplay of market forces. Domestic steel prices are influenced by trends in raw material prices, demand, supply conditions in the market, and international price trends among others. An Inter-Ministerial Group (IMG) is functioning in the Ministry of Steel, under the chairmanship of the secretary (Steel) to monitor and coordinate major steel investments in the

country. As a facilitator, the government monitors the steel market conditions and adopts fiscal and other policy measures based on its assessment. Currently, basic excise duty for steel is set at 12.5% and there is no export duty on steel items. The government has also imposed an export duty of 30% on all forms of iron ore except low grades, which carry a duty of 10%, while iron ore pellets have an export duty of 5% to control ad-hoc exports of the items and to conserve them for the long-term requirements of the domestic steel industry. It has also raised the import duty on most steel imports by 2.5%, taking the import duty on carbon steel, flat products to 10% and that on long products to 7.5%.

COMPANY PROFILE

The modern plant incorporates a complete thermal treatment system and a structural mill. The complete range of requirements can therefore be met under one roof. Chennai being one of India's premiere steel hubs, the billets is locally procured from Steel Authority of India. Proximity to other raw materials and markets means that Bescal steel industries products are competitively priced despite their superior quality.

Our Vision

Trusted by the best

Over the years, Bescal steel industries has developed an enviable roster of customers in India, as well as a growing export market in Nepal, Bhutan, etc. We are enlisted with numerous multinational companies, who recognize the quality of our steel. Many prestigious buildings have been made with our steel.

The 21st century has marked good times for the Indian steel industry. Both domestic and international demand has been robust. For producers like Bescal steel industries, the boom in the infrastructure sector has fuelled demand from the construction industry. Almost all steel companies have done well and we are no exception.

Good times, however, do not last forever. In our quarter century of industry experience we have seen the ferrous cycle rise, fall and rise again. We have learnt that what survive are quality - and the trust of customers.

It is this trust that is our most precious asset. We seek to sustain it with technology, engineering skills and ethical behaviour.

In the last few years we have consistently invested in building a modern plant and implementing quality systems and processes. Today we use the best steel as raw material, process it with the best equipment, and follow best practices to assure quality products.

Mission

The Mission statement set by the visionaries of Bescal Steel Industries Ltd. is To be integral to the nation's industrial progress and a responsible partner of the country's infrastructural growth and to earn due respect in the steel industry by serving with complete integrity and loyalty towards their clientele.

Quality Policy

Bescal Steel Industries Pvt Ltd is committed to:

- Delivering the required products at the right place at the right time at the right cost from our Integrated Steel Plant(original producer) form the very backbone of our Principles of Manufacturing.
- We view improvement as a continuous process. We are constantly aspiring to achieve betterment of our core processes, be it manufacturing, quality control, sales or delivery. There is a joint effort to achieve Manufacturing Excellence.

Corporate Social Responsibility Policy

As a Corporate Organisation we believe that it is our primary purpose to give back to society. Giving and sharing what we have received is embedded deeply in us. We have actively pursued to raise the quality of life of the people around us. We hold hands in our joint effort to create better tomorrows.

Occupational Health & Safety Policy

At our world class Integrated Steel Plant we treat our worker's well being as a mandate and not as an option. Ensuring the highest standards of safety is imperative. We follow the occupational health and safety policy certified under ISO 18001 : 2007. We aim to:

- Create an environment which is safe and secure for everyone in its vicinity, be it a worker, contractor, visitor and even the local community. All identifiable OHSAS risks and hazards are treated with the gravest concern.

- To constantly endeavour towards the highest level of health and safety such that injuries, waste and emissions are reduced to the bare minimum.
- Train all employees to work safely and responsibly thus preventing injury to themselves and others.
- Ensure that optimum conditions exist for the proper execution of all the stipulated health and safety norms.

PRODUCTS

1. TMT BARS



Production Capacity: 100,000 MT pa

Size (mm)	Standard Weight Kg/m.
8	0.385
10	0.617
12	0.888
16	1.580
20	2.470
25	3.850
28	4.830
32	6.310

2. ANGLES



Production Capacity: 150,000 MT pa

Section	Mass kg/m.	Root Radius mm.
35x35x3	1.6	5.0
4	2.1	5.0
5	2.6	5.0
6	3.0	5.0
40x40x3	1.8	5.5
4	2.4	5.5
5	3.0	5.5
45x45x3	2.1	5.5
4	2.7	5.5
5	3.4	5.5
6	4.0	5.5
50x50x3	2.3	6.0
4	3.0	6.0

5	3.8	6.0
6	4.5	6.0
55x55x4	3.3	6.5
5	4.1	6.5
60x60x4	3.7	8.0
5	4.5	6.5
65x65x4	4.0	6.5
5	4.9	6.5
6	5.8	6.5
8	7.7	6.5
70x70x5	5.3	7.0
6	6.3	7.0
75x75x5	5.7	7.0
6	6.8	7.0
8	8.9	7.0
10	11.0	7.0
80x80x6	7.3	8.0
8	9.6	8.0
90x90x6	8.2	8.5
7	9.6	10.0
8	10.8	8.5

10	13.4	8.5
100x100x6	9.2	8.5
7	10.7	12.0
8	12.1	8.5
10	14.9	8.5
110x110x8	13.4	10.0
10	16.6	10.0
12	19.7	10.0
120x120x8	14.7	13.0
10	18.2	13.0
12	21.6	13.0
130x130x8	15.9	10.0
10	19.7	10.0
12	23.5	10.0
16	30.7	10.0
150x150x10	22.9	12
12	27.3	12.0
15	33.8	16.0
16	35.8	12.0
18	40.1	16.0
20	44.1	12.0

200x200x12	36.9	15.0
16	48.5	15.0
18	54.0	15.0
20	60.0	18.0
24	71.1	18.0
25	73.9	15.0

3. CHANNELS



Production Capacity: 150,000 MT pa

Size	Flange	WEB Thickness	R1	R2	Standard wt. Kg/Mtr
75x40	7.5	4.8	8.5	2.4	07.140
100x50	7.7	5.0	9.0	2.4	09.560
125x65	8.2	5.3	9.5	2.4	13.100
150x75	9.0	5.7	10.0	2.4	16.800
200x75	11.4	6.2	11.0	3.2	22.300
250x82	14.1	9.0	12.0	3.2	34.200
300x90	13.6	7.8	13.0	3.2	36.300

400x100	15.3	8.8	15.0	4.8	50.100
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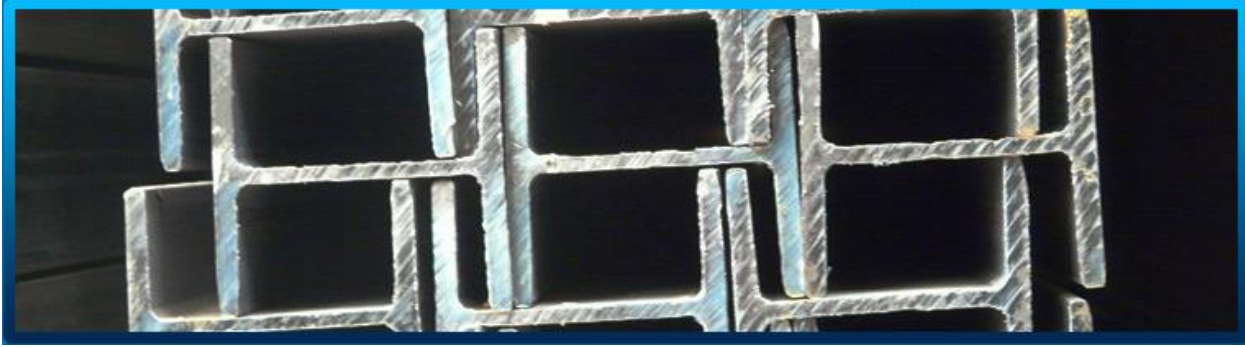
4. BEAMS/JOISTS



Production Capacity : 150,000 MT pa

Size	Flange	WEB Thickness	R1	R2	Standard wt. Kg/Mtr
125x70	8.0	5.0	9.0	4.5	13.350
150x75	8.0	5.0	9.0	4.5	15.000
175x85	9.0	5.8	10.0	5.0	19.600
200x100	10.0	5.7	11.0	5.5	24.200
250x125	12.5	6.9	13.0	6.5	37.300
300x140	13.1	7.7	14.0	7.0	46.000
350x140	14.2	8.1	14.0	7.0	52.400

5. H-BEAMS



Production Capacity : 150,000 MT pa

Size	Flange	WEB Thickness	R1	R2	Standard Wet/Mtr
HB 150x150	9.0	11.8	8.0	4.0	34.600
SC 152x152	11.9	7.9	11.7	3.0	37.100
WB 203x152	16.5	8.9	15.5	7.6	52.000

6. ROUNDS



Production Capacity : 150,000 MT pa

Up to 160mm

7. FLATS



Production Capacity : 150,000 MT pa

Up to 400mm

Size in mm	Weight Kg/M
5.5	0.186
6	0.222
7	0.302
8	0.395
10	0.617
12	0.887
16	1.57

International Standard materials can be rolled based on orders

8. WIRE ROD



Coil Weight :

Up to 1000 Kg per Coil.

Coil Dimension :

Outer Diameter 1240/1380mm Inner,

Diameter 830/956mm,

Height 512/620mm.

Packing:

Each Coil is strapped with metallic straps.

Grades:

Alloy Steel, Carbon Steel, Electrode quality Steel, Grade-High Carbon steel, Spring Steel, Bearing Quality Steel, CHq Steel, Free Cutting steel, Low Carbon Steel.

Specification:

As Per Indian Standard.

9. BILLETS



100 X 100MM

130 X 130MM

160 X 160MM

Length :

3M, 6M,9M

Grade :

Alloy Steel, Carbon Steel, Electrode quality Steel, High Cutting Steel, Spring Steel, Bearing Quality Steel, CHq Steel, Free Cutting steel, Low Carbon Steel.

Specification:

As Per Indian Standard.

CHAPTER III

REVIEW OF LITERATURE

JOURNALS AND ARTICLES

1. An analysis of Activity Based Costing (ABC) journal literature

Since the early 1980s a high number of innovative management accounting techniques have been developed. These new techniques have been developed to support modern technologies, new management processes and to search for competitive advantage to meet the challenge of global competition. Activity based costing is one of them and has attracted the interest of academics (researchers) and practitioners (management accountants) since its emergence.

The paper contains a qualitative analysis of the activity based costing journal literature. We intend to analyse how ABC generated attention and was received by academics and practitioners; how ABC was developed over the years; how and why ABC was adopted by organizations from all over the world; what were the reasons for which ABC was not adopted; what have been the benefits of the adoption process.

Specialists (Spicer, 2022; Hartnett & Lowry, 2022; Gosselin, 2022; Kaplan & Cooper, 2022; Chenhall, 2023; Askarny & Smith, 2023; Kellermanns & Islam, 2022; Askarany, 2022), around the world, have condemned the traditional cost and management accounting systems and practices. They consider that traditional cost accounting systems fail to describe the accurate costs of activities (Kaplan & Cooper, 2023) and they don't provide detailed information to managers; they can lead to erroneous decision making by ignoring the fact that complex products consume more resources than simply structured products (Kellermanns & Islam, 2022); are characterized by a lack of efficiency and capability in coping with the requirements of the changing environment (Askarany, 2023).

Indeed, many companies are not gaining competitive advantages from these enhanced cost systems because they rely on information from a cost system designed for a simpler technological age when competition was only local instead of global, and companies were producing standardized products and services and when speed, quality and performances were less critical for success. Using these systems managers doesn't have timely and relevant information to guide their improvement activities and they are not having accurate and valid information to shape their strategic decisions about processes, products services and customers.

Therefore, the management accounting literature turned into the study of cost and management accounting innovations. The major cost and management accounting technique, identified by the literature (Bjornenak&Olson, 2022; Jones&Dugdale, 2022; Jarvenpaa, 2022), was the activity based costing system, followed by activity based management.

Activity Based Cost (ABC) Systems emerged to meet the need for accurate information about the cost of resource demands by individual products, services and customers and these system also enabled indirect and support expenses to be driven first to activities and processes and then to products, services and customers. In this way managers have obtained a clearer picture of the economics of their operations. Moreover, ABC have aimed at helping business decisions and taking control in an increasingly sophisticated way (Jarvenpaa, 2023) and proved to be a flexible and up-to-date decision support system that could handle the problem of increasing overhead and simultaneously provide strategic information (Kellermanns&Islam, 2023). Because of these aspects, ABC gained a degree of popularity both in theory and practice.

2. THE ROLE OF COST ANALYSIS IN MANAGERIAL DECISION MAKING

This paper provides a review of empirical research on the role of cost analysis in managerial decision making in profit- oriented organizations. A well developed costing system is becoming increasingly important to profit oriented organizations. Cost analysis helps managers in making decisions in such areas like pricing, profit planning, setting standard cost, capital investment decisions, marketing decisions, cost management decisions and others. The review shows that, findings from different literatures stated that Cost analysis is crucial in various decisions and play some important role in managerial decision making.

The goal of this paper is to provide a review of empirical research on the role of cost analysis in managerial decision making in profit- oriented organizations. The importance of accounting in managerial decisions has long been recognized in the literature. Particularly in the field of management accounting, actual cost data, cost estimates and cost analysis. Cost data and analysis helps managers in making decisions in such areas like pricing, profit planning, setting standard cost, capital investment decisions, marketing decisions, cost management decisions and others. One of the responsibilities of managers is to pass decisions on various issues concerning their organizations.

3. Activity-based Costing (ABC) and Activitybased Management (ABM) Implementation – Is This the Solution for Organizations to Gain Profitability

Adherents of ABC/ABM systems claimed traditional management accounting systems generated misleading costs in a contemporary, tumultuous, often changing business environment and implementing ABC/ABM would remedy this. That is why activity-based costing (ABC) and activity-based management (ABM) represents the symbol of improved competitiveness and efficiency in every organization. The purpose of this article – after analyzing the existing literature in the field – is to emphasize that new cost systems such as ABC and ABM could be a strong couple that assures competitiveness and efficiency for each company. Another objective is to present that, besides its disadvantages, firms implement the ABC/ABM system because it permits better tracing of costs to objects, superior allocation of overheads to cost objects, financial and non-financial analysis and measures useful to managers and management accountants in the decision making process.

Activity-based costing/management have attracted high levels of interest from both academics and practitioners since its emergence in the late 1980's (Bjornenak & Falconer, 2023: 481). ABC was developed as an approach to address problems associated with traditional cost management systems, which tend to have the inability to accurately determine actual production and service costs, or provide useful information for operating decisions. With these deficiencies managers can be Activity-based Costing (ABC) and Activity-based Management (ABM) Implementation 155 exposed to making decisions based on inaccurate data. The higher exposure is for companies with multiple products or services. The origins of ABC are in the United States of America and it is the result of multiple theoretical and practical research and works. It is also considered one of the most important innovations in cost calculation and managerial accounting. In 1963 Peter Drucker draw attention on the fact that the characteristic of traditional cost calculation methods is the lack of pertinence and relevancy and this leads to mutual subsidy between products and their costs. Later in the 1970s and 1980 American and French researchers – Cooper, Kaplan, Porter, Lebas, Lorino – formulate, elaborate and crystallize the method through articles, publications and works. In these years, CAM-I (The Consortium of Advanced Management, International), an international consulting group, had an important role during the research, financing various works and projects, and it also provided a formative role for studying and formalizing the principles that have become more formally known as Activity-Based Costing. In the late 2000's and early 2002's Bjornenak and Falconer conducted a study about the development of ABC/M journal literature between 2018 and 2023.

They began their research in 1987, the year when the first accounting journal publication on ABC/M appeared and stopped at the end of 2002, the latest practical data for the authors. The literature of two countries – UK and USA – formed the basis of their study and they analyzed only the accounting literature on ABC/M both in applied/practitioners' journals (Management Accounting – UK; Management Accounting – USA; Journal of Cost Management – USA and Journal of Accountancy - USA) and academic research journals (Management Accounting Research, Accounting and Business Research and Accounting Horizons in UK and Journal of Management Accounting Research, Accounting Horizons, Accounting Review and Critical Perspectives in Accounting in the USA). The mentioned survey shows that after a take-off period in the late 1980's a high and consistent volume of papers on the topic of ABC/ABM has been evident. Moreover, these articles are spread across thirteen of the seventeen journals included in the study. Indeed, the breadth of exposure through the accounting journals occurred relatively quickly because as early as 2000 almost half of them contained materials on ABC/M.

4. Developments Around the Activity-Based Costing Method: A State-of-the Art Literature Review

This paper analyzes the management accounting applications which try to improve the Activity-based Costing method. In the first part, we describe them using the Strategic Management Accounting stream. Then, we present the main features of these applications. In the second part, we examine in detail two of these features: The widening of the analysis perimeter and the relevant level of details to analyze the costs. Finally, we analyze several proposals: Customer-driven ABC, Inter-organizational Cost Management, Resource Consumption Accounting and Time-driven ABC.

THEORITICAL REVIEW

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actual production and service costs, or provide useful information for operating decisions. With these deficiencies managers can be exposed to making decisions based on inaccurate data. The higher exposure is for companies with multiple products or services.

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Through their study, Bjornenak and Falconer, tried to (1) investigate the significance of the ABC literature; (2) how ABC has developed; (3) how information on ABC has been obtained; (4) analyze the role the articles played in the communication structures and diffusion of ABC.

The mentioned survey shows that after a take-off period in the late 1980's a high and consistent volume of papers on the topic of ABC/ABM has been evident. Moreover, these articles are spread across thirteen of the seventeen journals included in the study. Indeed, the breadth of exposure through the accounting journals occurred relatively quickly because as early as 2010 almost half of them contained material on ABC/M.

The result of the study shows that the specialist management accounting journals predominates in publishing articles about ABC/ABM. They account for 358 (89%) of the 404 published papers. In particular, the three professional journals contribute 325 (80% of total) of the papers with all three providing a major portion: Management Accounting (UK), 98 (24% of total); Management Accounting (USA), 87 (22% of total); Journal of Cost Management, 140 (35% of total). The two management accounting research journals contain a further 33 papers (8% of total). The other 8 journals have a much lower volume of papers on ABC, specifically 46 papers (11% of total) spread in the following journals: Accountancy (UK) 12 articles; Journal of Accountancy (USA) 8 articles

and Accounting Horizons (USA) 11 articles.

Academics had a consistent contribution, providing 60% of the published papers (240 articles) but a substantial contribution comes from both consultants and practitioners. 25% of the papers came from the consultants (99 articles) and 16 % of the papers came from practitioners (64 articles).

In UK journals most of the authors are British (67%) but there are also authors from Finland, Australia, Canada, Netherlands, Norway, Denmark, Ireland and even South Correa. Meanwhile in USA journals there is "hegemony" of native authors (99%). The articles included the public sector (public administration, universities, health care) and the private sector (electronics, pharmaceutical, telecommunications, airlines and financial services).

The content of the articles can be divided in three categories: propagator, moderator and neutral. Usually, the articles from the academic journals are sending a propagator message. Specialists consider that ABC: (1) improves other current developments (Kee, 2023); (2) has known high adoption rates and successful implementation (Bright et al, 2002; McGowan&Klammer, 2023); and by implementing it the perceived benefits exceed costs (Swenson, 2023).

Other articles are sending moderator or neutral messages, such as ABC: (1) is based on strong assumptions (Noreen, 2023); (2) evidence of ABC implementation failure (Malmi, 2023); (3) may increase measurement errors (Datar&Gupta, 2023) or (4) that this method is not so new (Staubus, 2023).

From the analysis of the literature we noticed that there is still an interest in ABC in the last years (2014-2022), evidenced by papers and articles published. This pattern of publication has been characterized by a high proportion of authorship from the accounting practitioner and, in particular, from the consultancy companies. Much of this has been positive and promotional. Specialists consider that ABC promotes rationality, efficiency and ultimate profitability (Carwin&Bouwman, 2023; Jones&Dugdale, 2023; Cohen et al, 2023; Hooper&Major, 2023); others concluded that ABC has a value-enhancing effect on pricing decision and profit performance, allows better price differentiation among products, customers and markets; it filters out the less relevant competitor prices from the decision process (Lere, 2023; Maiga&Jacobs, 2023; Cardinaels et al, 2023;) and there are authors which consider that ABC permits customer satisfaction, customer and business profitability analysis (Helgesen, 2023; Kuchta&Troska, 2023; Namazi 2023). Besides the positive

and promotional messages, there are reserved authors, wondering about the usefulness of this cost system (Dosch&Wilson, 2023; DeWayne&Roberts, 2023; Stratton et al, 2022).

All and all, activity based costing attracted both academic and practice research interest from its first appearance, the dynamism of the published papers underlies the durability of this topic. The journal literature on ABC is predominantly positive (Bjornenak&Falconer, 2023), the majority of the authors consider that ABC might be the solution for many companies and leads to improved business processes.

ABC IN PRACTICE

After the theoretical papers, in the last years, we are witnessing the appearance of empirical papers, studies and surveys about how ABC is used in practice, about the success or failure of the implementation of ABC (Groot, 2023; Innes et al, 2023; Clark&Mullins, 2023; Clarke et al, 2023; Hughes&Gjerde, 2023; Cohen et al, 2023; Pierce, 2023; Askarany, 2023; Pavlatos&Paggios, 2023).

Innes et al (2023) emphasized that in the '90s there has been a growing awareness of ABC but the implementation rates has been low both in the USA and Europe. In the USA Grott (2023) find out that around 18% of the investigated companies adopted ABC while 58% were considering the possibility to implement the method. In Canada the adoption rates were lower, only 14% of the investigated companies implemented ABC. In Europe the adoption rates were similar. With the exception of France and Belgium (20% adoption rate) in other countries rates less than ten percent (10%) are common for many countries (Groot, 2023; Clarke et al, 2023). Findings from Australia present a mixed picture regarding ABC adoption with rates ranging from 12% to 56% (Cohen et al, 2023).

The reasons for adopting ABC were (Bescos et al, 2023; Cohen et al, 2023): (1) cost reduction; (2) improving the internal production processess; (3) more accurate cost information about products and services; (4) more accurate allocation of indirect costs; (5) improving cost and management control; (6) improve customer profitability analysis and (7) modernization of cost accounting systems.

Later, in 2022 Better Management conducted a study worldwide, among its members, to determine the state of ABC. The respondents came from a variety of industries out of which the manufacturing industry had the highest representation with 24%, followed by financial services at 18%, the public sector with 16% and communications with 8%. Other industries (health care, consulting, IT or distribution) accounted for less than 5% each.

Over half of the respondents (55%) indicated that their companies are currently using ABC, either actively or in a pilot, with another third (32%) considering use; only 11% has not considered use of ABC and a very small portion of companies (2%) are no longer using the method.

The same study shows that the use of ABC increases with company size. While only 42% of small businesses are using or piloting ABC, 58% of midsized and 71% of enterprises use some form of ABC.

Use of ABC also varies by industry. Communications and financial services entities are much more likely than other industries to have active ABC programs in place. Manufacturing companies seem to be lagging behind others in their adoption of ABC, with equal proportions in pilot phase and active (24% each). Firms in the public sector appear to be somewhat more tentative. While 52% currently report using some form of ABC, 19% of the public sector organizations are not considering ABC and are apparently not in the market.

When survey respondents were asked how they use ABC their answer was that they use ABC: (1) for costing and cost control--43%; (2) for process improvement--17%; (3) for product profitability--17%; (3) for customer profitability analysis--14%;

According to the same study, the main challenges companies face when implementing ABC vary. A significant number of respondents (30%) considered that the main challenge is to design and build the model. Others considered that updating and maintaining the model (18%); gathering data (22%); integrating and loading data (11%) or reporting and disseminating reports (10%) are the main challenges when implementing ABC.

Recent studies (Cohen et al, 2007; Brierley et al, 2023) shows that ABC was "called" to provide a

more accurate picture of cost information and to enhance competitiveness. ABC has, more or less, helped companies satisfy not only these two needs but also gain a number of other benefits such as customer profitability analysis; preparation of relevant budgets.

Nevertheless, there are companies that do not consider adopting ABC. In their study, Cohen et al (2023) divided the organizations in four categories:

(1) ABC adopters--including the companies who successfully adopted ABC and gained a large number of benefits;

(2) ABC supporters--including in this category companies that will include in their future plans ABC implementation in order to improve cost control, to refine the decision making process.

(3) ABC deniers--are represented by those companies which strongly oppose to the possibility of ABC adoption.

(4) ABC unawares--are represented by those companies which don't know the method, they never heard about ABC.

As we can see, besides its advantages and benefits, there are companies which refuse to implement the method or even worse, they never heard of ABC. The reasons identified by the researchers (Bescos et al, 2022; Cohen et al, 2023) are, as follows: (1) the implementation process is being associated with high costs; (2) lack of time to undertake an assessment of ABC implementation; (3) satisfaction with the existing cost systems; (4) lack of management support or interest or (5) requirement to follow the parent companies directives.

Brierley et al (2023) found similar ideas after they interviewed 51 qualified management accountants working in the manufacturing industry in UK. The result of their study emphasized that, besides ABC adopters and ABC supporters there are companies which implemented ABC and subsequently abandoned it; investigated ABC and rejected it; rejected ABC and never investigated its possible use; never considered using ABC and finally rejected ABC but established a system of activity analysis.

The interviewed management accountants considered that there is no need for a new cost system because: current cost accounting systems are working well, a growing business is not ready for ABC, it takes too much time and effort to operate, non-accounting staff would not understand it and it would be difficult to identify the benefits.

CHAPTER IV

RESEARCH METHODOLOGY

RESEARCH DESIGN

The research design adopted for this study was the descriptive research design. This was selected due to the availability of information needed to do the study. The methodology was adopted to understand the present costing system in the organization and also to trace out the lags prevalent in it. The study was then focused on providing suggestions to the management, about improving the present costing system by implementing Activity-Based Costing.

DATA COLLECTION

The study was done based on the secondary sources of information.

SECONDARY DATA

The secondary data collection was performed by collecting information from the various books of records of the company. This includes the Purchase Records, Petty Expenses Records, Sales and Distribution Records, Work Records and other records.

4.1 NEED FOR THE STUDY

Activity-Based Costing (ABC) is a new but potential important emerging concept in the Management Accounting domain. It has gained greater importance in developed economies to a

huge extent. The present trend suggests companies to adopt ABC even in developing economies of the world. Bescal Steel Industries Pvt Ltd has looked to implement ABC in the following situation:

- ⌘ The prices of its products are stagnant. Considering that there has been inflation, there is really a decrease in prices in the 'real' terms. The company is also facing pressure on its costs due to inflation, in general and there is an increase in input prices particularly. The company should run faster to even stay in the same place.
- ⌘ There is a high demand for cost reduction studies to pave way for reducing the production costs of the Iron produced.
- ⌘ Lowering the cost of the products would help the company to maintain profitability.
- ⌘ The company has to go about cost reduction in a systematic way to achieve permanent reduction in its cost structure.

All the above factors have induced the company to adopt the following Activity based costing applications to suit its needs.

4.2 OBJECTIVES OF THE STUDY

PRIMARY OBJECTIVES

- ❖ To formulate an Activity-Based Costing system for Bescal Steel Industries Pvt Ltd under study.

SECONDARY OBJECTIVES

- ❖ To use ABC costing for calculating the cost of a particular product in the company namely, '60S IRON '.
- ❖ Analysis of various cost drivers and grouping them based on their Nature.
- ❖ Development and implementation of "COST MATRIX" Method to calculate and analyse the average cost of each activity.
- ❖ To provide suggestions to the company, relating to the cost attached to the various business activities.
- ❖ To find out the likely lag in the various business functions of the organization.

4.3 SCOPE FOR FURTHER STUDY

- ❖ Better understanding in the view of how much is ABC superior to the traditional process costing system followed in the company for controlling cost.
- ❖ Fixing up responsibilities for the executives who control the activities with authority and also making them accountable.
- ❖ Setting of standards for value adding and non-value adding activities.
- ❖ A study into the scientific method that can classify cost drivers and activities.
- ❖ Make a complete study on the whole organizations functions and allocation of administrative and selling and distribution overheads to the cost of the product.

4.4 LIMITATIONS OF THE STUDY

- ❖ The study shall be applied only to the organization taken for consideration and so cannot be applicable to other business bodies.
- ❖ The study was done based on the production process only and does not cover the administrative aspects in the company.

- ❖ The secondary data and their usage limit the study's approach since based on past data to some extent.
- ❖ Certain parts of the analysis were done based on assumptions due to unavailability of information.

COST MATRIX DEVELOPMENT

The cost matrix was developed following the steps enumerated below:

1. Work content identification

Work content was determined at a process level for each component. Identification of resources

The resources were classified as:

- Variables resources like power, tools, consumables, which will vary production and
- Capacity resources like machines, material handling equipment etc.

2. Identification of cost drivers

- Cost drivers are those activities which happen in the shop floor which do not add any value to the product or customer.
- Examples of cost drivers are Quality, Breakdown, Idle time, Delay in receipt of materials, Operator carelessness etc

3. Classify cost drivers

- A category – this pertains to those cost drivers which are operator oriented like operator carelessness, breakdowns, leakage and similar waste.
- B category – this pertains to those cost drivers which are supervisor oriented like checking input quality of materials and tools, taking excess time for production, etc.
- C category – this pertains to those cost drivers which are inherent in the current product design and process design like choice of material using high quality where not required or choice of process (using a process which is more costly). The essential point in this is that activity will not add value to the product or to the customer.
- D category – this pertains to cost drivers which are related to technology.

CLASSIFICATION OF COST DRIVERS

- Cost Driver • An activity that results in excess usage of resources or does not add any value to the product/ customer.

Resources

Capacity resource

- Capital in nature
- Facility made available for production/ rendering of service like Machine tools, service equipment etc.
- Capacity cost is the depreciation of the capacity resource and its associated maintenance costs.

Variable resources

- Revenue in nature
- Resources used in production or rendering of services like power, tools, and oil and including expenditure incurred/ services paid to external agencies like external repairs etc...

Criteria for selection of resource for cost matrix

- Costs are significant from the view point of the shop floor operator/ operating group.
- Usage of resource is measurable.
- Identifiable to a cost driver.

CLASSIFICATION OF COST DRIVERS

Code	Classification	Characteristics
A	Daily Management Losses	→ Losses caused by a cost driver for which there is no Standard Operating Procedure (SOP). → Operator Oriented Examples → Operator carelessness / skills → Material delay → Break down → Machine behavior → Rectification / reworks → Inspection delays – inadequate facilities → Leakage / spillages → Accidents → Idle running (not switching oft) → Part loads
B	Process control losses	→ Losses caused by a cost driver due to Variation from the Standard Operating Procedure (SOP). → Supervisor oriented Examples → Excess setup time and tool change time. → Excess operations performed due to process but not required → Faulty commissioning of machines

Code	Classification	Characteristics
C	Process Set up	➔ Cost driver for which there has to be a change in the Standard Operating Procedure (SOP) for Process or Product design ➔ Unavoidable in nature for the present Process or Product design ➔ Non value adding to the end-customer ➔ Challenges the existing permissible limits/ norms ➔ Most of the projects under continuous improvement programs and value engineering efforts would fall under this category ➔ Projects under this category would involve cross functional team of Production/ Quality/ Project planning/ Product development Examples ➔ Allowable set up time/ change over time ➔ Allowable tool change time ➔ Machining allowance
D	Market / Technology	➔ Cost driver which involves elimination of a series of Standard Operating Procedures (SOP) ➔ Innovations – Process and Product ➔ Analysis of functionality and there by eliminate non value adding activity to end-customer. ➔ Combining two components to one without affecting functionality ➔ Creative ideas to deliver the same functionality to end-customer.

FORMAT FOR COST MATRIX

COST DRIVERS	RESOURCES				TOTAL	%
A. DAILY MANAGEMENT						
1.						
2.						
Sub Total						%
B. Process Control Losses						
1.						
2.						
Sub Total						%
UNUSED RESOURCES (Balancing Figure)						%
Used Resources						%
TOTAL						
	%	%	%	%	%	
Breakup of Used Resources						
Product/ Process Design						
1.						
2.						
Sub Total						%
D. TECHNOLOGY						
1.						
2.						
Sub Total						%
Used resources for Good output (equivalent units)						
Total resources for Good output (Equivalent units)						

CHAPTER V
DATA ANALYSIS AND INTERPRETATION

Product : 60s Iron
Process : Compression molding
No. of working days : 29
No. of Machine : 3
Cost/ Unit : 3.89 (manned hours/ power/ cost)

Machine Code	Hourly Dep.	Hourly Power on Load	Hourly Power without Load
BM1353	44.66	6.50	2.00
BM1457	47.04	6.50	2.00
BM1729	107.03	9.80	2.00
Average	66.24	7.60	2.00

From the above table it can be inferred that the average hourly depreciation of a machine was 66.24, the average hourly power cost of a machine with load was 7.60 and the average hourly power cost of a machine without load was 2.00. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the cost center / number of machines. Similarly the power cost of machine with load and without load is calculated.

Category		Machine Hrs	Machine Cap (Rs.)	Power Hrs.	Power (Rs.)	LF tools	Pr tools	Comp (Rs.)	Consumables	Total
C	(1) Perm setup change time	40	2650	40	311	0	0	0	0	2961
B	Exces s setup change time	0	0	0	0	0	0	0	0	0
C	(2) Perm tool change time	23	1524	23	179	0	0	0	0	1703
B	Exces s tool change time	0	0	0	0	0	0	0	0	0
A	(3) Machine behavior	0	0	0	0	0	0	0	0	0
A	(4) Operator skill + Rect	0	0	0	0	0	0	0	0	0
A	(5) Material delay	0	0	0	0	0	0	0	0	0
A	(6) Break down	48	3180	48	0	0	0	0	0	3180
F	(7) Permissible	1498	99228	1498	44287	0	36492	0	4287	184294
	(8) Total	1609	106582	1609	44777	0	36492	0	4287	192138
E	(9) Inadequate Load	479	31729	0	0	0	0	0	0	50 31729
	(10) Grand total	2088	138311	1609	44777	0	36492	0	4287	223867

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula $[(\text{Load hours} \times \text{power on load}) + (\text{Booked hours} - \text{load hours}) \times \text{Power on no load}] \times \text{Electricity Board power Rate}$. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula $(\text{Tools rate} \times \text{total production produced}) / \text{Total production that can be produced}$. Common consumable is calculated in proportion of worked hours. Component cost is the product of Number of components and stores ledger rate.

Category		Machine Cap (Rs.)	Power (Rs.)	L7 tools	Pr tools	Comp (Rs.)	Consumables	Total
A	Daily Management	3180	0	0	0	0	0	3180
B	Process Control	0	0	0	0	0	0	0
C	Process Setup	4174	490	0	0	0	0	4664
D	Market / Technology	0	0	0	0	0	0	0
E	Unused Capacity	31729	0	0	0	0	0	31729
F	Permissible	99228	44287	0	36492	0	4287	184294
	Grand total	138311	44777	0	36492	0	4287	223867

Table: 1

Product : 60s Iron

Process : Compression molding

Category	Cost Drivers	Total Values
A	Daily Management	3180
B	Process Control	0
C	Process Setup	4664
D	Market / Technology	0
	Total (A+B+C+D)	7844
F	Permissible	184294
	Total (A+B+C+D+F)	192138
E	Unused Capacity	31729
	Grand total	223867

Product : 60s Iron
Process : Pressing
No. of working days : 29
No. of Machine : 2
Cost/ Unit : 3.89 (manned hours/ power/ cost)

Machine Code	Hourly Dep.	Hourly Power on Load	Hourly Power without Load
CM1392	80.21	12.50	4.00
CM1560	102.41	12.50	4.00
Average	91.31	12.50	4.00

From the above table it can be inferred that the average hourly depreciation of a machine was 91.31, the average hourly power cost of a machine with load was 12.50 and the average hourly power cost of a machine without load was 4.00. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the cost center / number of machines. Similarly the power cost of machine with load and without load is calculated

Catego ry		Machin e Hrs	Machin e Cap (Rs.)	Powe r Hrs.	Powe r (Rs.)	LF tool s	Pr tools	Com p (Rs.)	Consu m- ables	Total
C	(1) Perm setup change time	29	2648	29	451	0	0	0	0	3099
B	Exce ss setup change time	0	0	0	0	0	0	0	0	0
C	(2) Perm tool change time	201	18353	201	3128	0	0	0	0	21481
B	Exce ss tool change time	195	17805	195	3034	0	0	0	0	20839
A	(3) Machine behaviour	0	0	0	0	0	0	0	0	0
A	(4) Operator skill + Rect	3	274	3	146	0	0	0	0	420
A	(5) Material delay	0	0	0	0	0	0	0	0	0
A	(6) Break down	28	2557	28	0	0	0	0	0	2557
F	(7) Permissib le	793	72409	793	3856 0	0	10598 6	0	1678	21863 3
	(8) Total	1249	114046	1249	4531 9	0	10598 6	0	1678	26702 9
E	(9) Inadequat e Load	143	13057	0	0	0	0	0	0	13057
	(10) Grand total	1392	127103	1249	4531 9	0	10598 6	0	1678	28008 6

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula $[(\text{Load hours} \times \text{power on load}) + (\text{Booked hours} - \text{load hours}) \times \text{Power on no load}] \times \text{Electricity Board power Rate}$. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula $(\text{Tools rate} \times \text{total production produced}) / \text{Total production that can be produced}$. Common consumable is calculated in proportion of worked hours. Component cost is the product of Number of components and stores ledger rate.

Category		Machine Cap (Rs.)	Power (Rs.)	LF tools	Pr tools	Comp (Rs.)	Consumables	Total
A	Daily Management	2831	146	0	0	0	0	2977
B	Process Control	17805	3034	0	0	0	0	20839
C	Process Setup	21001	3579	0	0	0	0	24580
D	Market / Technology	0	0	0	0	0	0	0
E	Unused Capacity	13057	0	0	0	0	0	13057
F	Permissible	72409	38560	0	105986	0	1678	218633
	Grand total	127103	453319	0	105986	0	1678	280086

Table: 2

Product : 60s Iron

Process : Pressing

Category	Cost Drivers	Total Value (Rs.)
A	Daily Management	2977
B	Process Control	20839
C	Process Setup	24580
D	Market / Technology	0
	Total (A+B+C+D)	48396
F	Permissible	218633
	Total (A+B+C+D+F)	267029
E	Unused Capacity	13057
	Grand total	280086

Product : 60s Iron
Process : Hand Laycup
No. of working days : 29
No. of Machine : 3
Cost/ Unit : 3.89 (manned hours/ power/ cost)

Machine Code	Hourly Dep.	Hourly Power on Load	Hourly Power without Load
CM1366	16.53	6.60	2.50
CM1641	21.94	6.60	2.50
CM1223	0.00	6.00	2.20
Average	12.82	6.40	2.40

From the above table it can be inferred that the average hourly depreciation of a machine was 12.82, the average hourly power cost of a machine with load was 6.40 and the average hourly power cost of a machine without load was 2.40. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the cost center / number of machines. Similarly the power cost of machine with load and without load is calculated.

Category		Machine Hrs	Machine Cap (Rs.)	Power Hrs.	Power (Rs.)	LF tools	PR tools	Comp (Rs.)	Consumables	Total
C	(1) Perm setup change time	11	141	11	103	0	0	0	0	244
B	Excess setup change time	17	218	17	159	0	0	0	0	377
C	(2) Perm tool change time	36	462	36	336	0	0	0	0	798
B	Excess tool change time	0	0	0	0	0	0	0	0	0
A	(3) Machine behavior	0	0	0	0	0	0	0	0	0
A	(4) Operator skill + Rect	3	38	3	75	0	0	0	0	113
A	(5) Material delay	0	0	0	0	0	0	0	0	0
A	(6) Break down	6	77	6	0	0	0	0	0	77
F	(7) Permissible	1388	17794	1388	34556	0	39831	0	3046	95227
	(8) Total	1461	18730	1461	35229	0	39831	0	3046	96836
E	(9) Inadequate Load	627	8038	0	0	0	0	0	0	8038
	(10) Grand total	2088	26768	1461	35229	0	105986	0	3046	104874

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula [(Load hours x power on load) + (Booked hours – load hours) x Power on no load] x Electricity Board power Rate]. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula (Tools rate x total production produced)/ Total production that can be produced). Common consumable is calculated in proportion of worked hours. Component cost is the product of Number of components and stores ledger rate.

Category		Machine Cap (Rs.)	Power (Rs.)	LF tools	Pr tools	Comp (Rs.)	Consumables	Total
A	Daily Management	115	75	0	0	0	0	190
B	Process Control	218	159	0	0	0	0	377
C	Process Setup	603	439	0	0	0	0	1042
D	Market / Technology	0	0	0	0	0	0	0
E	Unused Capacity	8038	0	0	0	0	0	8038
F	Permissible	17794	34556	0	39831	0	3046	95227
	Grand total	26768	35229	0	39831	0	3046	104874

Table: 3

Product : 60s Iron

Process : Hand Laycup

Category	Cost Drivers	Total Value (Rs.)
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A	Daily Management	190
B	Process Control	377
C	Process Setup	1042
D	Market / Technology	0
	Total (A+B+C+D)	1609
F	Permissible	95227
	Total (A+B+C+D+F)	96836
E	Unused Capacity	8038
	Grand total	104874

Product : 60s Iron
Process : Injection Molding
No. of working days : 29
No. of Machine : 3
Cost/ Unit : 3.89 (manned hours/ power/ cost)

Machine Code	Hourly Dep.	Hourly Power on Load	Hourly Power without Load
DM1393	16.30	11.20	4.00
DM1568	19.76	11.20	4.50
Average	18.03	11.20	4.25

From the above table it can be inferred that the average hourly depreciation of a machine was 18.03, the average hourly power cost of a machine with load was 11.20 and the average hourly power cost of a machine without load was 4.25. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the cost center / number of machines. Similarly the power cost of machine with load and without load is calculated.

Category		Machine Hrs	Machine Cap (Rs.)	Power Hrs.	Power (Rs.)	LF tools	PR tools	Comp (Rs.)	Consumables	Total
C	(1) Perm setup change time	41	739	41	679	0	0	0	0	1418
B	Excess setup change time	0	0	0	0	0	0	0	0	0
C	(2) Perm tool change time	63	1136	63	1042	0	0	0	0	2178
B	Excess tool change time	0	0	0	0	0	0	0	0	0
A	(3) Machine behaviour	0	0	0	0	0	0	0	0	0
A	(4) Operator skill + Rect	4	72	4	174	0	0	0	0	246
A	(5) Material delay	0	0	0	0	0	0	0	0	0
A	(6) Break down	32	577	32	0	0	0	0	0	577
F	(7) Permissible	1027	18517	1027	44744	0	16689	0	1770	81720
	(8) Total	1135	21041	1135	46639	0	16689	0	1770	86139
E	(9) Inadequate Load	257	4634	0	0	0	0	0		4634
	(10) Grand total	1392	25675	1135	46639	0	16689	0	1770	90773

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula $[(\text{Load hours} \times \text{power on load}) + (\text{Booked hours} - \text{load hours}) \times \text{Power on no load}] \times \text{Electricity Board power Rate}$. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula $(\text{Tools rate} \times \text{total production produced}) / \text{Total production that can be produced}$. Common consumable is calculated in proportion of worked hours. Component cost is the product of Number of components and stores ledger rate.

Category		Machine Cap (Rs.)	Power (Rs.)	LF tools	Pr tools	Comp (Rs.)	Consumables	Total
A	Daily Management	649	174	0	0	0	0	823
B	Process Control	0	0	0	0	0	0	0
C	Process Setup	1875	1721	0	0	0	0	3596
D	Market / Technology	0	0	0	0	0	0	0
E	Unused Capacity	4634	0	0	0	0	0	4634
F	Permissible	18517	44744	0	16689	0	1770	81720
	Grand total	25675	46639	0	16689	0	1770	90773

Table: 4
Product : 60s Iron
Process : Injection Molding

Category	Cost Drivers	Total Value (Rs.)
A	Daily Management	823
B	Process Control	0
C	Process Setup	3596
D	Market / Technology	0
	Total (A+B+C+D)	4419
F	Permissible	81720
	Total (A+B+C+D+F)	86139
E	Unused Capacity	4634
	Grand total	90773

Product : 60s Iron
Process : Stamping
No. of working days : 29
No. of Machine : 3
Cost/ Unit : 3.89 (manned hours/ power/ cost)

Machine Code	Hourly Dep.	Hourly Power on Load	Hourly Power without Load
SM1472	69.03	9.60	3.50
SM1513	70.48	9.60	3.50
SM1486	113.30	9.60	3.50
Average	84.27	9.60	3.50

From the above table it can be inferred that the average hourly depreciation of a machine was 84.27, the average hourly power cost of a machine with load was 9.60 and the average hourly power cost of a machine without load was 3.50. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the cost center / number of machines. Similarly the power cost of machine with load and without load is calculated

Cat ory		Machine Hrs	Machine Cap (Rs.)	Power Hrs.	Power (Rs.)	LF tools	PR tools	Comp (Rs.)	Consum- ables	Total
C	(1) Perm setup change time	16	1348	16	218	0	0	0	0	1566
B	Exces s setup change time	0	0	0	0	0	0	0	0	0
C	(2) Perm tool change time	0	0	0	0	0	0	0	0	0
B	Exces s tool change time	26	2191	26	354	0	0	0	0	2545
A	(3) Machine behaviour	0	0	0	0	0	0	0	0	0
A	(4) Operator skill + Rect	9	758	9	336	0	0	0	0	1094
A	(5) Material delay	0	0	0	0	0	0	0	0	0
A	(6) Break down	84	7079	84	0	0	0	0	0	7079
F	(7) Permissible	1564	131798	1564	58406	0	9876	0	4737	204817
	(8) Total	1699	143174	1699	59314	0	9876	0	4737	217101
E	(9) Inadequate Load	389	32781	0	0	0	0	0	0	32781
	(10) Grand total	2088	175955	1699	59314	0	9876	0	4737	249882

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula [(Load hours x power on load) + (Booked hours – load hours) x Power on no load] x Electricity Board power Rate]. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula

(Tools rate x total production produced)/ Total production that can be produced). Common consumable is calculated in proportion of worked hours. Component cost is the product of Number of components and stores ledger rate.

Category		Machine Cap (Rs.)	Power (Rs.)	LF tools	Pr tools	Comp (Rs.)	Consumables	Total
A	Daily Management	7837	336	0	0	0	0	8173
B	Process Control	2191	354	0	0	0	0	2545
C	Process Setup	1348	218	0	0	0	0	1566
D	Market / Technology	0	0	0	0	0	0	0
E	Unused Capacity	32781	0	0	0	0	0	32781
F	Permissible	131798	58406	0	9876	0	4737	204817
	Grand total	175955	59314	0	9876	0	4737	249882

Table: 5

Product : 60s Iron

Process : Stamping

Category	Cost Drivers	Total Value (Rs.)
A	Daily Management	8173
B	Process Control	2545
C	Process Setup	1566
D	Market / Technology	0
	Total (A+B+C+D)	12284
F	Permissible	204817
	Total (A+B+C+D+F)	217101

E	Unused Capacity	<u>32781</u>
	Grand total	<u>249882</u>

Product : 60s Iron
Process : EDP
No. of working days : 29
No. of Machine : 3
Cost/ Unit : 3.89 (manned hours/ power/ cost)

Machine Code	Hourly Dep.	Hourly Power on Load	Hourly Power without Load
RM1433	17.48	14.50	5.50
RM1605	20.11	14.50	6.00
RM1606	20.11	14.50	6.00
Average	19.23	14.50	5.83

From the above table it can be inferred that the average hourly depreciation of a machine was 19.23, the average hourly power cost of a machine with load was 14.50 and the average hourly power cost of a machine without load was 5.83. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the cost center / number of machines. Similarly the power cost of machine with load and without load is calculated

Category		Machin e Hrs	Machin e Cap (Rs.)	Powe r Hrs.	Power (Rs.)	LF tools	PR tools	Comp (Rs.)	Cons um- ables	Tot al
C	(1) Perm setup change time	42	808	42	953	0	0	0	0	176 1
B	Excess setup change time	0	0	0	0	0	0	0	0	0
C	(2) Perm tool change time	32	615	32	726	0	0	0	0	134 1
B	Excess tool change time	0	0	0	0	0	0	0	0	0
A	(3) Machine behaviour	0	0	213	12020	0	0	0	0	120 20
A	(4) Operator skill + Rect	10	192	1	56	0	0	0	0	248
A	(5) Material delay	0	0	0	0	0	0	0	0	0
A	(6) Break down	206	3962	0	0	0	0	0	0	396 2
F	(7) Permissible	1619	31133	1619	91320	0	2591	0	2992	128 036
	(8) Total	1909	36710	1909	10506 9	0	2591	0	2992	147 362
E	(9) Inadequate Load	179	3442	0	0	0	0	0	0	344 2
	(10) Grand total	2088	40152	1909	10506 9	0	2591	0	2992	150 804

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula [(Load hours x power on load) + (Booked hours – load hours) x Power on no load] x Electricity Board power Rate]. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula (Tools rate x total production produced)/ Total production that can be produced). Common consumable is calculated in proportion of

worked hours. Component cost is the product of Number of components and stores ledger rate.

Category		Machine Cap (Rs.)	Power (Rs.)	LF tools	Pr tools	Comp (Rs.)	Consumables	Total
A	Daily Management	4154	12070	0	0	0	0	16224
B	Process Control	0	0	0	0	0	0	0
C	Process Setup	1423	1679	0	0	0	0	3102
D	Market / Technology	0	0	0	0	0	0	0
E	Unused Capacity	3442	0	0	0	0	0	3442
F	Permissible	31133	91320	0	2591	0	2992	128036
	Grand total	40152	105069	0	2591	0	2992	150804

Table: 6
Product : 60s Iron
Process : EDP

Category	Cost Drivers	Total Value (Rs.)
A	Daily Management	16224
B	Process Control	0
C	Process Setup	3102
D	Market / Technology	0
	Total (A+B+C+D)	19326
F	Permissible	128036
	Total (A+B+C+D+F)	147362
E	Unused Capacity	3442
	Grand total	150804

Product : 60s Iron
Process : Painting
No. of working days : 29
No. of Machine : 3
Cost/ Unit : 3.89 (manned hours/ power/ cost)

Machine Code	Hourly Dep.	Hourly Power on Load	Hourly Power without Load
CM1570	28.07	5.00	2.00
Average	28.07	5.00	2.00

From the above table it can be inferred that the average hourly depreciation of a machine was 28.07, the average hourly power cost of a machine with load was 5.00 and the average hourly power cost of a machine without load was 2.00. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the cost center / number of machines. Similarly the power cost of machine with load and without load is calculated.

Category		Machin e Hrs	Machin e Cap (Rs.)	Powe r Hrs.	Powe r (Rs.)	LF tools	PR tools	Comp (Rs.)	Cons um- ables	Total
C	(1) Perm setup change time	1	28	1	9	0	0	0	0	37
B	Excess setup change time	0	0	0	0	0	0	0	0	0
C	(2) Perm tool change time	0	0	0	0	0	0	0	0	0
B	Excess tool change time	0	0	0	0	0	0	0	0	0
A	(3) Machine behaviour	213	5979	213	4142	0	0	0	0	10121
A	(4) Operator skill + Rect	1	18	0	0	0	0	978	0	996
A	(5) Material delay	0	0	0	0	0	0	0	0	0
A	(6) Break down	0	0	0	0	0	0	0	0	0
F	(7) Permissible	175	4912	175	3404	0	0	0	0	8525
	(8) Total	389	10937	389	7555	0	0	978	209	19679
E	(9) Inadequate Load	307	8618	0	0	0	0	0	0	8618
	(10) Grand total	696	19555	389	7555	0	0	978	209	8618

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula [(Load hours x power on load) + (Booked hours – load hours) x Power on no load] x Electricity Board power Rate]. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula (Tools rate x total production produced)/ Total production that

can be produced). Common consumable is calculated in proportion of worked hours. Component cost is the product of Number of components and stores ledger rate.

Category		Machine Cap (Rs.)	Power (Rs.)	LF tools	Pr tools	Comp (Rs.)	Consumables	Total
A	Daily Management	5997	4142	0	0	978	0	11117
B	Process Control	0	0	0	0	0	0	0
C	Process Setup	28	9	0	0	0	0	37
D	Market / Technology	0	0	0	0	0	0	0
E	Unused Capacity	8618	0	0	0	0	0	8618
F	Permissible	4912	3404	0	0	0	209	8525
	Grand total	19555	7555	0	0	978	209	28297

Table: 7
Product : 60s Iron
Process : Painting

Category	Cost Drivers	Total Value (Rs.)
A	Daily Management	11117
B	Process Control	0
C	Process Setup	37
D	Market / Technology	0
	Total (A+B+C+D)	111154
F	Permissible	8525
	Total (A+B+C+D+F)	19679
E	Unused Capacity	8618
	Grand total	28297

Product : 60s Iron
Process : Assembling
No. of working days : 29
No. of Machine : 1
Cost/ Unit : 3.89 (manned hours/ power/ cost)

Machine Code	Hourly Dep.	Hourly Power on Load	Hourly Power without Load
PM1749	92.87	23.60	13.00
Average	92.87	23.60	13.00

From the above table it can be inferred that the average hourly depreciation of a machine was 92.87, the average hourly power cost of a machine with load was 23.60 and the average hourly power cost of a machine without load was 13.00. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the cost center / number of machines. Similarly the power cost of machine with load and without load is calculated.

Category		Machin e Hrs	Machin e Cap (Rs.)	Powe r Hrs.	Powe r (Rs.)	LF tools	PR tool s	Com p (Rs.)	Con sum- able s	Total
C	(1) Perm setup change time	12	1114	12	607	0	0	0	0	1721
B	Excess setup change time	0	0	0	0	0	0	0	0	0
C	(2) Perm tool change time	0	0	0	0	0	0	0	0	0
B	Excess tool change time	0	0	0	0	0	0	0	0	0
A	(3) Machine behaviour	0	0	0	0	0	0	0	0	0
A	(4) Operator skill + Rect	0	0	0	0	0	0	0	0	0
A	(5) Material delay	0	0	0	0	0	0	0	0	0
A	(6) Break down	21	1950	21	0	0	0	0	0	1950
F	(7) Permissible	321	29811	321	29469	65048	0	0	0	124328
	(8) Total	354	32875	354	30076	65048	0	0	0	127999
E	(9) Inadequate Load	342	31762	0	0	0	0	0	0	31762
	(10) Grand total	696	64637	354	30076	65048	0	0	0	159761

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula [(Load hours x power on load) + (Booked hours – load hours) x Power on no load] x Electricity Board power Rate]. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula (Tools rate x total production produced)/ Total production that can be produced). Common consumable is calculated in proportion of

worked hours. Component cost is the product of Number of components and stores ledger rate.

Category		Machin e Cap (Rs.)	Powe r (Rs.)	LF tools	Pr tools	Comp (Rs.)	Cons umab les	Total
A	Daily Management	1950	0	0	0	0	0	1950
B	Process Control	0	0	0	0	0	0	0
C	Process Setup	1114	607	0	0	0	0	1721
D	Market / Technology	0	0	0	0	0	0	0
E	Unused Capacity	31762	0	0	0	0	0	31762
F	Permissible	29811	29469	65048	0	0	0	124328
	Grand total	64637	30076	65048	0	0	0	159761

Table: 8

Product : 60s Iron

Process : Assembling

Category	Cost Drivers	Total Value (Rs.)
A	Daily Management	1950
B	Process Control	0
C	Process Setup	1721
D	Market / Technology	0
	Total (A+B+C+D)	3671
F	Permissible	124328
	Total (A+B+C+D+F)	127999
E	Unused Capacity	31762
	Grand total	159761

FINANCIAL YEAR-WISE PRODUCTION OF IRON

(Qty. in Company in Kgs.)

FINANCIAL YEAR	RAW IRON			BLENDED IRON			100 % PURE IRON		
Qty.		Growth Rate	% Share	Qty.	Growth Rate	% Share	Qty.	Growth Rate	% Share
2016-2017	2268	3%	72%	644	4%	20%	246	11%	8%
2017-2018	2212	-2%	71%	609	-5%	20%	280	14%	9%
2018-2019	2177	-2%	71%	584	-4%	19%	319	14%	10%
2019-2020	2121	-3%	69%	589	1%	19%	342	7%	11%
2020-2021	2066	7%	70%	538	0%	18%	337	9%	11%
2021-2022	2258	9%	73%	528	-2%	17%	320	-5%	10%

NOTE: Growth Rate is calculated with respect to the same period last year.

INDUSTRY OVERVIEW

ITEMS	UNITS	2018	2019	2020	2021	2022
Springs / Metals	Nos.	1850	1846	1860	1875	1787
Automobile Units	Nos.	369973	377045	378113	383230	416128
Capacity Installed	Company ion Nos.	2181087. 1	2246917. 2	2263337	2326037. 1	2366037. 3
Production of Iron ore	Company in Nos.	898125.6	969074	902065.8	5162033. 6	5189457. 7
Production of Iron	Company in Kgs.	3940000	4140000	4063000	4181000 0	4170000
Springs Production	Company in NOS	39208	40233	42034	41973	42383

NOTE: Source of Export / Import data from Bescal Steel Industries Pvt Ltd , Chennai

CHAPTER VI

6.1 FINDINGS

1. For a product of Pipes 's Loading process have
 - a. the average hourly depreciation of a machine was 66.24
 - b. The average hourly power cost of a machine with load was 7.60
 - c. The average hourly power cost of a machine without load was 2.00.

2. For a product of Pipes 's Edging process have
 - a. The average hourly depreciation of a machine was 91.31
 - b. The average hourly power cost of a machine with load was 12.50
 - c. The average hourly power cost of a machine without load was 4.00.

3. For a product of Pipes 's Forming process have
 - a. The average hourly depreciation of a machine was 12.82
 - b. The average hourly power cost of a machine with load was 6.40
 - c. The average hourly power cost of a machine without load was 2.40.

4. For a product of Pipes 's Welding process have
 - a. The average hourly depreciation of a machine was 18.03
 - b. The average hourly power cost of a machine with load was 11.20
 - c. The average hourly power cost of a machine without load was 4.25.

5. For a product of Pipes 's Weld Seam Annealing process have

- a. The average hourly depreciation of a machine was 84.27
 - b. The average hourly power cost of a machine with load was 9.60
 - c. The average hourly power cost of a machine without load was 3.50.
4. For a product of Pipes 's Sizing/Cutting process have
- a. The average hourly depreciation of a machine was 19.23
 - b. The average hourly power cost of a machine with load was 14.50
 - c. The average hourly power cost of a machine without load was 5.83.
5. For a product of Pipes 's Preliminary Inspecting process have
- a. The average hourly depreciation of a machine was 28.07
 - b. The average hourly power cost of a machine with load was 5.00
 - c. The average hourly power cost of a machine without load was 2.00.
6. For a product of Pipes 's End Finishing process have
- a. The average hourly depreciation of a machine was 92.87
 - b. The average hourly power cost of a machine with load was 23.60
 - c. The average hourly power cost of a machine without load was 13.00.

6.2 SUGGESTIONS

1. The growth rate for 100% Black Pipes and Rectangular Pipes are found to be negative in the current year. This shows a decline in the production of the yarn. The company has to take necessary actions to increase the production of the 100% Black Pipes and Rectangular Pipes.
2. The production of Pipes was found to be declined in the current year. So the company has to take necessary actions to increase the production of Pipes.
3. The overall view of the company is satisfactory. The company has to improve the overall production process.
4. The Company can improve the production process by understanding the over-head costs and eliminating them.
5. The Company can eliminate the Cost-Drivers to increase the production cost.

6.3 CONCLUSION

Activity-Based Costing emphasizes the need to obtain a better understanding of the behavior of overhead costs. ABC recognizes that in the long run most costs are not fixed and seeks to understand the forces that cause overhead costs to change over time. It focuses on activities, as the activities cause costs. ABC systems assume that cash outflows are incurred to acquire a supply of resources (i.e., labour, material and resources), which are consumed by activities. Thus from this project it is found that the production unit of the company has been declined in the current year. The current year production of the Pipes has a negative growth rate. The company has to increase their production and should increase their profit. Though the production of Pipes are in the decreasing rate the metals production rate are in a satisfactory level.

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A STUDY ON ACTIVITY BASED COSTING IN BESCAL STEEL INDUSTRIES PVT LTD

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ABSTRACT

Activity-Based Costing (ABC) is a new but potential important emerging concept in the Management Accounting domain. It has gained greater importance in developed economies to a huge extent. The present trend suggests companies to adopt ABC even in developing economies of the world. Activity-Based Costing emphasizes the need to obtain a better understanding of the behaviour of overhead costs. The project titled “A study on Activity based costing” conducted in Bescal Steel Industries Pvt Ltd helps to formulate an Activity-Based Costing system for the company, to identify the impact of implementing ABC in the organization. The need for doing this project is to use ABC costing for calculating the cost of a particular product in the company namely, ‘60S IRON’, to provide suggestions to the company, relating to the cost attached to the various business activities and To find out the likely lag in the various business functions of the organization. Better understanding in the view of how much is ABC superior to the traditional process costing system followed in the company for controlling cost. Fixing up responsibilities for the executives who control the activities with authority and also making them accountable. Setting of standards for value adding and non-value adding activities. A study into the scientific method that can classify cost drivers and activities. Make a complete study on the whole organizations functions and allocation of administrative and selling and distribution overheads to the cost of the product

KEYWORDS: Activity based costing, Cost Drivers, Modern Approach, Overhead Costs..

INTRODUCTION:

Activity-Based Costing (ABC) is a systematic cause and effect method of assigning the cost of activities to products, services or any other cost object. It is based on the principle that “products consume activities”. It states that the activities consume resources which are the cost drivers. It provides for the understanding of this relationship since it is critical for the successful management of overheads. It is a system that attempts to link the cost of each business activity in an organization to the products which benefit from the activity.

Earlier costs were first collected for production departments and service departments and finally the costs of production departments were absorbed by jobs or processes. Traditional costing systems were designed decades ago, when most companies manufactured a narrow range of products and direct labour and direct material were dominant factory costs. Overhead costs were small and thus inappropriate overheads allocations were insignificant. The allocations were always volume-related measures, such as direct labour hours or machine hours.

There are certain resources exist for activities that are unrelated to physical volume. The volume-related activities consist of support activities such as material handling, material procurement, performing set-ups, production scheduling and first item inspection activities. The traditional system assumes that products consume all resources in proportion to their production volumes, thus reporting distorted product costs.

Job costing and process costing are two basic methods of cost accounting. Activity-Based Costing is not a distinct method of costing like 'job costing and process costing'. It is only a new practice in the process of attribution of costs to jobs or processes. Now in the context of Activity-Based Costing, the costs are collected according to activities such as material ordering, material handling, quality testing, machine set-ups, customer support service, etc. and jobs and processes for which cost collection is being attempted are loaded with costs of these activities rationally.

FACTORS PROMPTING THE DEVELOPMENT OF ABC:

Growing overhead costs because of increasingly automated production.

- ☐ Decreasing costs of information processing because of continued improvements, and increasing application of information technology.
- ☐ Increasing market competition, which necessitated more accurate product costs.
- ☐ Increasing product diversity to secure economies of scope and increased market share.
- ☐ Traditional costing fails to capture cause and effect relationship.
- ☐ Traditional costing often fails to highlight inter-relationship among activities in different departments.
- ☐ Growing dissatisfaction among the working executives regarding traditional costing, which is based on averages and estimates.
- ☐ Overhead costs are no longer a mere burden to be minimized. Overhead functions such as product design, quality control, customer service, production planning and sales order processing are as important to customer as physical processes on the shop floor.

ACTIVITY-BASED COSTING METHODOLOGY

Activity-Based Costing emphasizes the need to obtain a better understanding of the behaviour of overhead costs and thus it seeks to ascertain

- 1) What causes costs?
- 2) How they relate to product or services?

ABC recognizes that in the long run most costs are not fixed and seeks to understand the forces that cause overhead costs to change over time. It focuses on activities, as the activities cause costs. ABC systems assume that cash outflows are incurred to acquire a supply of resources (i.e., labour, material and resources), which are consumed by activities. In other words, activities cause

cost and products create demand for activities. A link is made between activities and products by assigning costs to products based on individual product's consumption or demand for each activity. Therefore, ABC system is based on understanding of the following:

- 1) Identifying major activities that take place in an organization
- 2) Creating a cost pool / cost centre for each activity or costing activities
- 3) Determining cost driver for each major activity
- 4) Assigning cost of activities to products based on product's consumption or demand for activities

REVIEW OF LITERATURE

Bužanin [2019] argued that 'the key changes in both environment and business of companies, which happened in the last few decades have brought to the development and possibility of use of ABC. According to that, the basic assumptions of creating competitive success have changed. Modern business conditions, application of new technologies, higher demands of consumers and greater competition have made traditional cost accounting unreliable in giving information about costs and cost prices. Competitive success of companies, in modern business conditions, depends mostly on its ability to engage and use efficiently its material and non-material resources, ability to adapt quickly to the constant changes in the environment and ability to recognize and satisfy the changes needs and requirements of consumers, before anyone else'.

Cooper and Kaplan [2019] stated that ABC is a system designed to provide clearer information about the production, support activities, and product costs so that managers can focus their attention on products and processes with higher consumption of resources. ABC is a costing system in which the crucial objective is to provide management with more useful and accurate information, both on the cost and profitability of the business processes themselves.

According to **Kaplan and Anderson [2017]**, the standard procedure for implementing the ABC system begins with the identification and mapping of the relevant activities that are performed in the organisation, as well as with the identification of the resources that will be used in carrying out each activity that is part of the company's operation

Major and Vieira [2020], argued that 'to implement an ABC/M system' successfully 'requires knowledge of a technical nature, but also, involves questions of a political and cultural behavioural nature'. It is essential to evaluate the company in economic and technical terms early because it is expected that the benefits are greater than its cost, making it essential to assess whether it will be possible to identify the activities.

According to **Khodadadzadeh [2002]**, ABC allows for identifying which products or services are not profitable for the company, thus eliminating them and

adjusting the price of products or services whose prices are improperly practised.

OBJECTIVES OF THE STUDY

PRIMARY OBJECTIVES

- To formulate an Activity-Based Costing system for Bescal Steel Industries Pvt Ltd under study.

SECONDARY OBJECTIVES

- To use ABC costing for calculating the cost of a particular product in the company namely, '60SIRON'.
- To provide suggestions to the company, relating to the cost attached to the various businessactivities.
- To find out the likely lag in the various business functions of the organization.

NEED OF THE STUDY

- There is a high demand for cost reduction studies to pave way for reducing the production costs of the Ironproduced.
- Lowering the cost of the products would help the company to maintain profitability.
- The company has to go about cost reduction in a systematic way to achieve permanent reduction in its coststructure.

SCOPE OF THE STUDY

- Better understanding in the view of how much is ABC superior to the traditional process costing systemfollowed in the company for controlling cost.
- Fixing up responsibilities for the executives who control the activities with authority and also making themaccountable.
- Setting of standards for value adding and non-value adding activities.
- A study into the scientific method that can classify cost drivers and activities.

DATA ANALYSIS & INFERENCE

Product : 60s Iron

Process : Compression molding**No. of working days:** 29

No. of Machine : 3

Cost/ Unit : 3.89 (manned hours/ power/ cost

Machine Code	Hourly Dep.	Hourly Power onLoad	Hourly Power without Load
BM1353	44.6 6	6.50	2.00

BM1457	47.0 4	6.50	2.00
BM1729	107.03	9.80	2.00
Average	66.2 4	7.60	2.00

From the above table it can be inferred that the average hourly depreciation of a machine was 66.24,

2.00. Hourly depreciation of a machine was calculated using the formula sum of depreciation of all machines in the costcenter / number of machines. Similarly the power cost of machine with load and without load is calculated.

the

ory		Machi ne Hrs	Machi neCap (Rs.)	Pow er Hrs .	Pow er (Rs)	LF tools	P r too ls	Co mp (Rs)	Consu m- ables	Total
	(1) Perm setup change time	40	2650	40	311	0	0	0	0	2961
	Exc esssetup change time	0	0	0	0	0	0	0	0	0
	(2) Perm tool change time	23	1524	23	179	0	0	0	0	1703
	Exc ess tool change time	0	0	0	0	0	0	0	0	0
	(3) Mach ine behav ior	0	0	0	0	0	0	0	0	0
	(4) Operato r skill + Rect	0	0	0	0	0	0	0	0	0

(5)	Mate rial delay	0	0	0	0	0	0	0	0	0
(6)	Break down	48	3180	48	0	0	0	0	0	3180
(7)	Permissib le	1498	99228	1498	44287	0	36492	0	4287	18429 4
(8)	To tal	1609	106582	1609	44777	0	36492	0	4287	19213 8
(9)	Inadequ ateLoad	479	31729	0	0	0	0	0	0	31729
(10)	Gra nd tota l	2088	138311	1609	44777	0	36492	0	4287	22386 7

Power cost in set up, Tool change, rework, and Material delay is the product of Hours booked, average power on no load and electricity board power rate. Power cost in permissible is calculated using the formula [(Load hours x power on load) + (Booked hours – load hours) x Power on no load] x Electricity Board power Rate]. Tools cost (Perishable) is the product of Tools issued and latest stores ledger rate. Tools cost (Long life) is calculated using the formula (Toolsrate x total production produced)/ Total production that can be produced). Common consumable is calculated in proportion of worked hours. Component cost is the product of Number of components and stores ledger rate.

SUGGESTIONS

The growth rate for 100% Black Pipes and Rectangular Pipes are found to be negative in the current year. This shows a decline in the production of the yarn. The company has to take necessary actions to increase the production of the 100% Black Pipes and Rectangular Pipes. The production of Pipes was found to be declined in the current year. So the company has to take necessary actions to increase the production of Pipes. The overall view of the company is satisfactory. The company has to improve the overall production process.

CONCLUSION

Activity-Based Costing emphasizes the need to obtain a better understanding of the behavior of overhead costs. ABC recognizes that in the long run most costs are not fixed and seeks to understand the forces that cause overhead costs to change over time. It focuses on activities, as the activities cause costs. ABC systems assume that cash outflows are incurred to acquire a supply of resources (i.e., labour, material and resources), which are consumed by activities. Thus from this project it is found that the production unit of the

company has been declined in the current year. The current year production of the Pipes has a negative growth rate. The company has to increase their production and should increase their profit. Though the production of Pipes are in the decreasing rate the metals production rate are in a satisfactory level.

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