Executive summary

It gives me an immense pleasure in presenting this report on B.D.K Engineering Industries LTD (BDKEI) Hubli. BDK Engineering Industrial Limited, which is one of the units of BDK group of companies, is situated in Gokul Road, in Hubli (Karnataka).

The company designs and manufactures diaphragm valves, butterfly valves, ‘B’ series check valves, rubber lined items and molding the company caters to the need of major sectors like water treatment plants, savage and effluent treatment plants, rayon plants, chemical and fertilizer plants, refineries, nuclear power plants etc, and export it to other countries.

This project report specially emphasized on financial functions of the company which are handled by accounts department of the organization. And report includes all the information about the BDK Engineering Industries Ltd with the detailed study of accounts department

Project Title:
“Financial analysis” of BDK Engineering Industries LTD

The above mentioned topic which includes Cost Volume Profit Analysis, Working Capital Management, & Ratio Analysis

Objectives:
To evaluate operational efficiency, liquidity and solvency of the company
To ascertain the sales volume necessary for the company’s achieve profit
To understand the Working capital management of the company and to study the liquidity position of the firm.

Findings:
We find that from the study it is relevant that BEP is 80% of total sales.
Increase in working capital
Overall we find that all the ratios show a falling trend
## CONTENTS

<table>
<thead>
<tr>
<th>SI.NO</th>
<th>PARTICULARS</th>
<th>PAGE NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INTRODUCTION</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>COMPANY PROFILE</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>MISSION &amp; VISION STATEMENT</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>PRODUCTS</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>NETWORK</td>
<td>26</td>
</tr>
<tr>
<td>6</td>
<td>MAJOR MARKET FOR THE INDUSTRY</td>
<td>31</td>
</tr>
<tr>
<td>7</td>
<td>ACHIEVEMENTS AND AWARDS</td>
<td>34</td>
</tr>
<tr>
<td>8</td>
<td>ORGANIZATION</td>
<td>36</td>
</tr>
<tr>
<td>9</td>
<td>DEPARTMENTS</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>➢ TIME OFFICE</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>➢ MATERIALS AND STORES</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>➢ DESIGN AND DEVELOPMENT</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>➢ PRODUCTION PLANNING AND CONTROL</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>➢ QUALITY ASSURANCE</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>➢ SALES CO-ORDINATION</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>➢ FINANCE(A/C)</td>
<td>59</td>
</tr>
<tr>
<td>10</td>
<td>FINANCIAL ANALYSIS</td>
<td>63</td>
</tr>
<tr>
<td>11</td>
<td>STUDY OBJECTIVES</td>
<td>64</td>
</tr>
<tr>
<td>12</td>
<td>ANALYSIS &amp; INTERPRETATION</td>
<td>65</td>
</tr>
<tr>
<td>A</td>
<td>COST VOLUME PROFIT ANALYSIS</td>
<td>65</td>
</tr>
</tbody>
</table>
# Table of Contents

## A. Financial Analysis

- **Table-1**: Marginal Income Statement (Page 66)
- **Table-2**: Profit Volume Ratio (Page 67)
- **Table-3**: Break Even Analysis (Page 68)
- **Table-4**: Margin of Safety (Page 69)

## B. Working Capital Management

- **Table-1**: Statement of Working Capital - 2006 (Page 82)
- **Table-2**: Statement of Working Capital - 2007 (Page 83)
- **Table-3**: Statement of Working Capital - 2008 (Page 84)

## C. Ratio Analysis

- **Table-1**: Current Ratio (Page 88)
- **Table-2**: Acid Test Ratio (Page 89)
- **Table-3**: Debt-Equity Ratio (Page 89)
- **Table-4**: Inventory Turnover Ratio (Page 91)
- **Table-5**: Debtors Turnover Ratio (Page 92)
- **Table-6**: Average Collection Period Ratio (Page 92)
- **Table-7**: Working Capital Turnover Ratio (Page 93)
- **Table-8**: Interest Coverage (Page 94)
- **Table-9**: Gross Profit Margin (Page 95)
- **Table-10**: Net Profit Margin (Page 95)
- **Table-11**: Return on Assets (Page 96)
- **Table-12**: Return on Capital Employed (Page 96)

## Findings

- **Page 97**

## Suggestion

- **Page 100**

## Conclusion

- **Page 101**

## Bibliography

- **Page 102**

## Annexure

- **Page 103**
INTRODUCTION

Keeping pace with the global industrial growth, the BDK Group was founded in 1978 by Bharat B. Khimji. The now US $35 million Group has since been building on a heritage of initiative and innovation, offering along with its eight associate companies - a wide spectrum of Industrial Valves designed for the needs of the Chemical and Petrochemicals Industries worldwide. For more than three decades, BDK valves and other products have enjoyed sustained and lasting reputation in both domestic and global markets.

Today, nine group companies, twelve marketing offices, and group strength of a little over 1500 hundred dedicated employees’ synergies their strengths to form one of India's largest and most progressive manufacturers in this field. With its heritage of excellence, and its resources of expertise and experience, the Group is poised to realize its destiny - as a world leader in manufacturing and marketing of Industrial Valves.

There are seven departments Personal Department, Sales Department, Design Department, Quality Assurance Department, Production Planning and Control, Accounts Department and Material Department.

HISTORY

In the early 1970’s B.D.K Engineering Industries was called B.D.K alloys and B.D.K valves. It was started by Mr. Bharat.B.Khimji who is the present CEO of the company.
During 1984 one more company of B.D.K engineering limited was started by S.M. Krishna. Later the company was called B.D.K process control in 1990.

Due to amalgamation all companies of B.D.K got merge into B.D.K Engineering Industries limited.

They have 10 branches throughout India, Dubai and abroad. In India they have branches in Delhi, Mumbai, Calcutta, Chenai, Baroda, Hyderabad, Bangalore, Pune, Lucknow and Indore. B.D.K Engineering Industries, Hubli manufacture valves and give it to their branches present in areas mention above from there they are given to the final customers. Manufactured goods will reach the customers through the branches. Valves, which they manufacture, are used by industries such as chemical industries etc.

It is 27 acres of land situated at the Airport Road near Hubli. CEO is Mr. Bharat B.Khimji, he has 2 sons Sachin B.Khimji and Binoy B.Khimji. Sachin B.Khimji is one of the Directors of the company and Binoy B.Khimji looks after the Mumbai branch.

BDKEI designs and manufactures Diaphragm valves, Butterfly valves, plug valves, `B` series check valves, ball valves Rubber lined items and mouldings. The caters to the needs of major sectors like water treatment plants, sewage and effluent treatment plants, Rayon plants, chemical fertilizer plants, Refineries nuclear power plants etc., And exports its products to Australia, New Zealand, Malaysia, Thailand, Singapore, Japan, Philippines, Indonesia, Italy, Germany, France, UK, Spain and Denmark.

BDKEI has a documented quality system to meet the Requirements of ISO: 9001/1994 to ensure that its orders processed products produced and service rendered meet the customer’s requirements. The unit has already accredited to ISO-9001-1994 quality assurance standard by M\S RW TUY Germany.

The units is also certified by RW.TUV, Germany CE Marking of Butterfly values and plug values according to pressures Equipment directive of European union PED 97/23\EC.
B.D.K.E.I Ltd. has the following Departments and accordingly duties and Authorities are assigned to each of them for the purpose of smooth meaning of the business activities

**Associates Concerns**

2. Valtek Industries.
3. T.S.Pumps & Valves Pvt, ltd
4. Veetech Valves Pvt Ltd.
5. Valtek Corporation.
COMPANY PROFILE

DESCRIPTION OF DIRECTORS & PLANT LOCATION

Name of the Company: BDK Engineering Industries Ltd.

Construction: Private Limited.

Sales head: 47/48, Gokul Road, Hubli – 580030, KARNATAKA.

Phone: (0836) 330799, 330899.

Fax: (0836) 330799, 330899.

E-mail: www.bdkindia.com

Registered office: A-Block, 8th floor Shivasagar Estate, Dr. A.B.Road, Worli Mumbai – 400 018

Telephone: (022) 24950580.

Bankers: (KANARA BANK)
“ANKUSH ARCADE”
Station Road
Hubli – 580 020
(KARNATAKA)

Company Registration No : 29934

Date of incorporation and Date of Establishment : 17-05-1983

Permanent Income Tax No : AAACB – 5081-B

List of Directors :

Sl. No. Name
01 Sachin. B. Khimji
02 Binoy. B. khimji
03 M. B. Goudar
04 K. Sundaram
**Hierarchy of Management**

- CEO
  - Ex-Dir
  - MR
  - CE
    - HOD SC (Head of the Dept of Sales Co-ordination)
    - HOD SNG&DVP (Head of the Dept of Design and Development)
    - HOD MAT (Head of the Dept of Materials)
    - HOD PPC (Head of the Dept of Production Planning and Control)
    - HOD QA (Head of the Dept of Quality Assurance)
    - HOD TO (Head of the Dept of Time Office)
    - HOD A/C (Head of the Dept of Accounts)
    - SIC (Section In-charge)
      - SIC
      - FIC

**ABBREVIATIONS**

01. CEO – Chief Executive Officer.
02. MR – Mgt Representative
03. CE – Chief Executive
04. HOD SC – Head of the Dept of Sales Co-ordination
05. HOD SNG&DVP - Head of the Dept of Design and Development
06. MAT HOD – Head of the Dept of Materials
07. HOD PPC - Head of the Dept of Production Planning and Control
08. HOD QA - Head of the Dept of Quality Assurance
09. HOD TO - Head of the Dept of Time Office
10. HOD A/C - Head of the Dept of Accounts
11. SIC – Section In-charge
12. FIC – Functional In-charge

**MISSION**

To Design, to Manufacture,
To Market, Quality products at competitive prices
To the entire satisfaction of the customer and attain market leadership through continual improvement.

**VISION**

“To be the most admired company in the production of valves industry”
Diaphragm Valves are mainly used in water treatment plants, fertilizer & petrochemicals industries, chemical industries, refineries, thermal power stations, and other process industries. Equally suited to on and off, or flow control applications, a diaphragm valve will handle positive pressures or high vacuum. Due to the wide range of material options it will handle almost all applications within its temperature and pressure ranges (175°C max. and 16 bar max.) and as such is used in almost every industry on both corrosive and abrasive applications. All working parts are isolated from the line media which enhances its reliability. Maintenance is a simple task with the body remaining in the pipe, the valve
thus being field serviceable. It has linear flow characteristics which makes it well suited to throttling or modulating duties. On/off and control automation is possible with the use of modern compact actuators and accessories.

**BUTTERFLY VALVES**

One of the most compact and light-weight valves available. Used for a wide range of applications, the choice of seat, lining and disc options has increased significantly over recent years making the valve a popular choice. A wide range of materials, sizes and pressure ratings gives reliable positive isolation and moderate flow control capability over a wide range of applications throughout the industry. The metal seated valve is well established in petrochemical and oil industries being lightweight, fire safe and suitable for actuation. Butterfly valves offer a number of advantages when used for the proper application. They may be used in a wide variety of chemical services, they are available with small dimensions allowing for use in areas where space is limited, and they allow a high coefficient of flow.
Butterfly valves are quick opening valves that consist of a metal circular disc or vane with its pivot axes at right angles to the direction of flow in the pipe, which when rotated on a shaft, seals against seats in the valve body. They are normally used as throttling valves to control flow. Unlike ball valves, butterfly valves do not have any pockets in which fluids may become trapped when the valve is closed.

PFA LINED VALVES

PFA is developed as a melt processable fluoropolymer, it is a co-polymer of tetrafluoroethylene and perfluoroalkoxy monomer. It has excellent mechanical strength outstanding dielectric properties & is unaffected by virtually all solvents & chemicals even at high temperature of 240° C to 260° C.
GATE VALVES

The most common and traditional type of valve the valves are large to accommodate the yoke and stem mechanism, but fully open the full bore design provides an uninterrupted flow path. Generally either used fully open or closed, for on/off isolation, and not used for modulating flow control duties. Variants include Solid and Flexible Wedge Gates, Double Disc Gates, Through Conduit Valves, Parallel Slide Valves and Knife Gate Valves.
GLOBE VALVES

Globe valves are designed for flow control or on/off isolation of fluids. They are manufactured in straight patterns, angle patterns, oblique patterns and needle designs with a large variety of internal seat construction variants to handle High Pressure flow control duties. A wide choice of metal body options and trims means Globe valves are widely used throughout industry.
Globe Valve designs consist of O.S. & Y type, Rising Spindle and Bolted Bonnets. The valve comprises of a Solid Rotating Plug Type Disc which is Fine Lapped. Back Seat facilities provide easy replacement of Gland Packing under pressure. Extra deep Stuffing Box Ensures Fluid Tightness, Long Packing life and Low Emissions We offer Globe Valves with special packing, suitable for thermic fluid temperature up to 425º C.

CHECK VALVES

A check valve is a mechanical device, a valve that normally allows a fluid to flow through it in only one direction. Check valves are two-port valves, meaning they have two openings in the body, one for fluid to enter and the other for fluid to leave. There are various types of check valves used in a wide variety of applications. Although they are available in a wide range of sizes and costs, many check valves are very small, simple, and / or cheap. Check valves work automatically and most are not controlled by a person or any external control; accordingly, most do not have any valve handle or stem. The bodies (external shells) of most check valves are made of metal.

An important concept in check valves is the cracking pressure which is the minimum upstream pressure at which the valve will operate. Typically the check valve is designed for and can therefore be specified for a specific cracking pressure.
The oldest design of valve comprising of a body with a tapered or less frequently a parallel plug. Design variants include Non-lubricated, Fluoropolymer sleeved, Lubricated and Pressure balanced designs. Principally designed for on/off isolation of fluids they
have inherent quick opening flow characteristics similar to ball valves, although specially designed eccentric plug designs may be used for flow control applications.

They can be automated by means of quarter-turn actuators

BALL VALVES
Ball valves come in two basic designs: Floating Ball and Trunnion Mounted, with three basic construction variants: Three piece, End Entry and Top Entry with options of either full or reduced bore designs. Principally designed as an on/off isolation valve for a very wide range of temperatures and pressures they have inherent quick opening flow characteristics. Specially designed ball valves however, may offer good flow control capabilities at High Pressure. All ball valves offer compact actuation due to their rotary quarter-turn operation. Firesafe versions are available for use in the oil and petrochemical industries.

FORGED STEEL VALVES
Hundreds of thousands of BDK forged steel valves are currently in operation on many of the most testing chemical and petrochemical plants worldwide.

BDK’s experience over many years is the key to the success and reputation of BDK forged steel valves. The design is acknowledged for its reliability, safety, technical and construction features. The machining of the components is made with high precision machine tools operated by experienced people with a commitment to total quality. The qualification of the product from some of the most reputable international customers is another indicator of the integrity of BDK valves. BDK offers a broad range of standard forged steel gate, globe and check valves, reduced and full bore, in threaded, socket weld and butt-weld end connections.
KNIFE GATE VALVES

BDK Knife Gate Valves are specially designed for tough applications viz. Ash landing, Cement, Paper & Pulp, Slurries etc. These valves feature a single piece cast stainless steel fully lugged body which is very robust in construction to cater to the extreme demanding applications. The gates made of stainless steel and other superior alloys are ground with super surface finish on both sides to assure positive shutoff. The machined and highly finished gland pockets ensure a leak proof gland packing and perfect stem seal.
OTHERS:
ACTUATORS

WHAT IS AN ACTUATOR

- ac·tu·a·tor
- One that activates, especially a device responsible for actuating mechanical equipment, such as one connected to a computer by a sensor link.

Alternatively

- A mechanism that causes a device to be turned on or off, adjusted or moved. The motor and mechanism that moves the head assembly on a disk drive or an arm of a robot is called an actuator.

Actuators are used for the automation of industrial valves found in all kinds of technical process plants including wastewater treatment plants, power plants, refineries etc wherein they play a major role in automation process. The valves to be automated vary both in design and dimensions. The diameters of the valves range from a few inches to a few meters.

Depending on their type of source for operation, the actuators may be classified as pneumatic, hydraulic and electric actuators.
SOLENOID VALVE

INTRODUCTION

BSV Series plate type NAMUR solenoid valve is available in both 3/2 way (Single Acting) and 5/2 way (Double Acting) versions with IP65 enclosure. The integral slot throttle structure design and high-precision finishing technique for valve hole allow for positive shifting of air flow and constant clearing of the spool with each shift, enabling the valve to stroke millions of trouble-free cycles. The BSV series solenoid valve is intended for use on all Valves with Quarter Turn Pneumatic Actuator that incorporate the standard of NAMUR mounting paid (24mm x 32mm rectangle, 1/4: connection).
NETWORK

INDIAN NETWORK

Bangalore
Bhubaneshwar
Chennai
Hyderabad
Indore
Karnataka
Kolkata
Lucknow
Mumba
Noida
Pune
Vizag
Vadodara

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VIZAG
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International network:
Australia
Egypt
Iran
Jordan
New Zealand
Singapore
Sri Lanka
Turkey
United States
Bahrain
France
Italy
Kuwait
United Arab Emirates
South Africa
Sultanate of Oman
Qatar
Canada
Indonesia
Japan
United Kingdom
Saudi Arabia
South America
Taiwan
Malaysia

INDIAN DISTRIBUTOR NETWORK

WEST ZONE
Kadakia Enterprise
TradeLinks
Creative Marketing
Sujal Enterprise
Indaai Technologies

NORTH ZONE
Industrial Mill Stores
The Uranus

EAST ZONE
Continental Hardware
Sarvshreshth Sambharan
Hydromatic
S.S.Trading

SOUTH ZONE
Chemtech Agencies
VKS Agencies
Magtech
S.K. Engineers
MAJOR MARKET FOR THE INDUSTRY

1) BASIC CHEMICAL INDUSTRY
2) END USER CHEMICALS
3) FOOD AND BEVERAGES INDUSTRY
4) NUCLEAR/Thermal POWER PLANT
5) MINING INDUSTRY
6) PHARMACEUTICAL INDUSTRY
7) SEVARAGE TREATMENT INDUSTRY
8) POLLUTION CONTROL EQUIPMENT MANUFACTURER
9) WATER TREATMENT PLANTS
10) PULP AND PAPER INDUSTRY
11) OIL REFINERIES AND PETROCHEMICAL INDUSTRIES
12) MISCELLANEOUS INDUSTRY
13) OVERSEAS MARKETS

LIST OF MAJOR CLIENTS:

A. Chemical Process Industries:
   01. Andhra Sugar Ltd, Kornur.
   02. Asian paints India Ltd. Mumbai.
   03. Ballapur Industries Ltd. Karwar.
   04. Hindustan Heavy Chemicals Calcutta.
   05. Hindustan Leaver ltd. Mumbai and Italdia.
B. Fertilizers and Agro Chemicals:
   01. Mangalore chemicals and fertilizers Ltd, Mangalore
   02. Tata fertilizers, Babrala
   03. Oswal Agro Chemicals, New Delhi
   04. Hindustan Fertilizers, Nangaon

C. Pharmaceutical And Lubricants:
   01. Kipla, Bangalore
   02. Andbascy New Delhi
   03. Almbic Baroda.
   04. Glasco lab Ltd. Mumbai.
   05. SmithKline Bangalore

D. Pulp, Paper and Fiber Industries:
   01. A.P.Rauaus Ltd. Hyderabad.
   02. Mysore Paper Mills
   03. Naional Rayan Company, Mumbai.
   04. Raym and Synthetics. Allahabad.
   05. Indian Rayon Baroda.
   06. Grasim Industries, Mumbai.

E. Oil Refineries and Petro Chemicals Industries:
   01. Bharat Petroleum Corporation Ltd. Mumbai and Delhi.
   02. Cochin Refineries Ltd. Ambalamanagar.
   03. Indian Oil Corporation Ltd. New Delhi.
   04. Oil India Ltd. Calcutta.
   05. Oil and National Gas, Hazira, Chennai.

F. Water Effluement Treatment Plants:
   01. Indocon Engg. Pune.
02. Thermax Ltd. Pune.
03. Priplex water Engg. New Delhi.
04. Agra chemicals, Chennai.

G. Miscellaneous Industries:
01. Bharat heavy plants and valves Ltd. Vishakapatnam.
02. Bharat heavy electricals ltd. Hyderabad, Delhi.
03. Citric India ltd. Mumbai.

MAIN COMPETITORS OF BDK:

1. Akay.
2. Audco.
3. Invest.
5. KSB.
6. Automech.
7. Niton.
8. Procepp.
ACHIEVEMENTS AND AWARDS

ACHIEVEMENTS:

2. TUV Certification Body of Rheinisch-Westfalischer TUV.
3. TUV certification Body of RWTUV Anlagentechnik GmbH.
4. TUV certification Body of RWTUV Systems GmbH.

AWARDS:

1. Received STATE AWRDS by Government of Karnataka for excellence in EXPORTS from 2000-2006.
2. Received AWARD by FEDERATION OF KARNATKA CHAMBER OF COMMERCE AND INDUSTRY BANGALORE for the “BEST EXPORTER” Dharwad district
WORK FLOW MODEL:
1. Prepare internal work order.
2. Planning department – indent after checking with stores.
3. Purchase department - purchase order on raw material supplies.
4. Goods receipt note (grn) at stores.
5. Incoming materials inspection – ok, re-work, reject.
6. Reject – send back to supplies for replacements.
7. Ok, reworked, credit to stores.
10. In-process inspection.
11. Assembling.
12. Final testing / test certificate.
13. Painting / packing / dispatch.
15. Local transport from factory to port.

PRODUCTION CAPACITY
BDK has an annual production capacity of manufacturing
135,000 Diaphragm and Butterfly Valves;
60,000 Cast Steel Gate, Globe & Check Valves;
50,000 Plug Valves;
120,000 Ball Valves;
100,000 Forged Steel Gate, Globe & Check Valves;
10,000 Special Purpose Valves
10,000 Custom-made Valves

BDK's speciality, along with a wide-ranging product line, is to manufacture Special Valves in Exotic materials.

ORGANIZATION

Companies are often enamored with the notion of global engineering, but many find that the reality and challenges of engineering in this arena can obscure the promises of pooled resources and lean engineering. As an international valve manufacturer, BDK understands that global engineering is supported by a solid corporate vision coupled with business practices that provide the foundation for creating an environment to deliver superior products and services.

With a strong and unique market position, BDK focuses on four key business areas to deliver this vision globally.

The first element revolves around customers' needs. We listen to what our customers say and try to respond with innovations, often taking a long-range view when implementing solutions.

The second element focuses on corporate culture. Our culture is founded on the principle of respect for individuals and cultural diversity. We provide an open, honest environment with high ethical standards where people are encouraged to express their opinions freely. We value high technical competence, aggressively seeking new ideas
externally as well as internally. The open exchange and communication of our philosophy to new people is fundamental to building our corporate network.

The third element relates to decision-making. At BDK, decision-making is decentralized. Our regional managers have significant autonomy to decide locally while still adhering to the company's philosophy, culture and vision.

The fourth element addresses technology. BDK is very technology-driven. Even as we grow our strength commercially as an organization, we continue to primarily base our differentiation on technical innovation.

With a strong corporate vision and key business elements in place, companies can tackle the demands of global engineering. We believe that global engineering is all about leveraging lower wages and offshore resources, combined with high-value expertise, anywhere in the world. To succeed, it is a requirement to customize tools and technology to different markets and to effectively collaborate with colleagues, wherever they are.

FUTURE PLANS

Innovation, Reinvention and Diversification are a continuous process at BDK.

Be it a new product development or enhancement of older products, we at BDK are constantly striving to give our customers maximum value for their investment, widest product range and most complete solutions.

Over the last few years BDK has been introducing new products on a regular basis, larger size butterfly valves up to 96 inches to the latest addition of the Triple Offset Butterfly Valve to name a few. We are on the constant look for innovative products that
complement the BDK Range. With our well-established network of sales offices and leading industry clientele, we have been able to successfully branch out and gain product acceptance for various ancillary products.

BDK is constantly on the lookout for new products that can complement our range, if you are an international manufacturer looking to enter in the Indian market and if you feel your products can complement our range then talk to us and see what BDK can do for you.

From Joint Ventures, Licensing to Outsourced Manufacturing, if we work worth you we guarantee you the results

OTHER BUSINESSES

TRAVEL INN
From a traditional manufacturing company, BDK has diversified into the Hotel Industry by introducing its first 36-room hotel on the outskirts of HUBLI. Complete with open-air restaurant, bar, banquet facilities to conference facilities Travel Inn provides the necessary amenities for both the Business and Holiday traveler.

PICK N PAY
The FMCG market is growing at an annual rate of 8% over the last 5 years and it is estimated to keep growing over at the same pace for the next decade. With a growing need for a one-stop shop convenience store, BDK recently launched two of the largest super market stores in HUBLI. Under the brand name of PICK 'N' PAY, BDK has taken its first step in to FMCG industry in India. The future plans are to franchise the
PICK 'N' PAY brand name to different parts of India and establish itself as a leader in
the super market industry.

KEY PEOPLE OF B.D.K:

Mr. Bharat Khimji,
C.E.O. and Founder of the BDK Group of Companies
The one who spearheaded the group successfully through a three decade-long
manufacturing and marketing journey from a one product manufacturer to a company
offering a complete range of Industrial Valves
Email: - bbk@bdkindia.com

Mr. Sachin Khimji,
Director - Manufacturing.
His dynamism and industrial experience of over twenty years in Production, Planning,
Control and Administration has provided a very vital and strong pillar to the group.
Today he focuses on streamlining the manufacturing processes at BDK, from inventory
management to introducing the latest manufacturing techniques.
Email: - sbk@bdkindia.com

Mr. Binoy Khimji,
Director - International Business.
A management whiz, who has mastered his Management and Marketing skills from
Bentley College, Boston, USA currently handles the group Strategy in terms of
Acquisition and Corporate Communication; he is also actively involved in marketing of
valves for North America and new emerging markets.
Email: - binoy@bdkindia.com
Mr. K. Sundaram,
Director - Corporate Finance.
Sharp and meticulous, he has been an integral part of the group for the last forty years. Corporate Law, Taxation and Group Finance are his forte, he is actively involved in new venture financing and banking
Email: - ks@bdkindia.com

Mr. M.B. Goudar,
Director - Domestic Sales.
With over forty years experience in Production, he has also been rendering relentless support to the group's Sales Co-ordination. He is responsible for BDK's Indian clients and the domestic sales team.
Email: - mbg@bdkindia.com

Mr. Shrikant Kulkarni
Head Exports
The key force behind the export division of BDK; handles BDK's worldwide clientele that spans from the United States to Australia. He is responsible for the group’s entire international business as well as new client development. A multifaceted personality conversant in Valves as well as Pumps
Email: - bdkei@bdkindia.com

DEPARTMENTS

1. TIME OFFICE (Personnel Department)

FEATURES
1. Acts as intermediate between management and employees.
2. They follow punch card system for the attendance of the employees.
3. Each employee is provided by a card, which has to be punched daily twice based on the shift.
4. Leave letter must be given if the employee remains absent.
5. Attendance register is maintained and the employee is provided salary based on the attendance.
6. Salary Format:
   Name:
   Ticket No:
   Days present:
   Basic + D.A +H.R.A +Medical facilities +Washing Facilities +Food
Deductions:

P.F @12%
E.S.I.C (Employee State Insurance Corporation) is also provided (less than 10000).

Professional tax
Less than 3000 don’t pay
More than 3000 to 4999 pay 30
More than 5000 to 7999 pay 60
More than 8000 to 9999 pay 100
More than 10000 to 14999 pay 150
More than 15000 pay 200.

7. Life Insurance Corporation is provided
8. Loan from company to employees @ 0%
9. No loan is provided on luxury items (mobile, bike).
10. Festival advances are given but later deducted from salary.

11. Canteen Facilities:
   Meals daily twice and employee has to pay 100 daily and the amount varies based on the eating capacity of the individual.

   - Two sets of uniforms every year.
   - Once in three year’s raincoat and sweater.
   - Every year 3 shirts for staff.
   - Safety equipments such as masks and gloves are provided.
   - 20% of bonus to eligible employees.
   - Paid leave are 21 days per year.
The head of department is assisted by 3 officers. They carry on labour office, factory inspection, provident fund, and professional employment exchange. They follow recruitment procedure by giving ads in newspapers, Internet etc.

HEALTH, SAFETY AND ENVIRONMENT POLICY:
1. To provide good working conditions and hygienic food to the employees.
2. Ensure safe working practices in all areas of operations and provide safety equipments wherever necessary.
3. Maintain and improve the environment in accordance with applicable Laws and Regulations.
4. Ensure proper waste disposal.
5. Maintain and improve eco-friendly ambience and make the work place livelier and pollution free.

2. MATERIALS AND STORES DEPARTMENT

MATERIAL DEPARTMENT

OBJECTIVES
- To plan and procure materials and services confirming to specified requirements through continual improvements.
  - Store and preserve material till they are issued for use.
FUNCTIONS

- Evaluation and approval of sub contractors.
- Performance rating of sub contractors.
- Receipts, storage, handling, preservation and issue of materials.
- Verification, identification and trace ability of products.
- To maintain quality documents and records.
- To identify tracing needs and to plan and to organize for the same.

PURCHASE ACTIVITY

1. Verify order acceptance for intent come preparation
2. Selection of supplier (new)
3. Approved supplier list
4. Intimate procurement
5. Release letter of intent
6. Pricing policy
7. Rate negotiation
8. Follow up work correspondence
3. DESIGN AND DEVELOPMENT DEPARTMENT

DESIGN AND TRAINING DEPARTMENT

Guidelines of National and International Design Standards

<table>
<thead>
<tr>
<th>NAME</th>
<th>DESIGN STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diaphragm Valves (Elastic)</td>
<td>BSEN 13397</td>
</tr>
<tr>
<td>Butterfly Valves (Elastic)</td>
<td>BSEN 593</td>
</tr>
<tr>
<td>Plug Valves (Polymer)</td>
<td>BS 5353/API 599</td>
</tr>
<tr>
<td>Gate Valves (Metal Sheet)</td>
<td>API 600/6D/BS 1414</td>
</tr>
<tr>
<td>Globe Valves (Metal Sheet)</td>
<td>BS 1873</td>
</tr>
<tr>
<td>Check Valves (Metal Sheet)</td>
<td>BS 1868</td>
</tr>
</tbody>
</table>
DESIGN PROCEDURE

1. The software used to design is AutoCAD, 3d and 2d MAX. This is used to design prepare a model of the valve in picture like form. From here making of the model starts

2. With the help of the above software they draw pot i.e. the outside boarder of the valve and from here it goes for planning.

3. In this stage they plan how to shape the valve once your draw the pot it becomes easy to shape it in proper form. Planning includes design the product in proper form and shape and once it is design it is then given for Quality Assurance.
4. In quality assurance the entire thing is tested to find out whether the raw materials are not damaged. If they are damaged they will replaced it. After this the product is design.

5. In this final testing of the product is done and after done it is certified as tested. If there are any damages then the whole process has to be repeated with new product.

Different tests are carried out over here
- Fire safe Test.
- Proto Type Test.
- Pressure Test.
- NDT (Non Destructive Testing).

WORKING OF DESIGN DEPARTMENT

1. Design Planning
2. Design Input
3. Design Adequacy
4. Design Calculations
TRAINING

The training of employees and upgradation of their knowledge is very important aspect of the organization. The employees should be trained regularly. Here training is kept yearly and it is divided into Common program and Departmental topic.

COMMON PROGRAM
1. ISO
2. PED (Pressure Equipment Directive)
3. APLOY
4. El Product Knowledge
5. Pc Product Knowledge
6. Codes and Material Standards
7. CE (European Conformity)
8. EI (if any changes)

DEPARTMENTAL TOPIC
Here the head of the department has to take intense care that the department functions well and the employees are trained properly.

4. PRODUCTION PLANNING AND CONTROL

OBJECTIVES
To plan and meet the production requirement as per customers’ specifications through continues improvement in planning procurement processing and optimum resource utilization.
PROCEDURE FOR PLANNING

1. Work order / order acceptances received from sales co-ordination.
2. Master schedule is updated for work order items to be produced house.
3. Sub assembly is allotted as per the order acceptance (planning) copy and given to materials department by referring approved vendor list.
4. Production plan for the month drawn by last week of previous month in consultation with sales co-ordination dept.
5. Following work orders are considered while preparing the procedure planning.

- Over due work orders on the last day of current month.
- Work orders, which are due in the subsequent month.
- Work orders which are done in the month for which the production plan is to be made.
- Left over work orders from current month plans.
- Urgency from the sales dept.
- Material availability of all the components (priority) is given to such orders.

- Referring the above mentioned point and considering the capacity of the machine.
- Shop, monthly production plan is drawn from the computer.
- Monthly machine shop requirement worked out referring production plan.
- Monthly stock statement is given to the machine shop.
- The materials requirement is given to the stores to issue the materials to the machine shop.
- The material to be processed is loaded to machine shop by issuing machine shop job card and machine drawings.
After completion of all operations mentioned in the job card, the material is sent to the stores through a credit note drawing, and job card is returned back to the planning section.

The material required for the monthly production plan is communicated to the sub-contractors in co-ordination with the material department. As per the quotation plan, the material is sent to respective sub-contractors for processing, referring to the approved vendor list. By raising material to the store, the material department is informed to follow up as per the requirement date.

On receipt date of sub-contract materials, the sub-contract register is given to the assembly section.

The monthly purchase plan requirement for sub-assembly for the monthly is finalized with all the sub-assemblies, sub-contractors during the last week of the previous month, and finalized purchased plan requirement is given to the material department for procurement follow up.

Following work orders are considered while preparing the monthly purchase plan requirement:

1. Work orders, which are due as on the last day of the current month.
2. Work orders, which are due in the month.
3. Work orders, which are due in the subsequent month.
4. Left over work from the current month purchase plan requirement.
5. Urgency from sales procedure to work out delivery, deliver date for order acceptance.
5. QUALITY ASSURANCE

QUALITY POLICY:

“THE QUALITY POLICY BE
TO DESIGN
TO MARKET QUALITY PRODUCTS
AT COMPETITIVE PRICES
Introduction:

The organizational success largely depends on the smooth functioning of Q.A. Department, more over it can rightly said as Q.A. Department is the quality policy of the organization. The B.D.K. set up the Q.A. department to assist it in promoting quality products to its customers.

Objectives:

- Inspection at Painting, Packing and dispatch
- Inward Material Inspection
- In process Inspection
- Final Inspection and Testing
1. To maintain and consistent and correct appraisal of quality of the product at all the stages of manufacturing till the product is dispatched, such that the required product quality is achieved, maintained and improved.

2. To develop the necessary competencies for fulfilling the specific quality requirements.

Functions:

1. Incoming material inspection.
2. In process inspection.
3. Painting, packing and dispatch.
4. Control of non-conforming production.
5. Corrective and preventive action.

Final inspection, Testing, Painting and dispatch:

Introduction:

The production department activity comes to an end at this section as all the major parts of the process of production are completed and only some of the formalities like painting, dispatching, inspecting, testing and packing are left out.

Objective:

To ensure that the final inspection and testing shall be carried out as per order alpaca, order amendments, drawings and work instruction.

Procedures:

1. On receipt of the product for final inspection and testing, FIC-QA ensure that specified inspections and tests have been carried out and the product meets the requirements. Product is inspected as per work instruction, technical specifications and approved drawings and the results are recorded.
2. Inspection and test status is provided and accepted products are released for painting, packing and dispatch.

3. Product test certificates are prepared as per approved drawing and submitted to customer through dispatch section.

4. Products are offered for customer inspection as per work order / order acceptance whenever called for.

5. Products at painting and dispatch section are checked for required painting, paint thickness finish. Packing materials and marking on the packing boxes and availability of all accessories as per the packing slip are verified, signed by FIC-QA and released for dispatch.

There are 3 stages of inspection:

1. **Inspection at sub-contractors stage (premises):**
   
   Here inspection is carried out in S / C premises. Inspectors will prepare inspection. Then the parts are sent to store 3 for assembling and to quality assurance department for testing.

2. **Inward Material Inspection:**
   
   Here incoming material is inspected at BDKEI. Then they are assembled and sent to quality assurance department.

3. **Final Inspection and Testing:**

   Inspection is of two types:
1. **In – house inspection:** In this case inspection is carried out in BDKEI itself.
2. **Client Inspection:** Here inspection is carried out by the client in the inspection agency.

**There are 3 types of testing:**
1. Hydro Test
2. Hydro Shell Test
3. Pneumatic Test

**Painting:**

The valves are cleared with wire brushed paper made totally free from scales, dust etc, the products are thoroughly wiped with solvents like thinner, petrol, kerosene, etc, to remove grease and oil from surface.

**The following shades of colors are used as standard:**

1. Head wheel                                           Black color.
2. IBR Valves                                           Red strip.
4. Rework                                               Blue color.
5. Reject                                               Record color.
6. AOD (Accepted on Deviation)                          Yellow color.
7. NC Items at suppliers (Non-conformance)             White color.

**6. SALES COORDINATION**

SALES DEPARTMENT
1. In the above flowchart the marketing officer will contact the customers about the offer. He will have direct contact with the customers.
2. After that there comes receivable of the order after placing of order from the customers. Here it is discussed with the design department and costing department about fixing the price and quote the accurate price. After the approval of the management it is carried on further.

3. After that it is forwarded to sales coordination and there it is checked whether the price is quoted right. The details of the product including size, description of the product is given. Then it is forwarded to planning purchase.

4. Here they plan how to carry on the order given by the customers. What steps to be taken how many goods raw materials are required for the order? Place order for the raw material for manufacturing of valve. After this it is forwarded for quality assurance.

5. In quality assurance the entire thing is tested to find out whether the raw materials are not damaged. If they are damaged they will replaced it. This process is carried out before and after assembling.

6. In assembling they assemble the entire raw material together for the formation of the product. From here it is again sent to quality assurance department.

7. In quality assurance final testing of the product is done from then it goes for dispatching and then to the final consumers.

OBJECTIVES
1. To understand customers requirements fully and resolve deviations if any before execution of the contract.

2. To translate mutually agreed customer’s requirements in to work order or amendments.

3. To coordinate with customer and concerned departments for prompt execution of the order.

4. To attend to the customers complaints promptly and co-ordinate to minimize reoccurrence.

5. To strive for the entire satisfaction of the customers.

FUNCTIONS

1. The objective of sales coordination department in contract review is to ensure that customer’s needs are clearly identified, understood, documented and activities are coordinates for effective execution of contract.

2. Control of customer supplied product done by verification, storage, and maintenance incorporation of the product.

3. The product is seen that it reaches to the customer through proper service facilities.

4. It is seen that the customer complaint is registered. Corrective and preventive actions are taken. A monthly report for customer complaint is prepared and submitted to HOD and management representative.
ACTIVITIES OF SALES CO-ORDINATION

1. First the BDK MS will make an offer to its customer.

2. Then the customer will send an enquiry to BDK MS.

3. A letter of purchase order is sent to BDK MS and other copy of it is sent to sales co-ordination department.

4. Sales co-ordination department will send back an enquiry for office to BDK MS will send a purchase order of offer to head of the sales co-ordination.

5. Sales co-ordination will prepare the consignment note review.

6. 6 copies of work amendments are prepared, which are distributed to planning department.

7. Quality Assurance plan is prepared by sales co-ordination department and sent to the production, planning and control, quality assurance department customer applicable.

8. Sales co-ordination department will review about the product will PPC for progress survey. Then status information is given to BDK / its customer.

9. The case of missing details a forwarding note is sent to BDK MS and a copy of letter to customer. After the receipts of missing details the information is given to PPC/ Q.A/ Account department.

10. A Performa invoice is prepared and sent to BDK MS/ customer after the receipts of payment information is given to the PPC for dispatch. The information of dispatch details is given to BDK MS/ customers.
7. ACCOUNTS DEPARTMENT

It plays a vital role by providing and maintaining the details of each and every financial activities of the company.

OBJECTIVES

1. To provide accurate and complete systematic information of financial activity.

2. To maintain all the books of account and financial documents.

3. To prepare periodic financial statement of the company like profit and loss account, trial balance and balance sheet.

FUNCTIONS

1. Preparation of daily cash and bankbooks.
2. Receipts and payment account.
5. Preparation of sales tax returns.
6. Preparation of central excise duty returns, service tax duty returns and income tax returns.
BOOKS MAINTAINED IN ACCOUNTS DEPARTMENT

1. General ledger.
2. Cashbook.
4. Purchase register.
5. Journal register.
7. Assets register.
8. Debit and Credit note.

BANKS

1. Syndicate bank in Hubli for domestic transactions.

2. Canara bank, Station Road, Hubli for export transaction.

3. ICICI bank, Hubli.
SWOT ANALYSIS OF BDKEI:

Strengths:
1) They are large scale manufacturing and suppliers of valves and pumps.
2) They have good reputation in the market.
3) They are recognized by their quality.
4) RW-TUV GERMANY and also API Certification have awarded the ISO 9001/2001.
5) The plant has well equipped calibration room and a chemical and metallurgical laboratory. They have efficient and well qualified personnel.
6) The plants are fully provided with latest production and testing equipments including CAD/CAM Centre.
7) They have provided a healthy environment to the employees.
8) They follow standard system for all the activities.
9) They have a well established sales and services network in both domestic and global markets.

Weaknesses:
1) Cost for maintaining standard is more.
2) They have not computerized wholly.

Opportunities:
1) There is no restriction for movement of product in the world due to globalization.
2) There is no sales and excise duty on export.
3) There are many foreign countries still to be cover

Threats:
1) More competition from MNC’S.
2) Many foreign valve companies entering the domestic market because of globalization.
3) Valve and pump industries are in the grip of recession.
4) Heavily depending on foundries because of causing and other raw materials.

Financial Analysis
STUDY OBJECTIVES

A. CALCULATION OF CVP
   1. To ascertain the minimum level of sales to cover the cost and avoid losses.
   2. To ascertain the sales volume necessary for the company’s achieve profit.
   3. To know the fluctuation of profit volume ratio.

B. WORKING CAPITAL MANAGEMENT
   1. To understand the Working capital management of the company and to study the liquidity position of the firm.
   2. To calculate last three years Working capital and to know the impact of various assets and liabilities financial performance of the company.

C. RATIO ANALYSIS
   1. To help the management in its planning and forecasting activities.
   2. To evaluate operational efficiency, liquidity and solvency of the company.
   3. To compare the previous and present year performance of the company.

“Financial analysis” of BDK Engineering Industries LTD

Methodologies:
This is an analytical study based on time series data of past years, which is collected from BDK Engineering Industries Ltd’s annual reports, Books and Internet. In addition to this primary data required is collected from the officials through interaction and personal discussion.

I. Primary Data:
Through personal interaction with office staff and external guide the required primary data has been collected.

II. Secondary Data:

The required secondary data has been collected from annual reports of the company, books, Internet and from company’s web site manuals.

**Analysis and Interpretation**

**CALCULATION OF COST VOLUME PROFIT ANALYSIS OR BEP INDIFFERENCE POINT:**

**Introduction**

As the term itself indicates the cost volume profit analysis is the analysis variable that is cost, volume and profit. In CVP analysis an attempt is made to measure the variations of cost and profit with volume. Profit as a variable is the reflection of a number of internal and external conditions which exert influence on sales revenue and costs.

The cost volume profit analysis helps or assists the management in profit planning. In order to increase the profit, a concern must increase the output, when the output at maximum with in the installed capacity, it adds the contribution.

In the other words of heiser ,” the most significant factor is profit planning of profit.” When volume of output increases, unit cost of output decreases, and vice versa; because the fixed cost remains unaffected .When the output increases, the fixed cost per unit decreases. Therefore, profit will be more, when sales price remains constant. Generally, costs may not change direct proportion to the volume. Thus, a small change in the volume will affect the profit. Cost volume profit analysis shows the relationship among the various ingredients of profit planning, namely unit sales price, variable cost, sales volume, sales mix and fixed cost.

**Essential of cost volume profit analysis:**

- Changes in the level of revenues and costs arise only because of changes in the number of product (or service) units produced and sold.
Total costs can be divided into a fixed component and a component that is variable with respect to the level of output.

The analysis either covers a single product or assumes that the sales mix when multiple products are sold will remain constant as the level of total units sold change.

All revenues and costs can be added and compared without taking into account the time value of money.

The unit selling price, unit variable costs and fixed costs are known and constant.

Marginal Income Statement:
In this analysis the margin income statement of BDK engineering industries ltd studied. It contains information regarding sales, variable cost, contribution, fixed cost and profit.

Table-1 Shows marginal income statement of BDK values

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>358091645</td>
<td>787382888</td>
<td>1389683708</td>
</tr>
<tr>
<td>Less: Variable Cost</td>
<td>9729881</td>
<td>22969737</td>
<td>43881928</td>
</tr>
<tr>
<td>Contribution</td>
<td>348361759</td>
<td>764413151</td>
<td>1345801780</td>
</tr>
<tr>
<td>Less: Fixed Cost</td>
<td>308322937</td>
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<td>1229655878</td>
</tr>
<tr>
<td>EBIT</td>
<td>40038822</td>
<td>147758592</td>
<td>116145902</td>
</tr>
<tr>
<td>Less: Interest</td>
<td></td>
<td>10165450</td>
<td>21940243</td>
</tr>
<tr>
<td>EBT</td>
<td>40038822</td>
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<td>138086145</td>
</tr>
<tr>
<td>Less: Provision Tax</td>
<td>14615417</td>
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<tr>
<td>Net Profit</td>
<td>25423405</td>
<td>86422198</td>
<td>94872806</td>
</tr>
</tbody>
</table>

Interpretation
In the year 2006 the EBIT is 400 lack and interest is nil and in the year 2007&2008 that is 1477 & 1161 lacks.

Profit Volume Ratio
Profit volume ratio is popularly known as p/v ratio. It expresses the relationship between the contributions to sales. The ratio, expressed as a percentage, indicated the relative profitability of different products.

The profit of a business can be improved by improving the p/v ratio. A higher ratio shows a greater profitability and vice versa. To improve the p/v ratio following are to be adapted.

- By increasing sales price per unit
- By decreasing variable cost
- By increasing the production of products which is having a high p/v ratio and vice versa.

Profit volume ratio can be calculated using following formula:

$$\text{Profit volume ratio} = \frac{\text{contribution}}{\text{sales}} \times 100$$

<table>
<thead>
<tr>
<th>Year</th>
<th>Contribution</th>
<th>Sales</th>
<th>P/V Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>348361759</td>
<td>358091645</td>
<td>97.28285032</td>
</tr>
<tr>
<td>2007</td>
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<tr>
<td>2008</td>
<td>1345801780</td>
<td>1389683708</td>
<td>96.84230824</td>
</tr>
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</table>

Interpretation

In the year 2006 & 2007 p/v ratio is 97% there is no much difference and in the year 2008 that is decreased to 96%.

**Break Even Sales**

Break even analysis is also known as cost volume profit analysis. The analysis is a tool of financial analysis where by the impact on profit of the changes in the volume, price, costs and mix can be estimated with reasonable accuracy.

Break even point is a point where the total sales are equal to total cost. In this point there is no profit or loss in the volume of sales.
A break even analysis is concerned with the study of revenues and costs in relation to sales volume and particularly, the determination of that volume of sales at which the firm’s revenue and total cost will be exactly equal. Thus break even point may be defined as point at which the firm’s total revenue is exactly equal to total cost, yielding zero income. The “no profit, no loss” point is a break even point or a point at which loss ceases and profit begins.

Assumption of break even analysis

- All costs can be segregated into fixed cost and variable components.
- Variable cost per unit remains constant and total variable cost changes in direct proportion to the volume of production.
- Selling price doesn’t change as volume changes.
- Cost and revenue are influenced only by volume.
- Stocks are valued at marginal cost.

The formula to calculate break even point is:

\[
\text{B.E. Sales} = \frac{\text{Fixed cost}}{\text{P.V ratio}} \times 100
\]

Table-3

<table>
<thead>
<tr>
<th>Year</th>
<th>Fixed Cost</th>
<th>P/V Ratio</th>
<th>B.E.Sales</th>
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</thead>
<tbody>
<tr>
<td>2006</td>
<td>308322937</td>
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Interpretation
In the year 2006 & 2007 BES was 3169 lacks and 6351 lacks, and in the year 2008 that is 12697 lacks.

**Margin of Safety**

Margin of safety means total sales minus break even sales at break even point. In other words, sales over and above break even sales are known as margin of safety. Higher the margin of safety indicates the soundness of the business. Small margin of safety indicates the weak position of the business because a small decrease in the sales and production leads to less profit of the business.

When the marginal of safety is not satisfactory, the following steps may be taken to improve it:

- Increase the volume of sales
- Increase the selling price
- Reduce fixed cost
- Reduce variable cost.

```
Margin of Safety = Actual Sales – Break Even Sales
```

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<th>M.O.S.</th>
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**Interpretation**

In the year 2006 & 2007 MOS was 411 and 1521 lacks, and in the year 2008 that is 1199 lacks. In the year 2007 that is showing high.
WORKING CAPITAL MANAGEMENT

Introduction:

It is well known that the total capital employed comprises of fixed capital and working capital. The larger the working capital required the smaller would be the return on total capital employed. The capital structure is divided into two types,

- Fund invested or sunk in fixed assets.
- Floating investment as current assets or current capital or working capital.

Working capital:

The two vital aspects of business life are liquidity and profitability. If liquidity is not there means there cannot be any profitability. That is why the working capital management is as vital as profit planning and is an integral part of planning business. The quantum of working capital fund reflects the solvency of the business.

Meaning of Working Capital:

In simple words working capital is the amount of fund required to finance the day-to-day activities operation of a business.
In accounting terminology the term Working capital will conceive current inflow of funds and outflow of funds. The balancing figure of inflow and outflow is the working capital.

Technically working capital may be defined as the excess of current assets over current liabilities.

**Current Assets:**

Current Assets are those assets that can be converted into cash in a shorter period that is within one year. Current assets include cash, cash at bank, marketable securities, bills receivable, sundry debtors, stock and prepaid expenses.

**Current Liabilities:**

Current Liabilities are those liabilities that need to be paid within a short period that is within one year. Current liabilities include creditors, bills payable, accrued expenses, bank overdraft, income tax liability and long term loans due for payment in current year.

**Concept of Working Capital:**

There are two concepts regarding the working capital:

1. Gross Working capital
2. Net working capital

1) **Gross Working Capital:**

Gross Working Capital refers to the firm’s investment in current assets. Gross Working Capital indicates the quantum of working capital in total assets with which the business has to operate.

2) **Net Working Capital:**

Net Working Capital refers to the difference between current assets and liabilities. It indicates liquidity position of the firm.
A firm should maintain a sound working capital position. It should have adequate working capital to run its business operation. Both excessive as well as inadequate working capital position are dangerous from the firm’s point of view.

Excessive working capital means ideal fund, which earns no profit for the firm. It results in unnecessary accumulation of inventories or it is an indication of defective credit policy and slack collection period. Limited Working Capital not only impairs firm’s profitability but also results in production interruption and inefficiency. Inadequate working capital stagnates growth. It is difficult for the firm to achieve the firm’s profit target. The firm may lose its reputation.

In Karnataka Conveyors & Systems Pvt. Ltd an enlightened management is maintaining a right amount of working capital on a continuous basis. It has adequate working capital to run its business activities.

**Advantages of Adequate Working Capital:**

Adequacy of working capital is a source of strength and stability to the enterprise. This is because the day to day working of the enterprise is facilitated by the adequate working capital. The following are the advantages of having adequate working capital.

- Adequacy of working capital is must for maintaining solvency and continuing production.
- Adequacy of working capital creates a feeling of security and confidence.
- It helps in creation of sound goodwill
- Easy availability of cash discount
- Steady work for the employees and efficiency in production
- Easy loan from bank
- Period of slump can be easily overcome
Facility of off season purchasing
Quick and steady return to the investors
Better market operations
General rise in management morale

Disadvantages of having adequate working capital:

The business can not earn a fair return on its investment, because excess working capital does not earn anything for the business, where as the profits are distributed on the whole of its capital, thus bringing down the rate of return to the shareholders.

Excess capital may prompt the management to purchase unnecessary assets, inventories and to carry experimental plans, which may not earn any profit to the concern resulting in waste of resources.

A concern with surplus working capital shows a sign of poor grade management.

Firms having adequate working capital may not develop useful links with banking under takings, whose assistance is inevitable in time of need and urgency.

Factors determining working capital requirements:

A firm should plan its operations with adequate working capital suiting to the needs of the nature of the enterprise. A number of factors are to be considered while deciding the working capital. Some of factors are discussed below.

1. Nature of the business:

The working capital requirement largely depends on nature of the business. Some enterprises fall into some board categories depending on the nature of their business. Public utilities under takings, industrial goods manufacturing units etc, have to invest more in fixed assets. Hence they require lesser proportion of working capital. Firms, which provide service rather than commodities, do not maintain big inventories.
and therefore they require less working capital. Trading and financial companies have to maintain large amount of cash, inventories etc therefore they require less working capital. Industrial concerns require very large amount of working capital depending upon the nature of the product.

2. Production cycle:

Production cycle means the time involved in manufacturing of goods. It covers the time span between the procurement of raw materials and the completion of production of finished goods. The longer the production cycle larger will be the tied up funds requiring larger working capital. Shorter is the production cycle lesser is the working capital needed. For example distilleries require higher working capital while bakeries require lesser working capital.

3. Business Cycle:

Business fluctuation leads to seasonal changes causing a shift in the working capital requirements. The variation may be in two directions

- Upward phase when boon condition prevails
- Downward phase when the market declines.

During the upward phase of business activity, the need for working capital is likely to grow to cover the lag between increased sale and receipt of cash as well as to finance purchases of additional materials to cater to the expansion of the level of activity. During the down swing phase of the business the cycle has exactly an opposite effect on the level of working capital requirement. The decline in the economy is associated with a fall in the volume of sales, which in turn leads to a fall in the level of inventories and book debts.

4. Production Policy:

The amount of working capital is also determined by production policy. Depending upon the market demand, competition and profitability firms change their quantum of production periodically.
When they decide to produce more at the higher margin the working capital requirement will be more and vice-versa.

5. Credit Policy:

The credit policy relating to sales and purchase affect the working capital. If the firm gets the required raw materials on credit basis from the suppliers, then the working capital requirements will be less. When the firm sells the finished goods on credit basis, then the working capital required will be high.

6. Growth And Expansion:

As a company grows the working capital requirement also increases. This increase in working capital depends on the economic conditions in the market and corporate practices. Advance planning of working capital in a growing firm is essential to keep the business running.

7. Availability Of Raw Materials:

Some raw materials may not be available to cope-up with the production demands. This may be due to the availability of these raw materials in particular season etc. so the firms who need to produce through out the year on continuous bases need to buy such raw materials far in excess of their day-to-day production. This increases the inventory of raw materials at a particular period. This stock will be used during the subsequent lean season when the raw materials are not available. This requires large working capital.

8. Profit Level:

Higher profit margin makes it possible to generate more funds for the working capital. Under such condition planning needs to be done to deal with this surplus working capital this is normally used to expand the business or to go for diversification.
9. Level Of Taxes:

   The amount of tax paid by a firm is predicted on the working capital of the company in the preceding year. Tax payment is a short term liability to be paid in cash. Higher the requirement of tax payment higher is the working capital.

10. Dividend Policy:

   A company will have to pay dividend to its shareholders. This requires liquid cash to make the payment. Accordingly, higher the need for payment of dividend higher is the requirement of working capital.

11. Depreciation Policy:

   Depreciation policy also exerts an influence on the quantum of working capital. Depreciation changes do not involve any cash outflows. The effect of depreciation policy on working capital is, therefore, indirect. Depreciation is allowable expenditure in calculating net profits. An enhanced rate of depreciation lowers the profits and therefore, the tax liability and, thus, more cash profits.

   Higher depreciation also means lower disposable profits and, therefore a smaller dividend payment. Thus cash is preserved. In the second case, the selection of the method of depreciation has an important financial implication. If the current capital expenditure falls short of the depreciation provisions, then the working capital provision is strengthened and there may be no need for short term borrowing. If the current capital expenditure exceeds the depreciation provision, either outside borrowing will have to be resorted to or a restriction on dividend payment coupled with retention of profits will have to be adopted to prevent the working capital position from being adversely affected. It is in these ways that depreciation policy is relevant to the planning of the working capital.

12. Banking Connections:
If the company has good banking connection and bank credit facilities, it may have minimum margin of regular working capital. But in the absence of the availability of bank finance, it should have relatively large amount of working capital.

13. Price level changes:

Change in the price level also affects the requirement of working capital. Rising prices necessitate the use of more funds for maintaining an existing level of activity. For the same level of current assets, higher cash outlays are required. The effect of rising prices is that higher amount of working capital is needed. However, in the case of companies which can raise their prices proportionately, there is no serious problem regarding working capital. The price rise does not have a uniform effect on all commodities. Some firms may not be affected at all. The implication of changing price levels on working capital position vary from company to company depending on the nature of its operations, its standing in the market and other relevant considerations.

14. Operating Efficiency:

The operating efficiency of the management is also an important determinant of the level of working capital. The management can contribute to a sound working capital position through operating efficiency. Management cannot control the rise in price; it can ensure the efficient utilization of resources by eliminating waste, improving coordination and a fuller utilization of existing resources. Efficiency of operations accelerates the pace of cash cycles and improves the working capital turnover. It releases the pressure on working capital by improving profitability and improving the internal generation of funds.

The level of working capital is determined by a wide variety of factors which are partly internal to the firm and partly external to it. Efficient working capital management requires efficient planning and a constant review of the needs for an appropriate working capital strategy.

**Principles of working capital management:**
The following are the Principles of working capital management:

- Requisite amount of the working capital should be raised at minimum cost.
- Excess of debts and receivables should be avoided.
- Excessive establishment expenses should be eliminated.
- Necessary inventories should be purchased at competitive rates.
- Suitable credit collection policy should be followed to minimize the problem of collections.
- Economy in the use of inventories and quick turnover of finished goods should be planned.

Management of working capital assets:

The following are the ways how the firms should manage its individual current assets:

1. **Management of cash balance**:

   Cash is the most important current assets for the operations of business. It is the basic input needed to keep the business running on a continuous basis. It is also the ultimate output expected to be realized by the firm. It means every activity in an enterprise revolves around the cash. Therefore it is the duty of the finance manager to provide adequate cash to all the activities of the organization. He has to ensure that no funds are blocked in idle cash, since this will involve cost in terms of interest to the business. Available cash must be managed properly. Therefore the aim of the cash management is to maintain a sound cash position to keep the firm sufficiently liquid and to use the excessive cash if any in some profitable way.

2. **Management of account receivables**:

   Receivables refer to the debts that are the accounts receivable by a firm from its customers for the goods and service provided on credit. In other words, they are the amounts outstanding in trade debtors and bills receivable. Thus receivables represent the
claims of a firm against its customers and are carried to the assets side of the balance sheet under titles such as accounts receivables, trade receivables, customer receivables or book debts.

3. Management of inventory:

   Inventory refers to the stock that a business firm keeps to meet its future requirements of production and sales. The different from on inventories exist are:
   - Stock of raw materials to be consumed in the process of production.
   - Work in progress inventories that are required for moving work before they are ready for sale.
   - Finished goods inventories are those, which are completely manufactured products and are ready for sale.
   - Stores and spare parts held for consumption by machines eg spare parts lubricants, cleaning materials, oil, cotton waste etc.

In B.D.K. ENGG the officials always try to have large stocks of inventories to facilitate production and marketing of product. So they require large amount of investment. Following are objectives of B.D.K. ENGG regarding the inventory management:
   - To provide the right quantity and quality of inventories required by the firm at proper time.
   - To prevent or minimize loss due to obsolescence, deterioration, theft etc.
   - To ensure effective utilization of storage capacity or space.
   - To have effective control over purchase, storage and use of materials.

Bank Finance for Working Capital:

   Banks are the main institutional sources of working capital finance in India. After trade credit, bank finance is the most important source of financing working capital requirements of the firm in India. A bank considers a firm’s sales and production plans
and desirable levels of current assets in determining its working capital requirements. The amount approved by the firm’s working capital is called credit limit. Credit limit is the maximum funds, which a firm can obtain from banking system. A firm can draw funds from its bank within the maximum limit sanctioned. It can draw funds in the following forms:

1. **Overdraft:**

   Under the overdraft facility, the borrower is allowed to withdraw funds in excess of the balance in his account up to a certain specified limit during a stipulated period. Though overdrawn amount is repayable on demand, they generally continue for a long period by annual renewals of the limits. It is very flexible arrangement from the borrower’s point of view since he can withdraw and repay whenever he desires within the overall stipulations.

   Interest is charged on daily balances that are on the amount actually withdrawn, subjected to minimum charges. The borrower operates the account through cheques.

2. **Cash Credit:**

   The cash credit facility is similar to the overdraft arrangement. It is the most popular method of bank finance for working capital in India. Under the cash facility, a borrower is allowed to withdraw funds from the bank up to the sanctioned credit limit. He is not required to borrow the entire sanctioned credit at once, rather, he can draw it periodically to the extent of his requirements and repay by depositing surplus funds in his cash credit account.

   Interest is payable on the amount actually utilized by the borrower. Cash credit limits are sanctioned against the security of current assets. Though funds borrowed are repayable on demand, Banks usually do not recall such advances unless they are compelled by adverse circumstances. Cash credit is a most flexible arrangement from the borrower’s point of view.

3. **Purchasing or discounting of bills:**

   Under the purchase or discounting of bills, a borrower can obtain credit from a bank against its bills. The bank purchases or discounts the borrower’s bills. The
amount provided under this agreement is covered within the overall cash credit or overdraft limit.

Before purchasing or discounting the bills, the bank satisfies itself as to the credit worthiness of the drawer. Though the term “bills purchased” means that the bank becomes owner of the bills, the bank holds the bills as security for the credit. When a bill is discounted, the borrower is paid the discounted amount of the bill and the bank collects the full amount at maturity.

4. Letter of credit:

Suppliers, particularly the foreign suppliers, insist that the buyer should ensure that his bank would make the payment if he fails to pay the amount. This is ensured though a letter of credit (L/C) arrangement. A bank opens an L/C in favour of a customer to facilitate his purchase of goods. If the customer does not pay the supplier within the specified credit period, then the bank makes the payment under the L/C arrangement. This arrangement passes the risk of the supplier to the bank. Bank charges the customer for opening the L/C. the bank will provide this facility to only financially sound customers.

5. Working Capital Loan:

A borrower may sometimes require ad-hoc or temporary accommodation in excess of sanctioned credit limit to meet unforeseen contingencies. Bank provides such accommodation through a demand loan account or a separate “non-operable” cash credit account. The borrower is required to pay a higher rate of interest above the normal rate of interest on such additional credit.

6. Commercial Paper:

Commercial paper is an important money market instrument in advanced countries like USA to raise short-term funds. In India RBI introduced the commercial paper in 1989. the buyers of commercial papers includes banks, insurance companies, unit trusts and firms with surplus funds to invest for a short
period with minimum risk. There is demand only for highly credit worthy companies.

7. Factoring:

It is a method by which a business can obtain cash for invoices he sends to his customers in respect of supply of goods and services rendered to them. Factoring is also called as “Invoice Discounting”. The financial institution which undertakes factoring is called a “Factor” while the business firm which gets finance from the factor is called a “Client”.

8. Ploughing Back Profit:

Ploughing back profit is the most suitable source of financing for an existing and well-established company. A well-established enterprise can set aside a portion of its earning for reinvesting in the business. When a company retains a part of its profit in the form of free reserve and utilizes this amount for future expansion, it is called as Ploughing Back Profit.

9. Public Deposits:

Acceptance of deposits from public is yet another method of financing the business enterprise. Many industrial and commercial establishments seek to raise part of their requirement in the form of deposits from the public. Deposits are accepted for periods of ranging from 6 months to 5 years. Interest is paid to the depositors by the deposited companies on the sums deposited, depending on the terms of deposits.

B.D.K. ENGG gets finance for working capital in the following forms i.e. overdraft, cash credit, letter of credit, working capital loan and ploughing back profit.

WORKING CAPITAL REQUIREMENT AS ON THE YEAR ENDING 2005-2006
Table-1

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**Interpretation:**
The above drawn table describes that total required working capital for the year 2005-2006. The total value of the current assets is Rs. 1507.40 lakh and the current liabilities Rs.708.64 lakh. And finally net working capital is Rs. 798.76 lakh.

**WORKING CAPITAL REQUIREMENT AS ON THE YEAR ENDING 2006-2007**

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443731685
Interpretation:
The above drawn table describes that total required working capital for the year 2006-2007. The total value of the current assets is Rs. 4437.32 lakh and the current liabilities Rs. 3019.33 lakh. And finally net working capital is Rs. 1417.99 lakh.

WORKING CAPITAL REQUIREMENT AS ON THE YEAR ENDING 2007-2008

Table-3

statement of working capital 0n 2008

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Interpretation:
The above drawn table describes that total required working capital for the year 2005-2006. The total value of the current assets is Rs. 6989.52 lakh and the current liabilities Rs. 4396.68 lakh. And finally net working capital is Rs. 2592.84 lakh.
RATIO ANALYSIS

The information given in the basic financial statement serves no useful purpose unless it is interpreted and analyzed in some comparable terms. Various tools are employed in analyzing the financial information contained in these financial statements, the ratio analysis is one of the most powerful tools of financial analysis.

Meaning and definition of Ratio analysis

Ratio analysis is a process of determining and interpreting numerical relationship of different items of financial statements. It provides a yardstick to measure the relationship between variables or figures. The relationship can be expressed as percent or a quotient.

Standards of Comparison

The ratio analysis involves comparison for a useful interpretation of the financial statement. A single ratio in itself does not indicate favorable or unfavorable conditions. It should be compared with some standards. Standards of comparison consist of:

1. Ratio calculated from the post financial statement of the same firm. Usually the past ratios are used as standards of comparison to evaluate the performance of the firm by comparing the present ratios with the past ratios. It gives an indication of direction of change and reflects whether the firm’s financial position and performance has improved or deteriorated or remained constant over the period of time.

2. Ratios developed using the projected or perform a financial statement of the same firm.

3. The ratios of the firm may be also compared with the ratios of some progressive competitive firm to know the relative financial position and performance of the firm.

4. The ratios may also be compared with the average ratios of the industry to which the firm is a member to determine its place in the total performance of the industry.
Significance or Importance of Ratio Analysis

1. **It helps in evaluating the firms performance:**

   With the help of ratio analysis conclusion can be drawn regarding several aspects such as financial health, profitability and operational efficiency of the undertaking. Ratios pinpoint the operating efficiency of the firm i.e. whether the management has utilized that the firm’s asset correctly, to increase the investor’s wealth. It ensures a fair return to its owners and secures optimum utilization of firm’s assets.

2. **It helps in inter-firm comparison:**

   Ratio analysis helps in inter-firm comparison, by providing necessary data. Inter firm comparison indicates the firm’s relative position. It provides the relevant data for the comparison of the performance of different departments. If comparison shows a variance, the possible reasons of variations may be identified and if results are negative, the corrective action may be initiated immediately to bring them in line.

3. **It simplifies financial statements:**

   The information given in the basic financial statement serves no useful purpose unless it is interpreted and analyzed in some comparable terms. The ratio analysis is one of the tools in the hands of those who want to know something more from the financial statements in simplified manner.

4. **It helps in determining the financial position of the concern:**

   Ratio analysis facilitates the management to know whether the firm’s financial position is improving or deteriorating or is constant over the years by setting a trend with the help of ratios. The analyst with the help of ratio analysis can know the direction or the trend of strategic ratio may help the management in the task of planning, forecasting and controlling.

5. **Helpful in budgeting and forecasting:**

   Accounting ratios provide a reasonable data, which can be compared, studied and analyzed. These ratios provide sound footing for future prospects. The ratios can also serve as a basis for preparing budgeting and also determining future lines of action.
6. Liquidity position:

With help of ratio analysis conclusions can be drawn regarding the liquidity position of a firm. The liquidity position of a firm would be satisfactory if it is able to meet its current obligation when they become due. The ability to meet short-term liabilities is reflected in the liquidity ratio of a firm.

7. Long term Solvency:

Ratio analysis is equally useful for assessing the long term financial ability of the firm. The long term solvency is measured by the leverage/capital structure and profitability ratio, which shows the earning power and operating efficiency. Solvency ratio shows relationship between total liability and total assets.

8. Operating Efficiency:

Yet another dimension of usefulness or ratio analysis, relevant from the viewpoint of management is that it throws light on the degree efficiency in the management and utilization of its assets; the various activity ratios measures this kind of operational efficiency.

Classification of Ratios

Different ratios are used for different purpose these ratios can be grouped in to various classes according to the financial activity or function to be evaluated. We may classify different ratios into following 5 broad categories.

A. Liquidity Ratio
B. Capital Structure Ratio
C. Turn over ratio
D. Coverage Ratio
E. Profitability Ratio
A. **Liquidity Ratio**

It measures the firm’s ability to meet its current obligations i.e. ability to pay its obligations and when they become due. Commonly used liquidity ratios are,

1. **Current ratio**

Current ratio is a ratio, which express relationship between current assets and current liabilities. It is calculated by dividing current assets and current liabilities.

\[
\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

<table>
<thead>
<tr>
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<th>Current liabilities</th>
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<td>1.86</td>
</tr>
<tr>
<td>2006-2007</td>
<td>443731685</td>
<td>285747225</td>
<td>1.55283187</td>
</tr>
<tr>
<td>2007-2008</td>
<td>698952122</td>
<td>402796522</td>
<td>1.73524865</td>
</tr>
</tbody>
</table>

**Interpretation:**

In a sound business a current ratio of 2:1 is considered as ideal one. If current ratio is lower than 2:1 the short term solvency of the firm is considered doubtful and it shows that the firm is not in a position to meet its current liabilities.

From the above calculations it shows that the company has maintained sufficient current assets to meet the current liabilities.

<table>
<thead>
<tr>
<th>Changes in current assets and current liabilities:</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of increase in current asset</td>
<td>70.375948</td>
<td>75.279906</td>
</tr>
<tr>
<td>% of increase in current liabilities</td>
<td>36.514724</td>
<td>29.059163</td>
</tr>
</tbody>
</table>

2. **Acid Test Ratio**
It is a ratio, which establishes relationship between quick or liquid assets and current liabilities.

**Acid Test Ratio**

\[
\text{Acid Test Ratio} = \frac{\text{Quick Assets}}{\text{Current liabilities}}
\]

**Table-2**

<table>
<thead>
<tr>
<th>Year</th>
<th>Quick assets</th>
<th>Current liabilities</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>106911447</td>
<td>70636983</td>
<td>1.5135336</td>
</tr>
<tr>
<td>2006-2007</td>
<td>383176585</td>
<td>285747225</td>
<td>1.34096345</td>
</tr>
<tr>
<td>2007-2008</td>
<td>543156711</td>
<td>402796522</td>
<td>1.34846425</td>
</tr>
</tbody>
</table>

**Interpretation**

Generally quick ratio 1:1 is considered as ideal and represents a satisfactory financial position. A low quick ratio may be not a good liquid position.

The above calculated ratio shows that the company has maintained sufficient liquid assets even though the ratio has decreased in 2007-08 while compared to previous year.

<table>
<thead>
<tr>
<th>Year</th>
<th>% of increase in quick assets</th>
<th>% of increase in current liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>72.098648</td>
<td>75.279906</td>
</tr>
<tr>
<td>2008</td>
<td>29.45377</td>
<td>29.059163</td>
</tr>
</tbody>
</table>

**B. Leverage or Capital Structure Ratio:**

Leverage or Capital Structure Ratio is the ratios, which indicate the relative interest of the owners and the creditors in an enterprise. These ratios indicate the funds provided by the long term creditors and owners.

**1. Debt-Equity Ratio**

Debt Equity Ratio is the ratio which expresses the relationship between Debt and Equity. The debt equity ratio is the measure of relative claims of creditors and owners against firm’s asset.

\[
\text{Debt Equity Ratio} = \frac{\text{Long term debts}}{\text{Shareholder’s equity}}
\]

**Table-3**
Interpretation
The debt equity ratio is calculated to show the extent to which the debt financing has been used in the business. A high ratio shows that the claim of creditor is greater than that of owner. A high ratio is unfavorable to a company. A low debt equity ratio is considered favorable from management point of view.

The above ratio indicates that the in year 2005-06 is high which is unfavorable from the firm’s point of view. It has declined drastically in the year 2006-07 and in the year 2007-08 which is also favorable to firm.

<table>
<thead>
<tr>
<th>Year</th>
<th>Long term debts</th>
<th>Shareholder’s equity</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>28459782</td>
<td>6608624</td>
<td>4.30646107</td>
</tr>
<tr>
<td>2006-2007</td>
<td>147579182</td>
<td>252484522</td>
<td>0.58450784</td>
</tr>
<tr>
<td>2007-2008</td>
<td>147294142</td>
<td>392472837</td>
<td>0.37529767</td>
</tr>
</tbody>
</table>

C. Activity Ratio
Activity ratio are sometimes are called efficiency ratios. Activity ratios are concerned with how efficiently the assets of the firm are managed.

These ratios express relationship between the level of sales and the investment in various assets: inventories, receivables, fixed assets etc.

The important activity ratios are
1. Inventory Turnover Ratio
2. Debtors turnover Ratio
3. Collection Period Ratio
4. Working capital turnover ratio
1. Inventory turnover ratio=

I) Inventory Turnover Ratio (Finished goods):

Formula: Cost of goods sold / Average inventory

Average inventory = opening stock + closing stock / 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost of goods sold (in Lakhs)</th>
<th>Avg inventory (in Lakhs)</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2007</td>
<td>607,316,222</td>
<td>42,547,480</td>
<td>14.27</td>
</tr>
<tr>
<td>2007-2008</td>
<td>1,141,532,397</td>
<td>108,175,255</td>
<td>10.55</td>
</tr>
</tbody>
</table>

Interpretation
The highest the turnover the better is the performance of the company. A low ratio may indicate a slow moving inventory.
This ratio shows that in 2006, 16 times and in 2007, 14 times which is almost times shows efficient inventory management.

II) Raw Material Turnover Ratio:

Formula: Material consumed / Average raw material consumed

Average raw material consumed = opening R/m + closing R/m / 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Material consumed (in Lakhs)</th>
<th>Avg raw material consumed (in Lakhs)</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>273,264,169</td>
<td>3,802,902</td>
<td>71.85</td>
</tr>
<tr>
<td>2006-2007</td>
<td>560,163,674</td>
<td>12,580,681</td>
<td>44.52</td>
</tr>
</tbody>
</table>
III) Work-In-Progress Turnover Ratio:

Formula: Cost of production / Average work-in-progress

Average work-in-progress = opening w-i-p + closing w-i-p / 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost of production (in Lakhs)</th>
<th>Avg work-in-progress (in Lakhs)</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>332,235,007</td>
<td>10,911,864</td>
<td>30.44</td>
</tr>
<tr>
<td>2006-2007</td>
<td>606,533,978</td>
<td>20,493,340</td>
<td>29.59</td>
</tr>
<tr>
<td>2007-2008</td>
<td>1,140,587,423</td>
<td>49,898,664</td>
<td>22.85</td>
</tr>
</tbody>
</table>

2. Receivables turnover ratio or Debtors turnover ratio

This ratio shows how quickly debtors are converted into cash. It indicates the relationship between sales and debtors of a firm.

Debtors Turnover ratio = Total sales / Debtors

Table-5

<table>
<thead>
<tr>
<th>Year</th>
<th>Total sales</th>
<th>Debtors</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>354737781</td>
<td>66222758</td>
<td>5.35673523</td>
</tr>
<tr>
<td>2006-2007</td>
<td>781491478</td>
<td>233627031</td>
<td>3.34503878</td>
</tr>
<tr>
<td>2007-2008</td>
<td>1382235743</td>
<td>329593565</td>
<td>4.19375828</td>
</tr>
</tbody>
</table>

Interpretation

The higher the turnover the better will be the credit management. The above calculation shows that in 2007 and 2008 the debtor’s turnover was less which is 3 times & 4 times. And in 2006 the debtor’s turnover is 5 times which shows good management.

3. Average collection period ratio

This ratio indicates the speed with which inventory is converted into cash.
Average collection period = Days in a year
Debtor’s turnover

Table-6

<table>
<thead>
<tr>
<th>Year</th>
<th>Days in a year</th>
<th>Debtor’s turnover</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>365</td>
<td>5.35673523</td>
<td>68.138518</td>
</tr>
<tr>
<td>2006-2007</td>
<td>365</td>
<td>3.34503878</td>
<td>109.116822</td>
</tr>
<tr>
<td>2007-2008</td>
<td>365</td>
<td>4.19375828</td>
<td>87.0341054</td>
</tr>
</tbody>
</table>

Interpretation
The shorter the average collection period the better the trade credit management and liquidity of debtors.
Collection period in 2007 is 109 and in 2008 it is 87 days which shows the collection period given is more. But the year 2006 it is 68 days which is moderate.

4. Working capital turnover ratio
This ratio shows the number of times the working capital turns in trading transaction. If it has an increasing trend over the previous year it shows that the working capital is being used efficiently. There is no ideal standard working capital turnover ratio.

Working capital turnover ratio = \( \frac{\text{Net sales}}{\text{Net working capital}} \)

Table-7

<table>
<thead>
<tr>
<th>Year</th>
<th>Net sales</th>
<th>Net working capital</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>354737781</td>
<td>79876155</td>
<td>4.44109736</td>
</tr>
<tr>
<td>2006-2007</td>
<td>781491478</td>
<td>141798750</td>
<td>5.51127198</td>
</tr>
<tr>
<td>2007-2008</td>
<td>1382235743</td>
<td>259283885</td>
<td>5.33097436</td>
</tr>
</tbody>
</table>

Interpretation
The higher the turnover shows efficient use of working capital. In 2006 the turnover was 4 times. But in 2007 and 2008 the working capital turnover is 5 and 5 times. It shows that working capital is used efficiently.

C. Coverage ratio:
These Ratios show whether the firm earns sufficient profits to service its debts and other liabilities.

1. **Interest coverage ratio:**

   It is also known as “Time-interest-earned ratio”. These ratio measures, the debt servicing capacity of the firm in so far as fixed interest on long term loans is concerned.

   \[
   \text{Interest Coverage} = \frac{\text{EBIT}}{\text{Interest}}
   \]

   **Table-8**

<table>
<thead>
<tr>
<th>Year</th>
<th>EBIT</th>
<th>Interest</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>40040</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2006-2007</td>
<td>147758592</td>
<td>10165450</td>
<td>14.5353715</td>
</tr>
<tr>
<td>2007-2008</td>
<td>160026388</td>
<td>21940143</td>
<td>7.29377142</td>
</tr>
</tbody>
</table>

   **Interpretation**

   The ratio suggests how many times the interest changes are covered by the EBIT. A high ratio is a sigh of low burden of debt servicing and lower utilization of borrowing capacity. From the creditors point of view, the larger the coverage, the greater the ability of the firm to handle fixed changes.

   Liabilities are the more assured payment of interest to the creditors. In contrast a low ratio signifies the danger signal that the firm is highly dependent on borrowing and its earning cannot meet obligations fully. The standard for this ratio for an industrial undertaking is six to seven times.

   From this above calculated figures shows that in 2005-06 the interest is nil and in 2007 it is 14.5, in 2008 which shows the coverage has increased to 7 which shows that it is improving and trying to cut down the debt servicing.

   **D. Profitability ratio**

   Profitability ratio are the best indicators of overall efficiency of the business concern, because they compare return of value over and above the value put into a business with sale or service carried on by the firm with the help of assets employed. Profitability ratio can be determined on the basis of either:

   - Sales
   - Investment

   **1. Profitability ratios as related to sale,**

   The profitability ratios in relation to sales are:
a. Gross Profit to sales ratio

The gross profit to sales ratio establishes relationship between gross profit and sales to measure the relative operating efficiency of the firm to reflect pricing policy.

Gross profit margin = \( \frac{Sales - cost\ of\ goods\ sold}{Sales} \) x 100

Table-9

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross profit</th>
<th>Sales</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>40365000</td>
<td>354737781</td>
<td>11.3788275</td>
</tr>
<tr>
<td>2006-2007</td>
<td>158833000</td>
<td>781491478</td>
<td>20.3243419</td>
</tr>
<tr>
<td>2007-2008</td>
<td>189997000</td>
<td>1382235743</td>
<td>13.7456292</td>
</tr>
</tbody>
</table>

Interpretation

A high ratio is an indication of good management or a higher selling price of the product or low cost of production. A relatively low margin is certainly a danger signal.

The ratio indicates that the gross profit margin with the low in 2006 and 2008 which were and increased in 2007 which indicates good management.

b. Net Profit to sales ratio or net profit margin

The net profit margin indicates the management’s ability to earn sufficient profit on sales not only to cover all revenue operating expenses of the business, the cost of borrowed funds and the cost of goods or servicing, but also to have a sufficient margin to pay reasonable comparison to share holders on their contribution to the firm.

Net profit margin = \( \frac{Net\ profit\ after\ interest\ and\ tax}{Sales} \) x100

Table-10
Interpretation
A high ratio is an indication of the higher overall efficiency of the business and better utilization of resources. A low ratio on the contrary would mean a poor financial planning and low efficiency.

The above calculated ratio shows that in 2006 the profit margin was 7.1% in 2007 its increased to 19% and has again decreased in 2008 which shows poor financial planning and low efficiency.

2. Profitability Ratios related to Investment
Profitability ratio can also be computed on investment. Profitability is relations on investment are:
   a. Return on Assets
   b. Return on Capital Employed

a. Return on Assets
The profitability ratio here measures the relationship between net profit and assets.

\[
ROA = \frac{\text{Net Profit after Tax} \times 100}{\text{Fixed Assets}}
\]

Table-11

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Profit after Tax</th>
<th>Fixed Assets</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>25256000</td>
<td>33726999</td>
<td>74.8836266</td>
</tr>
<tr>
<td>2006-2007</td>
<td>154738000</td>
<td>239767437</td>
<td>64.5367035</td>
</tr>
<tr>
<td>2007-2008</td>
<td>94873000</td>
<td>228824802</td>
<td>41.4609776</td>
</tr>
</tbody>
</table>

Interpretation
It measures the profitability of total funds or investment of a firm.

From the above calculations it shows that the returns in the year 2007 was 64% in the year 2008 it is 41% and in the year 2006 74% which shows a good sign.

b. Return on capital employed (ROCE)
This ratio measures relationship between net profit and capital employed.
ROCE = \frac{\text{Net profit after taxes}}{\text{Total capital employed}} \times 100

**Table-12**

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Profit after Tax</th>
<th>Total capital employed</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>25256000</td>
<td>94546032</td>
<td>26.7129138</td>
</tr>
<tr>
<td>2006-2007</td>
<td>154738000</td>
<td>400063704</td>
<td>38.6783401</td>
</tr>
<tr>
<td>2007-2008</td>
<td>94873000</td>
<td>539766979</td>
<td>17.5766588</td>
</tr>
</tbody>
</table>

**Interpretation**

This ratio measures the overall performance of the firm and may be useful in comparing the firm’s efficiency with that of similar concern. The higher the ratio, the more efficiency the funds are used.

From the above calculation it can be known that in the year 2006 and 2008 the capital which was employed was not sufficiently used. And in 2007 there with efficiently use of fund.

**FINDINGS**

1. Changes in sales, net profit, and fixed cost

<table>
<thead>
<tr>
<th>year</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of increase in sales</td>
<td>54.52128177</td>
<td>43.34085638</td>
</tr>
<tr>
<td>% of increase in net profit</td>
<td>70.58232076</td>
<td>8.907302689</td>
</tr>
<tr>
<td>% increase in fixed cost</td>
<td>50.0007042</td>
<td>49.85145275</td>
</tr>
</tbody>
</table>

2. Changes in Working Capital

<table>
<thead>
<tr>
<th>year</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of increase in working capital</td>
<td>43.66%</td>
<td>45.31%</td>
</tr>
</tbody>
</table>
In B.D.K. ENGG working capital required during

<table>
<thead>
<tr>
<th>Year</th>
<th>Working capital (in Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>Rs. 79876155</td>
</tr>
<tr>
<td>2006-07</td>
<td>Rs. 141798750</td>
</tr>
<tr>
<td>2007-08</td>
<td>Rs. 259283885</td>
</tr>
</tbody>
</table>

B.D.K. ENGG makes use of the following techniques of inventory control:

- A.B.C Analysis system
- F.S.N Analysis system

1. In a sound business a current ratio of 2:1 is considered as ideal one. If current ratio is lower than 2:1 the short term solvency of the firm is considered doubtful and it shows that the firm is not in a position to meet its current liabilities. From the above calculations it shows that in the year 2006 & 2007 1.8 & 1.5 and in the year 2008 that is 1.7

2. Acid Test ratio
Generally quick ratio 1:1 is considered as ideal and represents a satisfactory financial position. A low quick ratio may be not a good liquid position. The above calculated ratio shows that the company has maintained sufficient liquid assets That is in the year 2006 & 2007 ratio was 1.5 & 1.3 and in the year 2008 again it is 1.3.

3. Debt equity ratio
The debt equity ratio is calculated to show the extent to which the debt financing has been used in the business. A high ratio shows that the claim of creditor is greater than that of owner. A high ratio is unfavorable to a company. A low debt equity ratio is considered favorable from management point of view. The above ratio indicates that the in year 2006 is high that was 4.3 unfavorable from the firm’s point of view. It has declined drastically in the year 2006-07 and in the year 2007-08 which is also favorable to firm.

4. Gross profit to sales ratio
The above ratio indicates that in year 2005-06 the gross margin is 11.37% and has increased in the year 2006-07, which is 20.32%. In the year 2007-08 it has highly decreased to 13.74% it indicates declining stage of gross profit.

5. Net profit to sales ratio or net profit margin
   In the year 2005-06 the profit margin is 7.11 and in the year 2006-07 it has increased to 19.8% and it has again decreased in the year 2007-08.

6. Return on Assets
   This ratio shows that in the year 2005-06 the return on assets was 74.88% and in the year 2006-07 it was 64.53% in the year 2007-08 it has slightly decreased to 41.46%.it indicates bad usage of assets.

7. Returns on capital employed
   Return on capital employed ratio shows that in the year 2005-06 the returns were just 26%, in the year 2007-08 the return on capital was 17%, which shows that the company has not utilized its fund properly. But in the year 2006-07 the return on capital employed has increased to 38%, which indicates that the firm is using the funds properly.

8. Inventory turnover ratio
   This ratio indicates that in the year 2005-06 the raw material turnover was 16 times and in the year 2006-07 the turnover was 14 times which is low an indicates slow moving of inventory. But in the year 2007-08 the turnover has decreased to 10 times which shows poor performance of company when compared to the previous year.

9. Working capital turnover ratio
   This ratio shows the number of times the working capital turns in trading transaction. This ratio indicates that in year 2005-06 the turnover is 4 times in 2006-07 also 5 times in the year 2007-08 the working capital turnover again 5 times which shows that the working capital is used efficiently.

10. Debtors turnover ratio
    This ratio shows that in the year 2005-06 and in the year 2006-07 the debtor’s turnover ratio is less which is 5 & 3 times. And in the year 2007-08 the debtor’s turnover ratio is increased to 4 times which shows good management.

11. Average Collection period
    The collection period in the year 2006-07 is very high which is 109 days and in 2007-08 it is 87 days which shows the collection period gives is more. But in year 2005-06 it is 68 days, which is moderate.
SUGGESTIONS

1. The company needs to reduce the cost of fixed assets, because BEP is 80% of total sales it indicates high fixed cost.

2. Company needs to increase its sales.
CONCLUSION


The company has different departments like Marketing, Engineering, Design, Planning, Production, Quality Control, Finance, Stores, Purchase and Personnel. There is co-ordination among the management and all the departments. Because of the cooperation and co-ordination the company is working efficiently. The company also takes care of the employees and is concerned about the welfare.

And finally we conclude that The Company’s financial position is strong and has maintained adequate funds to meet its obligation. The overall profitability of the company is good when compared to last two years. This shows that the company is developing year by year.
BIBLIOGRAPHY

Financial management:

1. KHAN & JAIN
2. I.M PANDIY
ANNEXURE

ABBREVIATIONS:

AOD : Accepted On Deviation.
DC  : Delivery Challenge
GRIR : Goods Receipt Note Inspection Report
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.T.V</td>
<td>Gate valve</td>
</tr>
<tr>
<td>IMI</td>
<td>Incoming Material Inspection</td>
</tr>
<tr>
<td>I/D NOTE</td>
<td>Inter Dep’t Stores</td>
</tr>
<tr>
<td>LOI</td>
<td>Letter of Indent</td>
</tr>
<tr>
<td>Mat’s</td>
<td>Materials</td>
</tr>
<tr>
<td>MRN</td>
<td>Material Requisition</td>
</tr>
<tr>
<td>Mat’s DEP</td>
<td>Materials Department</td>
</tr>
<tr>
<td>NCRC committee</td>
<td>Non- Conference Review</td>
</tr>
<tr>
<td>NSCV</td>
<td>Non Slam Check Valve</td>
</tr>
<tr>
<td>NR</td>
<td>Needle Valve</td>
</tr>
<tr>
<td>PED</td>
<td>Preserve Equipment Directive</td>
</tr>
<tr>
<td>P.O</td>
<td>Purchase Order</td>
</tr>
<tr>
<td>PPC</td>
<td>Production planning and Control</td>
</tr>
<tr>
<td>QA</td>
<td>Quality Assurance</td>
</tr>
<tr>
<td>SCV</td>
<td>Swing Check Valve</td>
</tr>
<tr>
<td>SUP</td>
<td>Supplier</td>
</tr>
<tr>
<td>WI</td>
<td>Work Instruction</td>
</tr>
<tr>
<td>Avg.C</td>
<td>Average Consumption</td>
</tr>
<tr>
<td>Max C</td>
<td>Maximum Consumption</td>
</tr>
<tr>
<td>Min C</td>
<td>Minimum Consumption</td>
</tr>
<tr>
<td>Avg.C D P</td>
<td>Average Delivery period</td>
</tr>
<tr>
<td>Max D P</td>
<td>Maximum Delivery period</td>
</tr>
</tbody>
</table>
Min D P : Minimum Delivery period
Avg. C DL : Average Stock Level
Max SL : Maximum Stock Level.
Min SL : Minimum Stock Level
ROQ : Re-Order Quantity
ROL : Re-Order Level
Annual C : Annual Consumption
MTR : Material Turnover Ratio