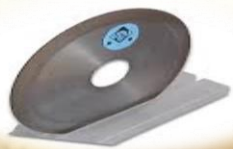


Y-1569

# Manufacturing of *Metal Cutting Wheels* *(TMT Bar Cutting)*

## Cutting Metal with Cutting Wheels



# Introduction

A cut off wheel, conjointly known as a cutoff wheel or cutting disc, is an arbor-mounted tool which will be used with angle grinders or stationary cutoff saws. Cut off wheels have an abrasive-coated material that's used for grinding a range of materials.



Bar Cutting Machine is high-powered by electrical three phase motor and is used for TMT bar cutting on construction sites. Specially designed clutch system provides safe operation. Highest quality of blade ensures precise and fast cutting of TMT bars.

The size of the grit

Bonding of Coating Material

The abrasive material used

The grade of the wheel

Last, the structure of the wheel



Bar Bending Machine is power-driven by electrical three phase motor with planetary gear box. It's simply operated by foot. Bar Bending Machine is used on construction sites for bending of TMT bars mechanically. Special limit switch is provided for safe operation of the machine. Five different dies with pin are provided for varieties of bend required for TMT bars



A grinding wheel is a self-sharpening tool composed of discrete abrasive grains held together by a bonding agent with composite structure of many clearance allowance for the cutting edges. The characteristics of a grinding wheel depends upon the combined elements of abrasive, grit size, grade, structure and bond.

**Related Project:- [Engineering Goods Projects](#)**



A grinding wheel could be a self-sharpening tool composed of distinct abrasive grains command together by a bonding agent with composite structure of the many clearance allowance for the cutting edges. The characteristics of a grinding wheel depends upon the combined components of abrasive, grit size, grade, structure and bond.



The most common size for these cutting wheels is 4-1/2 inches in diameter, however they can range from 2 to 16 inches in diameter with a thickness range from 0.045 in to 0.125 in. Type 1 discs are fat, and type 27 discs have a raised hub. These wheels are strong, however not resistant to breaking, if a cutting wheel breaks whereas in use, fragment might injure the operator or a close-by co-workers. To avoid breaking cutting discs, never exceed the most speed (RPM) specified on the disc, and don't overload the disc by cutting with excess force or jamming the wheel into your work piece.



## Applications:-

Automotive

Metalworking

Machinery

Electrical & Electronics

Construction





## Uses:-

The capability of an abrasive wheel is determined by the kind of abrasive material used in making the wheel. The hardness, toughness, and ability to cut sharp edges are determined by the abrasive used. The bonding or coating material that is used to see the structure and shape integrity of the wheel in use.

Grinding wheels use an abrasive material for varied cutting and grinding purposes, are known as abrasive wheels. It uses these wheels for cutting and grinding various metal and alternative work items in an exceedingly workshop. It conjointly uses these wheels to cut and shape complex work piece.

**Silicon Carbide:** This is sharp and hard and it can be brittle. It should use this only in grinding of low tensile strength materials such as grey cast iron, chilled iron, bronze, [aluminum](#), [copper](#), and brass.

**Aluminum Oxide:** - This is slightly softer than Silicon Carbide but much tougher. It should be in cutting and grinding high tensile strength materials like alloy steel, malleable iron, bronze, etc.

- Transportation
- Automotive
- Aerospace
- Marine
- Construction
- Metal Working
- Ship Building

## **Types of Abrasive Wheel:-**

Based on requirement and need, there are different grinding wheels used in different machining processes in workshops. It uses a mainly abrasive grinding wheel to cut diamonds, metallic equipment, etc. The following are various types of abrasive wheels:-

**Straight Grinding Wheels:** Straight wheels are the foremost common mode of the wheel that's found on the pedestal or bench grinders. This is often additionally wide used for center less and cylindrical surface grinding operations.



**Cylinder or Wheel Ring:** this type of wheel doesn't have a middle mounting support, however it's a long and wide surface. They're in the main utilized in horizontal or vertical spindle grinders for manufacturing flat surfaces. Further grinding will be through with the top face of the wheel.

**Tapered Grinding Wheels:** A tapered grinding wheel may be a straight wheel that tapers outwardly towards the midpoint of the wheel. A straight wheel with a tapered wheel is mostly used for gear teeth, grinding thread, etc.

**Straight Cup:** This straight cup wheel is used as a possibility for cup wheels in cutters and tool grinders. Because it has an additional, surface and grinding are most favorable.



**Dish Cup:** They use this sort of wheel in jug grinding and cutter grinding. It only cuts in crevices and slots because it features a very skinny cup-style grinding.

**Saucer Grinding Wheels:** Saucer Grinding wheels are used for grinding twist drills and edge cutters. This is often particularly in demand in non-machining areas because the saw filers are utilized by saucer wheels to maintain saw blades.



## Abrasive Wheel Benefits:

By grinding, we understand it as the usage of solid abrasive wheels to shape or finish a particular material. The main benefits of using abrasive wheels are:-

It can cut hardened [steel](#).

It can produce smooth finishes.

The time taken is less.

It can maintain accuracy in each case.

It requires very little pressure.

These grinding machines are aptly suited for cutting high-quality alloy [steels](#).

Increased Grinding productivity.

# Market Outlook

Abrasive Wheels Market by Product (Bonded Wheels and Super Abrasive Wheels) and by Material Type (Aluminum Oxide, Zirconia Alumina, Silicon Carbide, and Ceramic Aluminum Oxide): The global abrasive wheels market was approximately USD 10.9 billion in 2018 and is expected to generate around USD 17.39 billion by 2026, at a CAGR of around 6.01% between 2019 and 2026. The Demand within the global market for grinding discs has been rising on account of standardization of industrial procedures in automotive, iron and steel, and [constructions industries](#). A grinding disc, also known as grinding wheel, is used in several abrasive machine operations and in abrasive cutting. Grinding machines are used across a range of industries, and the indispensability of grinding discs in these machines is expected to propel demand within the global market.

The proven relevance of these discs across multiple industries has helped in earned the trust of the investors and stakeholders in the market.

Growing demand for abrasives from the automotive industry is that the key driving factor for the rising product demand. Abrasives play a vital role in manufacturing automotive elements in modifying operating parameters like lowering the noise levels and reducing the carbon dioxide emissions of high-performance engines, and machining of elements.

By product, the abrasive wheels market is divided into bonded wheels and super abrasive wheels. Bonded wheels are expected to contribute the most revenue within the years ahead. Bonded wheels are extremely economical and may hold the abrasive grains with efficiency that really grinds the surface on wheels among the wheels. There's a growing demand for bonded wheels as they're efficient and cost-efficient excluding being extensively utilized by the automobile industry.



North America can hold a major share of the worldwide abrasive wheels market over the forecast fundamental quantity, because of the rising demand for grinding tools for finishing within the [automobile](#). The U.S. and Canada are expected to be the most important countries to contribute toward the growth of the North American abrasive wheels market.

The Latin American abrasive wheels market is expected to witness moderate growth over the forecast timeline, because of the growing abrasive wheels demand from the automotive sector in Brazil. Brazil and Colombia are expected to be the most important contributors to the current regional market within the future.



North America will hold a major share of the global abrasive wheels market over the forecast time period, owing to the rising demand for grinding tools for finishing in the [automobile](#). The U.S. and Canada are expected to be the major countries to contribute toward the growth of the North American abrasive wheels market.

The market for cutting wheels is expected to stay promising in the years to come. The main market drivers will be the booming metal and construction industries. With never ending scope for the consumption of cut metal pipes, TMT steel rods and HYSD (High Yielding Strength Deformed) bars, which find usage in the construction industry in the form of Rebar (Reinforced Bar), the growth of the construction industry will add considerably to the growth of the cutting wheels market.

The market for cutting wheels is expected to grow at a significant rate due to their high rate of replacement. A typical cutting wheel lasts for only 5-8 17 cuts, thereby calling for better replacement rates. Diamond abrasives are being increasingly used to cut metal bars and concrete in today's market. This is expected to further enhance the growth of the market in the coming years and is expected to set a trend in the cutting wheels market.



Cutting wheels are being replaced by various different methods of cutting metal and cement, like plasma cutting, laser cutting, water jet and burning. The most reason behind this shift is that the simple operation provided by the higher than said cutting processes. Though these methods are popular, because of their high cost of installation and maintenance, most of the masons prefer the standard means of cutting that offers higher accuracy with sleek finishes.



## Key players

Forney Industries, Inc.

Makita Corporation

DEWALT

Grindwell Norton Ltd

Walter Surface Technologies Inc.

Dremel

Lenox Tools

Ryobi Limited

Shark Industries, LTD.

Anant cutting Edge PVT.LTD

Sak Abrasive LTD.

Sterling Abrasives Ltd.

Tyrolit Sak Ltd.

Wendt (India) Ltd.

# Machinery Photograph



**Double Pots Hydraulic Mixer**



**Air Compressor**



**Grinding Wheel  
Making Machine**



**Cutting Disc Making Machine**



# Project at a Glance

| COST OF PROJECT     |              |              |        | MEANS OF FINANCE   |              |              |        |
|---------------------|--------------|--------------|--------|--------------------|--------------|--------------|--------|
| Particulars         | Existin<br>g | Propose<br>d | Total  | Particulars        | Existin<br>g | Propose<br>d | Total  |
| Land & Site         |              |              |        |                    |              |              |        |
| Development Exp.    | 0.00         | 45.00        | 45.00  | Capital            | 0.00         | 80.72        | 80.72  |
| Buildings           | 0.00         | 51.60        | 51.60  | Share Premium      | 0.00         | 0.00         | 0.00   |
|                     |              |              |        | Other Type Share   |              |              |        |
| Plant & Machineries | 0.00         | 142.86       | 142.86 | Capital            | 0.00         | 0.00         | 0.00   |
| Motor Vehicles      | 0.00         | 8.00         | 8.00   | Reserves & Surplus | 0.00         | 0.00         | 0.00   |
| Office Automation   |              |              |        |                    |              |              |        |
| Equipments          | 0.00         | 23.25        | 23.25  | Cash Subsidy       | 0.00         | 0.00         | 0.00   |
| Technical Knowhow   |              |              |        | Internal Cash      |              |              |        |
| Fees & Exp.         | 0.00         | 10.00        | 10.00  | Accruals           | 0.00         | 0.00         | 0.00   |
| Franchise & Other   |              |              |        | Long/Medium Term   |              |              |        |
| Deposits            | 0.00         | 0.00         | 0.00   | Borrowings         | 0.00         | 242.16       | 242.16 |
| Preliminary& Pre-   |              |              |        | Debentures /       |              |              |        |
| operative Exp       | 0.00         | 3.00         | 3.00   | Bonds              | 0.00         | 0.00         | 0.00   |
| Provision for       |              |              |        | Unsecured          |              |              |        |
| Contingencies       | 0.00         | 10.00        | 10.00  | Loans/Deposits     | 0.00         | 0.00         | 0.00   |
| Margin Money -      |              |              |        |                    |              |              |        |
| Working Capital     | 0.00         | 29.17        | 29.17  |                    |              |              |        |
| TOTAL               | 0.00         | 322.88       | 322.88 | TOTAL              | 0.00         | 322.88       | 322.88 |



# Project at a Glance

| Year | Annualised |       | Book Value | Debt  | Dividend  | Retained Earnings |       | Payout | Probable Market Price | P/E Ratio   | Yield Price/Book Value |
|------|------------|-------|------------|-------|-----------|-------------------|-------|--------|-----------------------|-------------|------------------------|
|      | EPS        | CEPS  | Per Share  |       | Per Share | Per Share         |       | %      |                       | No.of Times | %                      |
| 1-2  | 5.64       | 9.68  | 15.64      | 24.00 | 0.00      | 100.00            | 5.64  | 0.00   | 5.64                  | 1.00        | 0.00                   |
| 2-3  | 8.49       | 12.00 | 24.13      | 18.00 | 0.00      | 100.00            | 8.49  | 0.00   | 8.49                  | 1.00        | 0.00                   |
| 3-4  | 11.34      | 14.37 | 35.47      | 12.00 | 0.00      | 100.00            | 11.34 | 0.00   | 11.34                 | 1.00        | 0.00                   |
| 4-5  | 14.09      | 16.72 | 49.55      | 6.00  | 0.00      | 100.00            | 14.09 | 0.00   | 14.09                 | 1.00        | 0.00                   |
| 5-6  | 16.72      | 19.02 | 66.28      | 0.00  | 0.00      | 100.00            | 16.72 | 0.00   | 16.72                 | 1.00        | 0.00                   |



# Project at a Glance

| Year    | D. S. C. R.       |            |         | Debt / Equity - Deposits Debt | Equity as-Equity | Total Net Worth | Return on Net Worth | Profitability Ratio |        |       |                  |           | Assets Turnover Ratio | Current Ratio |
|---------|-------------------|------------|---------|-------------------------------|------------------|-----------------|---------------------|---------------------|--------|-------|------------------|-----------|-----------------------|---------------|
|         |                   |            |         |                               |                  |                 |                     | GPM                 | PBT    | PAT   | Net Contribution | P/V Ratio |                       |               |
|         | Individual        | Cumulative | Overall |                               |                  |                 |                     | %                   | %      | %     | %                | %         |                       |               |
|         | (Number of times) |            |         | (Number of times)             |                  | %               | %                   | %                   | %      | %     | %                | %         |                       |               |
| Initial |                   |            |         | 3.00                          | 3.00             |                 |                     |                     |        |       |                  |           |                       |               |
| 1-2     | 1.39              | 1.39       |         | 1.53                          | 1.53             | 2.79            |                     | 10.05%              | 5.16%  | 3.74% | 295.93           | 24.33%    | 2.59                  | 1.05          |
| 2-3     | 1.70              | 1.54       |         | 0.75                          | 0.75             | 1.68            |                     | 11.35%              | 7.25%  | 4.83% | 337.06           | 23.75%    | 2.76                  | 1.26          |
| 3-4     | 2.06              | 1.70       | 2.06    | 0.34                          | 0.34             | 1.06            |                     | 12.22%              | 8.74%  | 5.64% | 385.02           | 23.74%    | 2.78                  | 1.49          |
| 4-5     | 2.50              | 1.87       |         | 0.12                          | 0.12             | 0.70            |                     | 12.81%              | 9.79%  | 6.23% | 432.98           | 23.73%    | 2.70                  | 1.76          |
| 5-6     | 3.02              | 2.06       |         | 0.00                          | 0.00             | 0.48            |                     | 13.18%              | 10.52% | 6.66% | 480.93           | 23.72%    | 2.57                  | 2.42          |



# Project at a Glance

BEP

|                                |   |
|--------------------------------|---|
| BEP - Maximum Utilisation Year | 5 |
|--------------------------------|---|

|                                    |        |
|------------------------------------|--------|
| Cash BEP (% of Installed Capacity) | 51.50% |
|------------------------------------|--------|

|                                     |        |
|-------------------------------------|--------|
| Total BEP (% of Installed Capacity) | 55.35% |
|-------------------------------------|--------|

IRR, PAYBACK and FACR

|                                        |        |
|----------------------------------------|--------|
| Internal Rate of Return .. ( In %age ) | 28.25% |
|----------------------------------------|--------|

|                                               |                  |
|-----------------------------------------------|------------------|
| Payback Period of the Project is ( In Years ) | 2 Years 3 Months |
|-----------------------------------------------|------------------|

|                                              |        |
|----------------------------------------------|--------|
| Fixed Assets Coverage Ratio ( No. of times ) | 11.773 |
|----------------------------------------------|--------|

# Major Queries/Questions Answered in the Report?

- 1. What is Metal Cutting Wheels (TMT bar Cutting) Manufacturing industry ?**
- 2. How has the Metal Cutting Wheels (TMT bar Cutting) Manufacturing industry performed so far and how will it perform in the coming years ?**
- 3. What is the Project Feasibility of Metal Cutting Wheels (TMT bar Cutting) Manufacturing Plant ?**
- 4. What are the requirements of Working Capital for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant ?**

- 5. What is the structure of the Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business and who are the key/major players ?**
- 6. What is the total project cost for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**
- 7. What are the operating costs for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant ?**
- 8. What are the machinery and equipment requirements for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant ?**

**9. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant ?**

**10. What are the requirements of raw material for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant ?**

**11. Who are the Suppliers and Manufacturers of Raw materials for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**

**12. What is the Manufacturing Process of Metal Cutting Wheels (TMT bar Cutting) ?**

- 13. What is the total size of land required for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant ?**
- 14. What will be the income and expenditures for Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**
- 15. What are the Projected Balance Sheets of Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant ?**
- 16. What are the requirement of utilities and overheads for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant?**
- 17. What is the Built up Area Requirement and cost for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**



- 18. What are the Personnel (Manpower) Requirements for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**
- 19. What are Statistics of Import & Export for Metal Cutting Wheels (TMT bar Cutting) ?**
- 20. What is the time required to break-even of Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**
- 21. What is the Break-Even Analysis of Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant?**
- 22. What are the Project financials of Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**

- 23. What are the Profitability Ratios of Metal Cutting Wheels (TMT bar Cutting) Manufacturing Project?**
- 24. What is the Sensitivity Analysis-Price/Volume of Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant?**
- 25. What are the Projected Pay-Back Period and IRR of Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant?**
- 26. What is the Process Flow Sheet Diagram of Metal Cutting Wheels (TMT bar Cutting) Manufacturing project?**

**27. What are the Market Opportunities for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing plant?**

**28. What is the Market Study and Assessment for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**

**29. What is the Plant Layout for setting up Metal Cutting Wheels (TMT bar Cutting) Manufacturing Business?**

# Table of Contents of the Project Report

# **1 PROJECT LOCATION**

## 1.1. DISTRICT PROFILE & GEOTECHNICAL SITE CHARACTERIZATION

1.1.1. General

1.1.2. History

1.1.3. Demographics

1.1.4. Map

1.1.5. Administration

1.1.6. Soil

1.1.7. Agriculture

1.1.8. Economy

1.1.9. Industry at a Glance

1.1.10. Transport

## **2. INTRODUCTION**

## **3. COMPONENT OF A CUTTING WHEEL**

## **4. BASICS OF CUTTING WHEELS**

4.1. GRIT TYPE AND COLOR

4.2. GRIT SIZE

## **5. USES & APPLICATIONS**

### **6. B.I.S. STANDARDS**

6.1. IS/ISO 603 PART 1: 1999 (REAFFIRMED YEAR: 2015) BONDED ABRASIVE PRODUCTS — DIMENSIONS PART 1 GRINDING WHEELS FOR EXTERNAL CYLINDRICAL GRINDING BETWEEN CENTRES.

6.2. IS 1991: PART 2: 1987 (REAFFIRMED YEAR: 2018) SAFETY REQUIREMENTS FOR THE USE, CARE AND PROTECTION OF ABRASIVE GRINDING WHEELS PART 2: HANDLING AND STORAGE (SECOND REVISION).

6.3. IS 2324: PART 2: 1985 (REAFFIRMED YEAR: 2010) BONDED ABRASIVE GRINDING WHEELS - PART 2: DIMENSIONS.

- 6.4. IS 11522: PART 5: 2017 - BASIC QUANTITIES IN CUTTING AND GRINDING PART 5 BASIC TERMINOLOGY FOR GRINDING PROCESSES USING GRINDING WHEELS.
- 6.5. IS 13068: 1991 (REAFFIRMED YEAR: 2015) BONDED ABRASIVE PRODUCTS - STATIC BALANCING OF GRINDING WHEELS – TESTING.
- 6.6. IS 13596: 1993 (REAFFIRMED YEAR: 2015) DIMENSIONAL TOLERANCES ON GRINDING WHEELS.
- 6.7. IS 15297: 2018 BONDED ABRASIVE PRODUCTS — PERMISSIBLE UNBALANCES OF GRINDING WHEELS AS DELIVERED — STATIC TESTING (SECOND REVISION).

## **7. PRODUCT DESCRIPTION**

- 7.1. TECHNICAL SPECIFICATION
- 7.2. PRODUCT SPECIFICATIONS

## **8. TYPES OF PRODUCT**

## **9. MARKET SURVEY**

- 9.1. ABRASIVE WHEELS MARKET
- 9.2. INDIA IMPORTS CUTTING WHEEL
- 9.3. CUTTING WHEEL IMPORT ANALYSIS - MONTHWISE

## **10. EXPORT & IMPORT: ALL COUNTRIES**

- 10.1. EXPORT: ALL COUNTRIES
- 10.2. IMPORT: ALL COUNTRIES

## **11. FINANCIALS & COMPARISON OF MAJOR INDIAN PLAYERS/COMPANIES**

- 11.1. ABOUT FINANCIAL STATEMENTS OF CMIE DATABASE
- 11.2. PROFITS & APPROPRIATIONS
- 11.3. TOTAL LIABILITIES
- 11.4. TOTAL ASSETS
- 11.5. NET CASH FLOW FROM OPERATING ACTIVITIES



## **11.6. SECTION – I**

- 11.6.1. Name of Company with Contact Details
- 11.6.2. Name of Director(S)
- 11.6.3. Credit Ratings
- 11.6.4. Plant Capacity
- 11.6.5. Location of Plant
- 11.6.6. Name of Raw Material(S) Consumed With Quantity & Cost

## **11.7. SECTION – II**

- 11.7.1. Assets
- 11.7.2. Cash Flow
- 11.7.3. Cost as % Ge of Sales
- 11.7.4. Forex Transaction
- 11.7.5. Growth in Assets & Liabilities
- 11.7.6. Growth in Income & Expenditure
- 11.7.7. Income & Expenditure
- 11.7.8. Liabilities
- 11.7.9. Liquidity Ratios

- 11.7.10. Profitability Ratio
- 11.7.11. Profits
- 11.7.12. Return Ratios
- 11.7.13. Structure of Assets & Liabilities (%)
- 11.7.14. Working Capital & Turnover Ratios

## **12. COMPANY PROFILE OF MAJOR PLAYERS**

## **13. EXPORT & IMPORT STATISTICS OF INDIA**

- 13.1. EXPORT STATISTICS OF METAL CUTTING WHEEL
- 13.2. IMPORT STATISTICS OF METAL CUTTING WHEEL

## **14. PRESENT MANUFACTURERS**

## **15. RAW MATERIAL**

## **16. MANUFACTURING PROCESS**

## **17. PROCESS FLOW DIAGRAM**

## **18. BUYER'S LIST**

- 18.1. CONTACT DETAILS OF BUYER'S
- 18.2. NAME OF DIRECTOR(S)
- 18.3. CREDIT RATINGS
- 18.4. PLANT CAPACITY
- 18.5. LOCATION OF PLANT
- 18.6. COMPANY WISE CONSUMPTION DETAIL OF THE RAW MATERIALS

## **19. SUPPLIERS OF RAW MATERIAL**

## **20. SUPPLIERS OF PLANT & MACHINERY**

## **21. PHOTOGRAPHS/IMAGES FOR REFERENCES**

- 21.1. MACHINERY PHOTOGRAPH
- 21.2. RAW MATERIAL PHOTOGRAPHS
- 21.3. PRODUCT PHOTOGRAPHS

## **22. PLANT LAYOUT**

## **23. QUOTATION OF PLANT, MACHINERY AND EQUIPMENTS FROM SUPPLIER**

# Project Financials

|                                                |                 |
|------------------------------------------------|-----------------|
| • <b>Project at a Glance</b>                   | <b>Annexure</b> |
| • Assumptions for Profitability workings ..... | 1               |
| • Plant Economics.....                         | 2               |
| • Production Schedule.....                     | 3               |
| • Land & Building.....                         | 4               |
| Factory Land & Building                        |                 |
| Site Development Expenses                      |                 |

- **Plant & Machinery.....5**
  - Indigenous Machineries**
  - Other Machineries (Miscellaneous, Laboratory etc.)**
  
- **Other Fixed Assets.....6**
  - Furniture & Fixtures**
  - Pre-operative and Preliminary Expenses**
  - Technical Knowhow**
  - Provision of Contingencies**
  
- **Working Capital Requirement Per Month.....7**
  - Raw Material**
  - Packing Material**
  - Lab & ETP Chemical Cost**
  - Consumable Store**

- **Overheads Required Per Month and Per Annum.....8**  
  - Utilities & Overheads (Power, Water and Fuel Expenses etc.)**
  - Royalty and Other Charges**
  - Selling and Distribution Expenses**
  
- **Salary and Wages .....9**
  
- **Turnover Per Annum .....10**
  
- **Share Capital.....11**  
  - Equity Capital**
  - Preference Share Capital**

- **Annexure 1 :: Cost of Project and Means of Finance**
- **Annexure 2 :: Profitability and Net Cash Accruals**
  - **Revenue/Income/Realisation**
  - **Expenses/Cost of Products/Services/Items**
  - **Gross Profit**
  - **Financial Charges**
  - **Total Cost of Sales**
  - **Net Profit After Taxes**
  - **Net Cash Accruals**

• **Annexure 3 :: Assessment of Working Capital requirements**

- **Current Assets**
- **Gross Working Capital**
- **Current Liabilities**
- **Net Working Capital**
- **Working Note for Calculation of Work-in-process**

• **Annexure 4 :: Sources and Disposition of Funds**



- **Annexure 5 :: Projected Balance Sheets**

- **ROI (Average of Fixed Assets)**
- **RONW (Average of Share Capital)**
- **ROI (Average of Total Assets)**

- **Annexure 6 :: Profitability Ratios**

- **D.S.C.R**
- **Earnings Per Share (EPS)**
- **Debt Equity Ratio**

• **Annexure 7 :: Break-Even Analysis**

- **Variable Cost & Expenses**
- **Semi-Variable/Semi-Fixed Expenses**
- **Profit Volume Ratio (PVR)**
- **Fixed Expenses / Cost**
- **B.E.P**

- **Annexure 8 to 11 :: Sensitivity Analysis-Price/Volume**

- **Resultant N.P.B.T**
- **Resultant D.S.C.R**
- **Resultant PV Ratio**
- **Resultant DER**
- **Resultant ROI**
- **Resultant BEP**

- **Annexure 12 :: Shareholding Pattern and Stake Status**

- **Equity Capital**

- **Preference Share Capital**

- **Annexure 13 :: Quantitative Details-Output/Sales/Stocks**

- **Determined Capacity P.A of Products/Services**

- **Achievable Efficiency/Yield % of Products/Services/Items**

- **Net Usable Load/Capacity of Products/Services/Items**

- **Expected Sales/ Revenue/ Income of Products/ Services/ Items**

- **Annexure 14** :: **Product wise Domestic Sales Realisation**
- **Annexure 15** :: **Total Raw Material Cost**
- **Annexure 16** :: **Raw Material Cost per unit**
- **Annexure 17** :: **Total Lab & ETP Chemical Cost**
- **Annexure 18** :: **Consumables, Store etc.**
- **Annexure 19** :: **Packing Material Cost**
- **Annexure 20** :: **Packing Material Cost Per Unit**

- **Annexure 21** :: **Employees Expenses**
- **Annexure 22** :: **Fuel Expenses**
- **Annexure 23** :: **Power/Electricity Expenses**
- **Annexure 24** :: **Royalty & Other Charges**
- **Annexure 25** :: **Repairs & Maintenance Expenses**
- **Annexure 26** :: **Other Manufacturing Expenses**
- **Annexure 27** :: **Administration Expenses**
- **Annexure 28** :: **Selling Expenses**

- **Annexure 29 :: Depreciation Charges – as per Books (Total)**
- **Annexure 30 :: Depreciation Charges – as per Books (P & M)**
- **Annexure 31 :: Depreciation Charges - as per IT Act WDV (Total)**
- **Annexure 32 :: Depreciation Charges - as per IT Act WDV (P & M)**
- **Annexure 33 :: Interest and Repayment - Term Loans**
- **Annexure 34 :: Tax on Profits**
- **Annexure 35 :: Projected Pay-Back Period and IRR**

# Reasons for Buying our Report:

- **This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, market potential of the product and reasons for investing in the product**
- **This report provides vital information on the product like it's characteristics and segmentation**
- **This report helps you market and place the product correctly by identifying the target customer group of the product**



- **This report helps you understand the viability of the project by disclosing details like machinery required, project costs and snapshot of other project financials**
- **The report provides a glimpse of government regulations applicable on the industry**
- **The report provides forecasts of key parameters which helps to anticipate the industry performance and make sound business decisions**

# Our Approach:

- **Our research reports broadly cover Indian markets, present analysis, outlook and forecast for a period of five years.**
- **The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players**
- **We use reliable sources of information and databases. And information from such sources is processed by us and included in the report**

# **Scope of the Report**

The report titled “Market Survey cum Detailed Techno Economic Feasibility Report on Metal Cutting Wheels (TMT bar Cutting) .” provides an insight into Metal Cutting Wheels (TMT bar Cutting) market in India with focus on uses and applications, Manufacturing Process, Process Flow Sheets, Plant Layout and Project Financials of Metal Cutting Wheels (TMT bar Cutting) project. The report assesses the market sizing and growth of the Indian Metal Cutting Wheels (TMT bar Cutting) Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product:

- **Good Present/Future Demand**
- **Export-Import Market Potential**
- **Raw Material & Manpower Availability**
- **Project Costs and Payback Period**

**We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in the Metal Cutting Wheels (TMT bar Cutting) sector in India along with its business prospects. Through this report we have identified Metal Cutting Wheels (TMT bar Cutting) project as a lucrative investment avenue.**

# Tags

#metalcutting #CuttingDisc #cuttingwheel #GrindingWheel #TMTbar  
#projectreport #DetailedProjectReport #businessfeasibilityreport  
#BusinessPlan #businessideas #businessgrowth #entrepreneur #startupidea  
#startyourbusiness

**Niir Project Consultancy Services (NPCS)  
can provide Detailed Project Report on**

**Manufacturing of Metal Cutting  
Wheels (TMT Bar Cutting).**

**Cutting Metal with Cutting  
Wheels**

**See more**  
**Project Reports & Profiles**  
**BOOKS**



*Visit us at*

[www.entrepreneurindia.co](http://www.entrepreneurindia.co)



[www.entrepreneurindia.co](http://www.entrepreneurindia.co)

**Take a look at  
Niir Project Consultancy Services  
on #Street View**

<https://goo.gl/VstWkd>

*Locate us on  
Google Maps*

<https://goo.gl/maps/BKkUtq9gevT2>



## OUR CLIENTS

Our inexhaustible Client list includes public-sector companies, Corporate Houses, Government undertaking, individual entrepreneurs, NRI, Foreign investors, non-profit organizations and educational institutions from all parts of the World. The list is just a glimpse of our esteemed & satisfied Clients.

**Click here to take a look**  
**<https://goo.gl/G3ICjV>**

# **Free Instant Online Project**

## **Identification and Selection Service**

**Our Team has simplified the process for you by providing a "Free Instant Online Project Identification & Selection" search facility to identify projects based on multiple search parameters related to project costs namely: Plant & Machinery Cost, Total Capital Investment, Cost of the project, Rate of Return% (ROR) and Break Even Point % (BEP). You can sort the projects on the basis of mentioned pointers and identify a suitable project matching your investment requisites.....[Read more](#)**



# Download Complete List of Project

## Reports:

### ▪ Detailed Project Reports

**NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.**

**Our Market Survey cum Detailed Techno Economic Feasibility Report provides an insight of market in India. The report assesses the market sizing and growth of the Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.**



**And before diversifying/venturing into any product, they wish to study the following aspects of the identified product:**

- **Good Present/Future Demand**
- **Export-Import Market Potential**
- **Raw Material & Manpower Availability**
- **Project Costs and Payback Period**

**The detailed project report covers all aspect of business, from analyzing the market, confirming availability of various necessities such as Manufacturing Plant, Detailed Project Report, Profile, Business Plan, Industry Trends, Market Research, Survey, Manufacturing Process, Machinery, Raw Materials, Feasibility Study, Investment Opportunities, Cost and Revenue, Plant Economics, Production Schedule,**



**Working Capital Requirement, uses and applications, Plant Layout, Project Financials, Process Flow Sheet, Cost of Project, Projected Balance Sheets, Profitability Ratios, Break Even Analysis. The DPR (Detailed Project Report) is formulated by highly accomplished and experienced consultants and the market research and analysis are supported by a panel of experts and digitalized data bank.**

**We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in India along with its business prospects.....[Read more](#)**



# Contact us

## **NIIR PROJECT CONSULTANCY SERVICES**

106-E, Kamla Nagar, Opp. Spark Mall,  
New Delhi-110007, India.

Email: [npcs.ei@gmail.com](mailto:npcs.ei@gmail.com) , [info@entrepreneurindia.co](mailto:info@entrepreneurindia.co)

Tel: +91-11-23843955, 23845654, 23845886, 8800733955

Mobile: +91-9811043595

Fax: +91-11-23845886

Website : [www.entrepreneurindia.co](http://www.entrepreneurindia.co) , [www.niir.org](http://www.niir.org)

Take a look at NIIR PROJECT CONSULTANCY SERVICES on #StreetView

<https://goo.gl/VstWkd>



# **Niir PROJECT CONSULTANCY SERVICES**

**An ISO 9001:2015 Company**



[www.entrepreneurindia.co](http://www.entrepreneurindia.co)

# Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*



*We at NPCS want to grow with you by providing solutions scale to suit your new operations and help you reduce risk and give a high return on application investments. We have successfully achieved top-notch quality standards with a high level of customer appreciation resulting in long lasting relation and large amount of referral work through technological breakthrough and innovative concepts. A large number of our Indian, Overseas and NRI Clients have appreciated our expertise for excellence which speaks volumes about our commitment and dedication to every client's success.*



*We bring deep, functional expertise, but are known for our holistic perspective: we capture value across boundaries and between the silos of any organization. We have proven a multiplier effect from optimizing the sum of the parts, not just the individual pieces. We actively encourage a culture of innovation, which facilitates the development of new technologies and ensures a high quality product.*



# What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Market Research Reports*
- *Business Plan*
- *Technology Books and Directory*
- *Industry Trend*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*

## How are we different ?

- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*

# Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

# Contact us

## NIIR PROJECT CONSULTANCY SERVICES

106-E, Kamla Nagar, Opp. Spark Mall,  
New Delhi-110007, India.

Email: [npcs.ei@gmail.com](mailto:npcs.ei@gmail.com) , [info@entrepreneurindia.co](mailto:info@entrepreneurindia.co)

Tel: +91-11-23843955, 23845654, 23845886, 8800733955

Mobile: +91-9811043595

Fax: +91-11-23845886

Website : [www.entrepreneurindia.co](http://www.entrepreneurindia.co) , [www.niir.org](http://www.niir.org)

Take a look at NIIR PROJECT CONSULTANCY SERVICES on #StreetView

<https://goo.gl/VstWkd>



# Follow us



➤ <https://www.linkedin.com/company/niir-project-consultancy-services>



➤ <https://www.facebook.com/NIIR.ORG>



➤ <https://www.youtube.com/user/NIIRproject>



➤ [https://twitter.com/npcs\\_in](https://twitter.com/npcs_in)



➤ <https://www.pinterest.com/npcsindia/>





# Thank You

**For more information, visit us at:**

[www.niir.org](http://www.niir.org)

[www.entrepreneurindia.co](http://www.entrepreneurindia.co)



[www.entrepreneurindia.co](http://www.entrepreneurindia.co)