Production of Zinc Oxide from Zinc Dross.

Profitable Project Opportunities in Inorganic Compound Sector
**Introduction**

Zinc oxide is water insoluble compound, but soluble in acid and bases. It has wide application in industry such as rubber, ceramics/glass, paint/coatings industry, cosmetics industry and the pharmaceutical industry. Zinc oxide has a widespread use in cosmetic products. Zinc oxide is used primarily in cosmetics and personal care products including makeup, baby lotions, bath soaps, nail products, and powders and others. Besides its authorized use as a cosmetic zinc oxide is applied as bulking agent and skin protecting UV absorber. In sunscreens zinc oxide is used at concentrations up to 25%. Zn2+ is generally considered a non-toxic metal.
It is an essential nutrient present virtually in every cell. It must be consumed in the diet and absorbed to maintain human health and it does not appear to accumulate with age, etc. Owing to its wide usage in various cosmetics products such as sunscreen, talcum powder, cold cream face powder, depilatories and others is supporting zinc oxide demand in cosmetics industry.

Zinc oxide (ZnO) is an inorganic and insoluble compound that is mainly used as an additive in various products such as rubber, ceramics, paints, lubricants, foods, batteries, plastics, first-aid tapes, antiseptic creams, cosmetic creams, and medical substances. One of the major applications of zinc oxide is its usage in creams, ointments, and lotions to protect human skin against sunburn and harmful UV rays.
Zinc oxide also finds application in treatment of a number of skin conditions and is widely used in products such as anti-dandruff shampoos, calamine creams, anti-septic ointments, baby care powder, and barrier creams for treating diaper rashes. Owing to the high refractive index, antibacterial properties, UV protection properties, and high thermal conductivity, zinc oxide has a vast application in personal and cosmetics industry.

Zinc oxide is an inorganic chemical compound used as an additive for different industrial and commercial applications. It is mainly used in the rubber industry as an activator for vulcanization of sulfur. One of the major consumers of zinc oxide is the tyre industry.
The growing demand for automobiles and innovations in the tyre industry has contributed to the growth of zinc oxide market. Cosmetic zinc oxide is applied as skin protecting UV absorber and bulking agent. In sunscreen lotions, zinc oxide is used at concentrations up to 25%. Zinc oxide must be absorbed in diet for maintaining human health.
Uses

1. Zinc oxide is used in the rubber, paint, ceramics, chemical textile and other industries. Accelerator activator, pigment, and reinforcing agent in rubber; ointment; pigment and mold growth inhibitor in paints; ceramics; floor tile; glass; zinc salts (zinc stearate etc.) feed additive; semiconductor in electronic devices; electronic ceramics, raw material to produce zinc phosphate as steel coating.

2. The first important use of zinc oxide is in all kinds of paints. The conventional oil based paints and emulsion type coating for cement and masonry surfaces contain zinc oxide pigment, which gives them good protection against contamination by wind born organic dirt, milder, ultraviolet rays and chalking.
3. It is also used in protective coating for exterior wood surfaces since it forms soaps with organic acids present in vehicle. The soap formation and in the mixing of the pigments with the oil and at the same time induces a thyrotrophic consistency in paints.

4. Zinc oxide finds use in metal protective coatings, paint pigmented with zinc dust and zinc oxide are the most successful coatings for use in galvanized surface. Zinc oxide is used in conjunction with red lead and/or zinc yellow for general purpose, primers for ferrous surfaces. In these priming paints, it aids in producing a tough, adherent film resistant to abrasion and chalking. Zinc oxide plays a great role in rubber vulcanization. It is one of the inorganic basic accelerators for speeding up the reaction between rubber and sulphur during vulcanization.
5. It has also been used to import toughness and white color to the tires. In the rubber industry, zinc oxide has varied uses in different and products by importing electrical insulation. Activation of organic activator, mechanical reinforcement, higher thermal conductivity, low heat generation (in fluxing, high heat capacity, good adhesive characteristics, improvement of aging, high hiding power, and increasing the resistance to deterioration by sunlight (due to high capacity to ultraviolet light).

6. Zinc oxide finds considerable use in the manufacture of glass, glazes, enamels, fruits, etc. In the production of fruits, zinc oxide helps in lowering the melting point, thereby improving the stability and reducing the water solubility of the product.
Zinc is used in textile and fabric industries for importing whiteness and strength.

6. It is used in the production of viscose rayon, particularly high tenacity, beltings and in other reinforcing applications. Demand of Zinc oxide is increasing day by day because of setting up of more and more paint and plastic industries. In paint, it is widely used as it also helps in mixing and grinding of paint as a consistency controller.
Zinc Oxide Market size to witness a substantial growth, with increasing demand in various industries including rubber, paint/coatings industry, ceramics/glass, cosmetics and pharmaceutical. Rising demand for cosmetics and personal care products will add to the growth of zinc oxide (ZnO) market in forecast time frame. The product is used as a bulking agent and protects the skin against harmful UV rays. Further government approval regarding the application of product in beauty segment will also be a major driving force for zinc oxide market growth.
Zinc oxide (ZnO) has a very good market and it is a growth oriented product and demand is over increasing in the country as well as abroad various industries consuming zinc oxide are in manufacturing, paint, paper, cosmetic, crockery, plastic, petroleum etc. It can be easily visualized that demand for any material consumed by such growth oriented industries will always be on the use.

Rising demand for the product in cosmetics industry as an essential nutrient for skin care, color cosmetics, hair care, toiletries, talcum and face powder are expected to be major factors propelling zinc oxide market growth.
Up surging use of the product as a filter against ultraviolet rays in sun protection lotions is expected to drive product development over the forecast period. In addition, increase in demand for application where product is widely used for lubrication and desulfurization to improve energy efficiency and protect the environment will help in product penetration. The chemical properties to seal out wetness and help in protecting chafed skin will further supplement application in baby products.

Increasing demand of ZnO in chemical and manufacturing industry will further boost the market size. Industrial application of the product majorly vulcanization of rubber will surge significantly in forecast period.
Tire industry is one the major consumer of the product. Other major application including manufacturing of concrete, photovoltaic, electronic, optoelectronic devices and glass cutting. Rising application of product in paints and coatings is projected to drive the zinc oxide market growth.

**Zinc Oxide for Cosmetics Application: Segmentation**

Zinc oxide for cosmetics industry is segmented on the basis of application. Zinc oxide is widely used in skin care, hair care, color cosmetics, toiletries and others (face powder and talcum powder). Among all these segments skin care segment is expected to be the major segment in terms volume contribution. Increasing usage of zinc oxide as an UV (ultraviolet) filters in sun protection products is expected to drive the segment growth over the forecast period.
Toiletries segment is expected to account for favorable growth over the forecast period in accordance with the usage of zinc oxide for cosmetic industry. Zinc oxide enable to treat and prevent diaper rash. It helps in protecting chafed skin and enables to seal out wetness. Thus increased usage of zinc oxide in baby products is expected to drive the segment growth over the forecast period.

On the basis of application, the zinc oxide market is segmented into rubber ceramics, chemicals, pharmaceuticals, cosmetics & personal care, agriculture and so on. Among these applications "rubber" accounted for largest market share.
Zinc oxide has region specific demands that are differentiated by placement, cost and efficiency. The other segment "cosmetics" is further segmented into skin care, hair care, color cosmetics, face powder, talcum powder, toiletries and so on. The "skin care" segment is expected to be the major one with respect to volume contribution.

The market size of zinc oxide in terms of value is projected to reach USD 4,184.5 million by 2020, and the global market size for zinc oxide is projected to register a CAGR of 6.0% between 2015 to 2020. In terms of value, the zinc oxide market size in rubber application is projected to reach USD 2,095.2 million by 2020, at a CAGR of 5.4% between 2015 and 2020.
The market in Asia-Pacific accounted for the largest share of the zinc oxide in 2014 and is projected to be the fastest-growing market in terms of value, between 2015 and 2020. The growth is attributed to the increasing automotive sales in countries, such as China and India.

Rubber industry contributes a major share to the zinc oxide market. However, in recent times, zinc oxide has gained significant traction in the booming personal care and cosmetics industry. Owing to its non-toxic property, zinc oxide is widely used in products such as baby lotions, talcum powder, nail care products, body soaps, and makeup products. It has a significant application in sunscreen lotions and creams in specific concentrations, attributed to its ability to provide wide protecting spectrum from UV rays and remains scattered on the skin without getting absorbed in the blood.
Few Indian major players are as under

- Bharat Zinc Ltd.
- Ess Vee Alloys Pvt. Ltd.
- Hindustan Zinc Ltd.
- K A Wires Ltd.
- Lords Chemicals Ltd.
- Maha Chemicals Ltd.
Machinery Photographs

Gas Fired Furnaces for Zinc oxide
Pneumatic Conveying System

Zinc Oxide Blender
## Project at a Glance

### Project at a Glance

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Existing</th>
<th>Proposed</th>
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<th>Particulars</th>
<th>Existing</th>
<th>Proposed</th>
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## Project at a Glance

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<th>Yield Price/Book Value</th>
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# Project at a Glance

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<th>Debt / Deposits Debt</th>
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<th>Asset Turnover Ratio</th>
<th>Current Ratio</th>
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## Project at a Glance

### BEP

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<td>Total BEP (% of Installed Capacity)</td>
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### IRR, PAYBACK and FACR

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1. What is Zinc Oxide from Zinc Dross Manufacturing industry?

2. How has the Zinc Oxide Manufacturing industry performed so far and how will it perform in the coming years?

3. What is the Project Feasibility of Zinc Oxide Manufacturing Plant?

4. What are the requirements of Working Capital for setting up Zinc Oxide Manufacturing plant?
5. What is the structure of the Zinc Oxide from Zinc Dross Manufacturing Business and who are the key/major players?

6. What is the total project cost for setting up Zinc Oxide from Zinc Dross Manufacturing Business?

7. What are the operating costs for setting up Zinc Oxide from Zinc Dross Manufacturing plant?

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4. **USES & APPLICATIONS**
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4.2. APPLICATIONS

5. PROPERTIES
5.1. PHYSICAL PROPERTIES
5.2. CHEMICAL PROPERTIES
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6. B.I.S. SPECIFICATION
6.1. IS: 35 – 1975 REAFFURNE D – 2012: SPECIFICATION FOR ZINC OXIDE FOR PAINTS (FIRST REVISION)
6.3. IS: 2850 – 1983 SPECIFICATION FOR ZINC OXIDE FOR COSMETIC INDUSTRY (SECOND REVISION)
6.4. IS: 3399 – 2013 ZINC OXIDE FOR RUBBER INDUSTRY – SPECIFICATION (THIRD REVISION)
6.5. IS: 6039 – 1970 SPECIFICATION FOR ZINC OXIDE-EUGENOL DENTAL CEMENT
6.6. IS: 14721 – 1999 ZINC OXIDE FOR CERAMIC INDUSTRY – SPECIFICATION

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8. EXPORT & IMPORT: ALL COUNTRIES
8.1. EXPORT: ALL COUNTRIES FOR ZINC OXIDE
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9.7.11. Profits
9.7.12. Return Ratios
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11. EXPORT & IMPORT STATISTICS DATA OF INDIA
11.1. EXPORT STATISTICS DATA FOR ZINC OXIDE
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12. PRESENT MANUFACTURERS

13. MANUFACTURING PROCESS
13.1. BASIC RAW MATERIAL REQUIRED
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15. BUYER’S LIST
15.1. CONTACT DETAILS OF BUYER’S
15.2. NAME OF DIRECTOR(S)
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15.5. LOCATION OF PLANT
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16. ENVIRONMENT AND HEALTH IMPACT
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17. SUPPLIERS OF PLANT & MACHINERY

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19. PHOTOGRAPHS/IMAGES FOR REFERENCE
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20. PLANT LAYOUT

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- Plant Economics
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- Land & Building

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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.

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• This report helps you market and place the product correctly by identifying the target customer group of the product.

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• 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.

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Scope of the Report

The report titled “Market Survey cum Detailed Techno Economic Feasibility Report on Zinc Oxide from Zinc Dross.” provides an insight into Zinc Oxide from Zinc Dross market in India with focus on uses and applications, Manufacturing Process, Process Flow Sheets, Plant Layout and Project Financials of Zinc Oxide from Zinc Dross project. The report assesses the market sizing and growth of the Indian Zinc Oxide from Zinc Dross 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 Zinc Oxide from Zinc Dross sector in India along with its business prospects. Through this report we have identified Zinc Oxide from Zinc Dross project as a lucrative investment avenue.
Production of Zinc Oxide, Zinc Oxide Production, Manufacturing of Zinc Oxide, Process for Preparation of Zinc Oxide, Manufacture of Zinc Oxide, Zinc Oxide Plant, Zinc Oxide for Rubber Industry, Process for Manufacture of Zinc Oxide Using Zinc Dross, Production of Zinc Oxide from Zinc Dross, Zinc Oxide in Rubber Industry, Zinc Oxide from Zinc Dross, Zinc Oxide Manufacturing Process in India, Zinc Oxide Project Report, Zinc Oxide Manufacturing Industry, Zinc Oxide Manufacturing Project Report, Zinc Oxide Production project ideas, Projects on Small Scale Industries, Small scale industries projects ideas, Project profile on small scale industries, How to Start Zinc Oxide Production Industry in India, Zinc Oxide Production Projects, New project profile on Zinc Oxide Production industries, Project Report on Production of Zinc Oxide from Zinc Dross, Detailed Project Report on Zinc Oxide Production, Project Report on Production of Zinc Oxide from Zinc Dross, Pre-Investment Feasibility Study on Production of Zinc Oxide from Zinc Dross, Techno-Economic feasibility study on Zinc Oxide Production, Feasibility report on Production of Zinc Oxide from Zinc Dross, Free Project Profile on Zinc Oxide Production, Project profile on Production of Zinc Oxide from Zinc Dross, Download free project profile on Zinc Oxide Production, Startup Project for Zinc Oxide Production, Project report for bank loan, Project report for bank finance, Project report format for bank loan in excel, Excel Format of Project Report and CMA Data, Project Report Bank Loan Excel
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And before diversifying/venturing into any product, they wish to study the following aspects of the identified product:

- Good Present/Future Demand
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- 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,
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Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation
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