**ZINC OXIDE FROM ZINC DROSS**

<table>
<thead>
<tr>
<th><strong>Capacity:</strong></th>
<th>3000 MT/ Annum</th>
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<tbody>
<tr>
<td><strong>Plant and machinery cost:</strong></td>
<td>132.00 Lakh</td>
</tr>
<tr>
<td><strong>Working Capital:</strong></td>
<td>0.00 Lakh</td>
</tr>
<tr>
<td><strong>Rate of return(ROR):</strong></td>
<td>38.00 %</td>
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<td><strong>Break Even Point (BEP):</strong></td>
<td>49.00 %</td>
</tr>
<tr>
<td><strong>TCI:</strong></td>
<td>401.00 Lakh</td>
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<tr>
<td><strong>Cost of Project:</strong></td>
<td>401.00 Lakh</td>
</tr>
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Although zinc oxide has been known since ancient times, its use as a pigment is relatively recent. It was developed as a pigment in place of basic lead carbonate. The lead pigment was superseded because it turned black on atmospheric exposure. Production of zinc oxide by burning zinc in air was developed by Le Clair in France in 1840, hence the French Process. Zinc oxide was the prime white pigment for another 100 years, when titanium dioxide was developed as an alternative with superior opacity to zinc oxide. Zinc dross is obtained from the recovery of zinc. The zinc types may be recovered from galvanized sheets, batteries, car components, galvanizing processes, etc. Zinc ashes are formed on the surface of molten zinc baths, and whilst primarily zinc oxide, particles of finely divided zinc will also adhere to the oxide. The various types of zinc are treated by processes to produce pure zinc metal. This is by far the most important Zinc compound. Zinc Oxide is valuable both for direct application and for production of other zinc compounds. Pure zinc oxide is white at ordinary temperatures, becoming yellow when hot. Its density depends to some extent on the method of manufacture; the accepted value is 5.68 gl cm3. ZnO is a IIIVI compound semiconductor whose iconicity resides at the borderline between the covalent and ionic semiconductors. Uses & Applications 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. 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. 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 thyrotophic consistency in paints. 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. Market Survey Demand of Zinc oxide is increasing day by day because of setting up of more and more paint and plastic industries. moreover, 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, paper, cosmetic, crockery, petroleum etc. It can be easily visualized that demand for any material consumed by such growth oriented industries will always be on the use.