Paper Manufacturing Plant  With Pulp from Bamboo, Wood and Grass

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
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<tbody>
<tr>
<td>Capacity</td>
<td>1,50,000 MT/Annum</td>
</tr>
<tr>
<td>Plant and machinery cost:</td>
<td>38424.00 Lakh</td>
</tr>
<tr>
<td>Working Capital</td>
<td>0.00 Lakh</td>
</tr>
<tr>
<td>Rate of return(ROR)</td>
<td>25.00 %</td>
</tr>
<tr>
<td>Break Even Point (BEP):</td>
<td>42.00 %</td>
</tr>
<tr>
<td>TCI</td>
<td>49107.00 Lakh</td>
</tr>
<tr>
<td>Cost of Project</td>
<td>49107.00 Lakh</td>
</tr>
</tbody>
</table>
Paper is made of pulped cellulose fibers like wood, bamboo, cotton or flax. Papyrus is a thick, paper-like material produced from the pith of the Cyperus papyrus plant which was used in ancient Egypt and other Mediterranean cultures for writing long before the making of paper in China. The use of paper for various purposes is an essential feature of the modern society. Therefore pulp and paper manufacturing is very important part of modern industry. Pulp and paper production is based on the use of bamboo, wood or grass as raw material, but also on the consumption of large-scale chemicals, like chlorine, sodium hydroxide, etc. Approximately 25,000 plants with a woody stem are registered under the term wood. However, the different varieties clearly differ in terms of usability for the production of paper. Wood comes from trees and its types are Soft Wood, Hard wood, Abnormal wood. Wood is made up of cellulose fibres that are bound together by a material called lignin. In a pulp mill, the fibres are separated from one another into a mass of individual fibres. This is called wood pulp. Wood pulp currently represents 33% of the fibre used to make paper and board in the India. 6% of that is home produced and is used by the 2 integrated mills (that is a mill that carries out the entire papermaking process from tree to end product). None of these mills use fully mature grown trees, but rather small dimension timber (which is of no use to other commercial users such as furniture makers and builders), saw mill waste and forest thinnings. Bamboo is one of rapidly growing and high yielding woody plants. It produces a large biomass per unit area as compared to many other plants. Bamboo is classified as a grass, although it attains a considerable size and the stems or culms are quite hard and resistant to mechanical and chemical action. Bamboo fibre is considerably longer than most of the perennial grasses and annual plants and therefore, is comparable to coniferous wood pulp. The fibre is extraordinarily fine, 0.015 mm. Since the fibres are long and flexible, all kinds of paper area manufactured from it. Grasses, or more technically graminoids, are monocotyledonous, usually herbaceous plants with narrow leaves growing from the base. They include the “true grasses”, of the family Poaceae (also called Gramineae), as well as the sedges (Cyperaceae) and the rushes (Juncaceae). The true grasses include cereals, bamboo and the grasses of lawns (turf) and grassland. Sedges include many wild marsh and grassland plants, and some cultivated ones such as water chestnut (Eleocharis dulcis) and papyrus sedge (Cyperus papyrus). Some of the various grasses used for producing paper are: Esparto Grass, Switchgrass, Cogon Grass etc. Pulp technology deals with the liberation of fibres fixed in the wood or plant matrix. Pulp can be converted to a number of different products with a variety of applications and there by with a variety of product demands. Paper technology is the knowledge of how to unify the fibres to form the paper web. Paper is made by pulping wood, bleaching this pulp and then spreading it out into sheets to make it into paper. At various stages of the process, chemicals are used to give the paper particular properties, such as the bleaching chemicals that make paper white (and which also enable it to subsequently be coloured). Uses: Pulp Pulp is used for Paper and board production. The furnishing of pulps used depends on the quality on the finished paper. Chemical pulps are used for making nanocellulose. Dissolving pulp is used in making regenerated cellulose that is used textile and cellophane production. Fluff pulp is used in diapers, feminine hygiene products and nonwovens. Paper Paper may be impregnated, enameled, metalized, made to look like parchment, creped, water-proofed, waxed, glazed, sensitized, bent, turned, folded, twisted, crumpled, cut, torn, dissolved, macerated, molded, and embossed. It may be colored, coated, printed or even written on! It can be laminated with fabric, plastic and metal. It can be opaque, translucent or transparent. It is naturally combustible, or can be made "re-retardant. It may be a carrier or a barrier. It may be made tough enough to withstand acid, or soft enough for a baby’s skin. It can be read and worn as a garment. It can be re-used and recycled and it is made from a renewable, sustainable source. Market Survey Paper and Paperboards The world consumption of paper and paperboard is estimated at over 300 mn tonne a year. It is constituted broadly of 30% of cultural papers (writing and printing), 14% of newsprint, and the balance of kraft and packaging paper including...
paperboards. The Indian production is about 2 to 3% of the global total. The Indian market is today growing at three times the rate of the global average. India's paper industry plans to invest USD 2.5 bn in the next two three years to add 2 mn tpa of paper and paper products production capacity. It will also help in improving cost-competitiveness. The Indian paper industry is one of the traditional industries of India consisting of over 500 units with an installed capacity (excluding newsprint) of over 7.5 mn tonne per annum. India has become self-sufficient in paper except for special varieties such as high quality bond paper and newsprint. The industry has progressed in the sense that dependence on wood-based raw material has come down to approximately 40%. Bagasse (about 33%) and waste paper (over 27%) now constitute more than 60% of the raw material base. The consumption of paper products is growing at a fast pace of around 6.5% and is expected to further go up in future. The industry now uses three sources of raw materials - recycled paper, wood and agro based, and waste. The recycled paper, comparatively cheaper, comprises almost 40% of the total raw material requirements at present. Major players from the paper industry had lined up close to $2.5 bn worth of investment. For instance, AP Paper planned for a capacity of 22,000 tpa at a cost of Rs 12.6 bn. Century Textiles is putting up 70,000 tpa at a cost of Rs 3.85 bn. The largest investment is coming from ITC with a 200,000 tpa pulp and paper capacity at a cost of Rs 25 bn. JK Paper, Seshasayee Paper, TN Newsprint and West Coast Paper are also ramping up capacities. In the meantime the industry had witnessed some significant takeovers: Triveni Tissues by ITC, Sewa Paper by Ballarpur, Central Pulp Mills by JK Corp. India is the 15th largest paper manufacturer in the world, accounting for ~2.5% of the worldâ€™s output. India is the worldâ€™s fastest growing paper market, growing at a CAGR of 7.3% over FY 06-11. Domestic paper & paperboard demand is closely linked to economic activity as demand has grown at an average 0.9x multiple of GDP in the past 5 years. Over the next five years, paper demand is projected to grow from 10.8 Million Tons in FY 11 to 14.7 Million Tons in FY 16, representing a CAGR of 6.4% and GDP multiple of 0.8x. Over the long-term, the countryâ€™s paper demand is looking structurally positive as Indiaâ€™s per capita paper consumption of 8.8 kg is well behind the global per capita consumption of 58 kg. The Indian Paper Industry is a booming industry and is expected to grow in the years to come. The usage of paper cannot be ignored and this awareness is bound to bring about changes in the paper industry for the better. It is a well known fact that the use of plastic is being objected to these days. The reason being, there are few plastics which do not possess the property of being degradable, as such, use of plastic is being discouraged. Wood timber forms the major raw material in the Indian paper industry. Therefore, forests determine the extent to which the Indian paper industry can flourish. The Paper industry is a priority sector for foreign collaboration and foreign equity participation upto 100% receives automatic approval by Reserve Bank of India. Several fiscal incentives have also been provided to the paper industry, particularly to those mills which are based on non-conventional raw material. Few Indian Major Players are as under Chadha Papers Ltd. Circar Paper Mills Ltd. Coral Newsprints Ltd. Dadrawala Papers Ltd. Danalakshmi Paper Mills Pvt. Ltd. Eggro Paper Moulds Ltd. Ellora Paper Mills Ltd. Gateway Speciality Papers Ltd. Gaurav Paper Mills Ltd. Hindustan Paper Corpn. Ltd. Khanna Paper Mills Ltd. Mukerian Papers Ltd. Mysore Paper Mills Ltd. Nagaland Pulp & Paper Co. Ltd. Nath Pulp & Paper Mills Ltd. R T Paper Boards Ltd. Rajalakshmi Paper Mills Ltd. Rama Paper Mills Ltd. Rohit Tissue Ltd. Sai Rayalseema Paper Mills Ltd. Sangal Papers Ltd. Satia Industries Ltd. Shiva Paper Mills Ltd. Shree Bhawani Paper Mills Ltd. Shree Industries Ltd. Shree Rajeshwaranand Paper Mills Ltd. Shree Vindhya Paper Mills Ltd. Sri Vishnu Annamalaiyar Paper Mills Ltd. Surya Chandra Paper Mills Ltd. Tamil Nadu Newsprint & Papers Ltd. Vidarbha Paper Mills Ltd.
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