# **HI-TECH PROJECTS**

(An Industrial Monthly Magazine on New Project Opportunities and Industrial Technologies)

> JANUARY 2020 Issue (E-copy)



# ENGINEERS INDIA RESEARCH INSTITUTE

Regd. Off : 4449, Nal Sarak, Main Road, Delhi - 110 006 (India) \* Ph: +91 9811437895, 9289151047, 91-11-23918117, 43658117, 45120361 \* E-Mail : eiri@eiriindia.org, eiritechnology@gmail.com

\* Website: www.eirlindia.org, www.industrialprojects.in \* PayTM: 9811437895

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# **MOST DEMANDABLE PROJECTS**

#### STAINLESS STEEL PIPES MANUFACTURING [3334]

Stainless steels are iron-based alloys usually containing at least 11.5% chromium. Other elements, nickel being the most Important, may be added in combination with chromium to obtain special properties. Stainless steels are highly resistant to corrosive attack and to oxidation at high temperatures. in general, resistance to corrosion and oxidation increases progressively, though not proportionately, with the increase in chromium content. Stainless steel pipe and tubing are used for a variety of reasons: to resist corrosion and oxidation. to resist high temperatures, for cleanliness and low maintenance costs, and to maintain the purity of materials which come In contact with stainless. The inherent characteristics of stainless steel permits the design of thin wall piping systems without fear of early failure due to corrosion. The use of fusion welding to join such piping eliminates the need for threading. Type 304 stainless is the most widely used analysis for general corrosive resistant tubing and pipe applications, it is used in chemical plants, refineries, paper mills, and food processing industries. Type 304 has a maximum carbon content of .08%. It is not recommended for use in the temperature range between 800° F and 1650° F due to carbide precipitation at the grain boundaries which can result in inter-granular corrosion and early failure under certain conditions. Type 304L. Is the same as 304 except that.03% maximum carbon content is maintained which precludes carbon precipitation and permits the use of this analysis in welded assemblies under more severe corrosive conditions. Type 318 is much more resistant to nitting than other chromium nickel allovs due to the addition of 2% to 3% molybdenum. it is particularly valuable wherever acids, brines, sulphur water, seawater or halogen salts are encountered. Type 316 is widely used in the sulphite paper industry and for manufacturing chemical plant apparatus, photographic equipment, and plastics. Type 316L, like 304L, is held to a maximum carbon content of .03%. This permits its use in welded assemblies without the need of final heat treatment. It is used extensively for pipe assemblies with welded fitting. Other fields where stainless steel pipe and tubing are used are: aviation, electronics, automotive, cyrogenic, marine, air conditioning and heating, medical, architectural and textiles. COST ESTIMATION

# Plant Capacity 4 MT/Day Land & Building (800 sq.mt) Rs. 4.68 Cr. Plant & Machinery Rs. 2.28 Cr. W.C. for 2 Months Rs. 4.49 Cr. Total Capital Investment Rs. 12.26 Cr. Rate of Return 33%

Break Even Point 48%

### BOXES AUTOMATIC PLANT (CHINA MACHINE BASED) [3335]

The materials now available for packaging are paper and paper products, metal containers and foils, glass, plastics-rigid and flexible, cellulosic films, textiles including jute, woven plastics and wood. Among the packaging materials, paper and paper based products continue to occupy a predominent place. Paper based materials used for packaging include bleached and unbleached kraft, corrugated and solid fiber boards and a large variety of converted items like wax coated, plastic coated, bitumen coated etc. Corrugated and solid fibre board boxes have replaced the conventional wooden boxes as transport containers because of their light weight and satisfactory strength. There are, however, several areas in which this sector is laggin behind the developed countries; they include mainly production of parchment paper for use in packaging of biscuits etc. Sack Kraft paper and high strength Kraft for producing corrugated fibre board of good strenath characteristics. Packaging has been assuming importance in the context of growth of industries in general and consumer industries in particular. Paper is one of the most important materials that enters packaging. Paper is extensively used for making boxes, bags, sealing tapes, drums and tubes and as cushioning materials. Paper makers in the country are becoming conscious of the needs of container industry and are working to improve the existing qualities. In India textile, tea, tobacco and coffee are probably the largest consumers of papers. Out of the total paper production about 35 per cent goes to the packaging industry With the advancement of industry, the production of paper and paper board is bound to increase, and the major increase will be in the field of packaging papers and boards. Paper is intact replacing the older materials used for packaging. In addition paper in packaging is economical; light easy to handle and superior. Corrugated boxes and solid fibre containers are extensively being used in place of wooden boxes. COST ESTIMATION

Plant Capacity	25 Ton/Day	
Land & Building (5000 sq.mt)	Rs. 5.43 Cr.	
Plant & Machinery	Rs. 2.73 Cr.	
W.C. for 1 Month	Rs. 4.53 Cr.	
Total Capital Investment	Rs. 12.96 Cr.	
Rate of Return	24%	
Break Even Point	52%	
*****	*****	
AEROPRESS COFFEE MAKER		
[3336]		
The AeroPress is a device	for brewing	

coffee. It was invented in 2005 by Aerobie president Alan Adler. Coffee is steeped for 10-50 seconds (depending on grind and preferred strength) and then forced through a filter by pressing the plunger through the tube. The AeroPress uses air pressure, forcing the water through by pushing the plunger down. The AeroPress is a simple device, with a chamber made from tough, heat-resistant plastic It uses a plunger to force water through the coffee which will be familiar to French pressusers The pressurization that occurs in the plunging action is similar to an espresso machine. This AeroPress brewing system makes coffee by forcing water through coffee under pressure. The result is a concentrated brew of coffee that you can then do different things with. These instructions focus on brewing the coffee and then diluting it with hot water to normal strength.

#### COST ESTIMATION

Plant Capacity	1000 Nos/Day
Land & Building (2000 sq.m	nt) Rs. 3.04 Cr.
Plant & Machinery	Rs. 3.39 Cr.
W.C. for 4 Months	Rs. 5.71 Cr.
Total Capital Investment	Rs. 12.52 Cr.
Rate of Return	59%
Break Even Point	33%
*****	*****

#### DETERGENT SOAP AND POWDER MANUFACTURING [3337]

Synthetic detergents occupy a vital place in the present age particularly when the modern society is constantly looking for quick, effective and economic cleaning agents. Synthetic detergents emerged as a regular industry after Second World War only. The development of this industry is closely linked with Petro-chemical industry which forms the basis for its raw materials. Detergents when dissolved in water, acquire better cleaning properties and hence facilitates easy removal of dirt 8 dust and grease etc. Apart from their use in clothes washing, detergents also have applications in the following industries. 1 In industry, in laundry and dry cleaning. 2. In textile processing, grain milling, metal plating and foods canning. 3. In dairy foods and beverages processing and in restaurants. 4. In plant maintenance and industrial house-keeping. The principal types of synthetic detergents are an ionic non-ionic and employtics. Sodium dodecvle benzene sulphonate is an example of the ionic type while nylon phenol nylone oxide obtained from ethylene oxide is the non-ionic type. The amploytic detergents like the alkyl amino propionates behave as cations in acidic solutions and like anions in alkaline solution. Among the numerous detergent powders are available today in the market eg. Fena, Hipoline, T.Series, Areal, Surf, Sunlight, Nirma, Wheel detergent powders and cakes are most popular. Soaps are the earliest form of detergents. Though a

Edible Oils, Essential Oils and Lubricating Oils Industry			
		preservation and storage	
Agarbatti & allied	Extraction of jasmine essence	Oleoresin from spices	
Agarbatti perfumery compound	Extraction of large cardamom oil	Olive oil plant	
Air/oil/fuel filter	Extraction of oil from oil seed expander	Palm kernel oil extraction from palm	
Ajowan extraction from ajowan seeds	extrusionTechnology)	kernel expeller (pke)	
Bees wax manufacture	Extraction of wild apricot (chulli) oil	Palm oil	
Bees wax refining & bleaching	Fat liquor sulphated oil	Palm oil	
Bio-diesel from algae	Fish oil		
Blending of lube oil (blending of	Food grade lubricant or grease	Palm oil crushing unit Palmrosa oil from grass	
lubricating oils & manufacture of	Fractional distillation of crude oil	Paraffin wax	
greases)	Fractional distillation of crude oil	Paraffin wax from slack wax	
Brake oil (brake fluid)	Fractional distillation of essential oil &		
Calcium base grease	medicinal plant extract	Peppermint oil	
Camphor	Fuel oil from jatropha (jatropha bio-diesel	Phenyl pine oil based & black and white	
Candles (semi automatic)	oil extraction from jatropha seed)	Pouches filling and packaging of edible oil	
Cardamom oil	Garlic oil & powder	-	
Cardmom oil (cap:20 kg/day)		Rajnigandha oil	
Castor oil	Geraniol citronellal & hydroxy citronellol	Re-refining of used engine oil	
	Ginger oil, sandalwood oil & nagarmotha	Re-refining of used lubricating oils	
Castor oil & its derivatives oleoresin,Turkey red oil, dco, hco,	oil Grease manufacturing	Reclamation of hydraulic oils	
sebacic acid, 12- hydroxy stearic acid		Reclamation of Transformer oils	
Castor oil and its derivatives oleo	Ground nut oil Ground nut oil mill	Reclamation of used engine oil (by	
		vacuum distillation process)	
resin, Turkey red oil, dco, hco, sebacic	Ground nut processing	Reclamation of used engine oils	
acid 12-hydroxy stearic acid Castor oil derivative oleoresins	Hair removing wax	Refined oil- sunflower oil, groundnut oil,	
Castor oli derivative oleoresins Chilli oil	HighTemperature grease Integrated wax complex	staff flower oil & cotton seed oil	
Citronella oils	5	Refined vegetable oil	
	lonone from lemon grass oil	Refining of palm oil, sunflower oil &	
Clove oil	Jasmine & lilly flower oil	groundnut oil	
Compressor oils	Jatropha bio-diesel	Refining of palm oil, sunflower oil and	
Concentrate of rose, jasmine & lily etc.	Jatropha biodiesel oil extraction from	cottonseed oils	
Core oil from cashewnut shell	jatropha seed	Rice bran oil (rbo)	
Corn oil	Kesh kalaTel (vasmol or godrej	Rose crystals	
Corn oil (maize oil)	keshkalaTelType)	Rose oil	
Cotton seed oil solvent extraction plant	Lemon grass oil	Rust prevention lubricating oil	
(capacity 150Ton/day)	Lemon grass oil production	Rust prevention oils	
Crude edible oil refining (refining of	Liquid paraffin	Seed oil extraction unit	
edible oils)	Lube oil & grease	Seeds grading and processing	
Crude edible oil refining (refining of	Lube oil & grease from used engine oils	Silicon grease	
edible oils)	Lube oil blending greases plant	Silicone oil	
Crude oil refining	Lube oil blending with greases	Silicone oil manufacturing	
Curcumin & Turmeric oil from Turmeric	Lubricating oil	Smokeless candle	
Cutting oil	Lubricating oil repacking and	Solvent extraction & refinning	
Decolourisation of refined rice bran oil	manufacture of greases	(soyabean)	
(edible grade)	Margarine butter (low cholestrol) from	Solvent extraction & refinning	
Dehydrated castor oil	vegetable oil	(soyabean) (capacity 250 mt/day & 50	
Dhoop batti	Marorphali powder and oil (powder and	mt/day oil refining)	
Dot-4 brake oil	extraction of oil frommarorphali)	Solvent extraction of rice bran oil	
Edible oil extraction & refining	Menthol crystals	Solvent extraction plant (oil cake based)	
Edible oil extraction and refining	Menthol oil & crystal	Soya oil and cattle feed from soyabean	
Edible oil manufacturing 200Tpd	Micro crystalline wax	Spice oil & oleoresins	
Essential oils distillation unit (basil &	MineralTurpentine oil (m.t.o.)from	Spice oils or oleoresins (extraction of	
cornmint)	petroleum (superior kerosene oil or other	essential oil (cardamon, jeera, ajowan,	
Essential oils from wood flex and chips	material)	ginger oil & other spice)	
(cyperus wood oil, rose wood oil, sandal	Mustard oil (edible oil)	Sunflower oil	
wood oil)	Mustard oil (expeller)	Synthetic almond oil	
Essential oils manufacturing	Mustard oil and flour mill (integrated unit)	Synthetic ghee Contact	
Ethanol (bio fuel) from rice straw	Mustard oil extraction & refining plant	Synthetic musk eiri@eiriindia.org	
Eucalyptus oil	Mustard oil plant	Synthetic wax for the	
Eugenol from cinnamon leaf oil	Mustard oil processing (expeller process)	letion grease	
Eugenol from cinnamon oil	Neem oil captive consumption in		
Extra highTemperature lubricating	production of neem coated urea (plant	Turbine oil	
grease (2500-30000C)	capacity 2.00 mt per day)	Turmeric oil extraction from dryTurmeric	
Extraction & distillation of essential oils,	Oil filling plant	Turmeric oil oleoresin	
oleoresins, flavours & fragrances	Oil from artemisia herbs	Vanaspati unit	
Extraction of essential oils (by super	Oil seed & procuement,	Vegetable oil extraction & refining	
critical method)	processing, preservation and storage	Virgin coconut oil	
Extraction of essential oils (cardamom,	Oil service of cars	Wax crayons	
jeera, ajowan, ginger oils, etc. &	Oil soap	Wax emulsion forTextiles	
packaging of ground spices)	Oils and storage	Wetting oil (non ionic)	
Extraction of essential oils/natural	Oilseeds procurement, processing,	Wire drawing lubricant	

Hi-Tech Projects, Jan'20, www.eiriindia.org # 04

# **Start Your Own Industry**

present the term detergent is used for synthetic detergents derived from petroleum products. The origin of soap making is unknown. The phoenicians were acquainted with it by at least 600 B.C. and it was known the gauls not later than about 300 B.C. From the 1940's on-ward, synthetic detergent have expanded rapidly all over the world. Their rapid development has been stimulated by the enormous and fast growth of the international petrochemical industry. The transition from conventional hard soaps to synthetic detergent cake has been rapid and irreversible response by consumers. So that to-day, synthetic detergent accounts in most developed and under developing countries in the world. To improve detergency of the detergent cakes powders. certain other components were added to it known as builders, synergers, fillers and

brightenere etc.	
COST ESTIMATION	
Plant Capacity	13 Ton/Day
Land & Building (1360 sq.ft)	Rs. 24 Lacs
Plant & Machinery	Rs. 12 Lacs
W.C. for 2 Months	Rs. 2.81 Cr.
Total Capital Investment	Rs. 3.22 Cr.
Rate of Return	40%
Break Even Point	36%

#### WATER BASED PIGMENT **EMULSION MANUFACTURING** AND FORMULATION FOR TEXTILE [3338]

Pigment emulsions are dispersed pigment used for textile printing the pastes are processed to obtain excellent dispersion and can be easily stirred into textile binder without further grinding. Pigment emulsion give high purity of tone and brilliant shades on fabric with suitable binder. These pastes can be inter mixed to get a variety of shades without any difficulty. The difference between dye-stuff chemically fixed on the fibre & pigment is that, in pigment printing the ultimate fastness to rubbing or washing is wholly dependent on the mechanical adhesion of the pigment to the fibre, which is obtained by various method. Products like egg or blood albumin which have a tendency to coagulate & become insoluble on drying, may bind the pigment sufficiently to give the desired fastness. By the use of this product, a slurry of the pigment in water is incorporated into a suitable thickner 8 albumin is used as a binding agent. Solvent soluble cellulose derivatives are also used on drying solvent evaporates leaving cellulose in precipitated condition, binding at the same time. Rubber latex compound have also been used to some extent. Synthetic resin have also been rather successfully used for printing of pigment. Solvent soluble resin bind the pigment to fibre very well so that ever

metallic powders can be bound satisfactorily.

COST ESTIMATIO	N
Plant Capacity	500 Kg./Day
Land & Building (600 sq.ft)	Rs. 23 Lacs
Plant & Machinery	Rs. 20 Lacs
W.C. for 1 Month	Rs. 41 Lacs
Total Capital Investment	Rs. 88 Lacs
Rate of Return	25%
Break Even Point	66%
*****	*******

#### HERBAL EXTRACT, ESSENTIAL **OILS, SPICES AND VALUE ADDITION** [3339]

Essential oil also called etheral or volatile oils are volatile odoriferous bodies of an oily character derived mostly form vegetable sources. They occur in small concentrations in special cells, glands or ducts, either in one particular organ of the plant or distributed over many part e.g. leaves, barks, roots, flowers or fruits. Occasionally, they are present in combination with sugars, as glycosides, e.g. amyodalin in bitter almonds and sinigrin in mustard seeds, and are liberated when the glycosides are hydrolyzed. Essential oils are insoluble in water, but freely soluble in alcohol, either, fatty oils and mineral oils. They are commonly liquid at ordinary temperature and some of them deposit solid matters on standing most of the essential oils are optically active, are lighter than water and possess high refractive index. They are composed of a number of chemical compounds:-Hydrocarbons, Alcohols, Ethers Aldehydes Ketones, Oxides and lactones etc. M. Indica is found largely in the greater part of India upto an altitude of 1200 M. Its bark is dark colour and cracked. Its leaves are clustered near the ouds of the branches. It is coriaceous, pubescent when young almost glabrous when mature the flowers of this tree are dense fasciles near ends of branches. They may be small, calyx, corolla tubular and fleshy. M. Indica is found in mixed deciduous forests, usually of a somewhat dry type, often growing on rocky and sandy soil and turning on the deccan trap. It is common throughout central India. Mumbai and Andhra Pradesh. It is also common in the drier type of sal forests in Madhva Pradesh. It is much planted in the plains of northern India and Deccon peninsula when forest land is cleared for cultivation, are corefully prov

manua trees are carefully pr		
COST ESTIMATION		
Land & Building (2000 sq.mt)	Rs. 1.45 Cr.	
Plant & Machinery	Rs. 1.78 Cr.	
W.C. for 2 Months	Rs. 2.12 Cr.	
Total Capital Investment	Rs. 88 Lacs	
Rate of Return	24%	h
Break Even Point	58%	li
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		1.

#### **CEMENT PLANT [3340]** COST ESTIMATION

	Plant Capacity	2000 MT/Day
'	Land & Building (30 Acre)	Rs. 49.38 Cr.
;	Plant & Machinery	Rs. 140 Cr.
;	W.C. for 2 Months	Rs. 42.03 Cr.
;	Total Capital Investment	Rs. 237.51 Cr.
;	Rate of Return	31%
,	Break Even Point	50%
	*****	*****

#### PLASTIC RECYCLING AND PLASTIC PRODUCTS PLANT (TANKS, BUCKETS, MUGS, JUGS, DUSTBIN, ROAD DIVIDER ETC.) [3341]

Plastic recycling is the process of recovering scrap or waste plastic and reprocessing the material into useful products. Since the vast majority of plastic is non-biodegradable, recycling is a part of global efforts to reduce plastic in the waste stream especially the approximately eight million tons of waste plastic that enter the Earth's ocean every vear. This helps to reduce the high rates of plastic pollution. Plastic recycling includes taking any type of plastic, sorting it into different polymers and then chipping it and then melting it down into pellets After this stage, it can then be used to make items of any sort such as plastic chairs and tables. Soft plastics are also recycled such as polyethylene film and bags. This closed-loop operation has taken place since the 1970s and has made the . production of some plastic products amongst the most efficient operations today. Compared with lucrative recycling of metal and similar to the low value of glass, plastic polymers recycling is often more challenging because of low density and low value. There are also numerous technical hurdles to overcome when recycling plastic. A macro molecule interacts with its environment along its entire length, so total energy involved in mixing it is largely due to the product side stoichiometry. Heating alone is not enough to dissolve such a large molecule, so plastics must often be of nearly identical . composition to mix efficiently.

#### COST ESTIMATION

Land & Building (2.5 Acre)	Rs. 5.04 Cr.
Plant & Machinery	Rs. 2 Cr.
W.C. for 2 Months	Rs. 6.18 Cr.
Total Capital Investment	Rs. 14.16
Cr.	
Rate of Return	37%
Decels Frien Deint	E00/

#### Break Even Point 50% **KRAFT PAPER FROM WASTE**

#### CARTON BOXES [3342]

Paper form a commodity of prime importance to day from the parts of view of mass communication, education, and industrial and economic growth. The art of

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STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS ABOUT THE JOURNAL		
HI-TECH PF	ROJECTS	
From IV (Se	e Rule 8)	
Place of Public	cation Delhi	
Periodicity of Publication:	Monthly	
Printer's Name :	Sudhir Kumar Gupta	
Whether Citizen of India:	Yes	
Address :	4449 Nai Sarak,	
	Delhi- 6	
Publisher's Name :		
Whether Citizen of India:	Yes	
Address :	4/35, Roop Nagar, Delhi- 7	
Editor's Name :	Sudhir Kumar Gupta	
Whether Citizen of India:	Yes	
Address :	4/35, Roop Nagar,	
	Delhi- 7	
Name & Address :	Engineers India	
	Research Institute,	
	4449, NaiSarak,	
	Delhi - 6	
Statement of individuals w	ho own the newspape	

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paper making was first discovered in China in and around 2nd century. B.C. pan where it travelled slowly west ward and reached the prantiens of Europe. By the end of 14th century, a member of paper mill existed in Europe, particularly in Spain, Italy, France and Germany. the invention of printing in 1956 brought a vastly in creased demand for paper, and paper-manufacturing was introduced to England, America followed in 1690. Agricultural residues, such as bagasse, rice husk, wheat husk jute sticks, grasses, etc are fast becoming popular materials for paper making, considerable attention is being given to the utilization of various agricultural by products for preparing pulp for paper manufacture landable efforts are being make in this direction. Paper production requires a disintegration of the bulky fibrous material to individual or small agglomerate fibres. This is called pulping. The ideal fibre for high grade paper should be long, high in cellulose content and low in ligrin content. Most ideal raw material for paper products is bamboo. Other sources are bagasse and hardwoods like jute stick must be developed and good quality paper pulp make by blending with bamboo fibre. Over recent years, the emergencies of mini paper plants on a reality seems to hold the promise of adding new horizons to the development and growth of Indian paper industry. In may be noted with concern that the large sector of this industry for auite sometime, has failed to sustain any appreciable growth due to various factors eq. The plant being highly capital intensive low rates of return and the raw material

bottlenecks etc. mini paper plants are W.C. for 2 Months viewed as an effective remedy to the current ailments of the paper industry as they involve much less capital cost and are proved to be technically feasible and economically viable these plants can be erected on the basis of fully indigenous expertise, knowhow and machinery. Moreover, they after an effective means of lasing considerably the burden an the conventional raw materials. COST ESTIMATION

55 MT/Day

Rs. 15.97 Cr.

Rs 25 79 Cr

Rs. 14.13 Cr.

Rs 57 70 Cr

35%

51%

#### Plant Capacity Land & Building (8 Acre) Plant & Machinery W.C. for 3 Months Total Capital Investment Rate of Return

Break Even Point

#### **ELECTRIC SCOOTER [3343]**

An electric scooter is vehicle that is powered by electricity, and that it will require periodic plug-in charging in order to function. They usually come in a two wheel format although three wheels models exist too. They have a step-through frame, where the rider can stand while driving the vehicle. Some models might even offer a seat, but this is just an addition on the step-through platform or frame. This is the key difference between electric scooters and electric motorcycles, where the later do not have a step-through frame, and directly provide a seat integrated in their frames. As previously said, the electric scooter requires electricity to function, which will be stored in some type of rechargeable battery that is attached to the frame. Some of the most common type of batteries for scooters are lithium ion batteries, and sealed lead acid batteries

#### COST ESTIMATION

Plant Capacity	100 Nos/Month
Land & Building (4000	sq.mt.)Rs. 2.52 Cr
Plant & Machinery	Rs. 94.65 Lacs
W.C. for 2 Months	Rs. 1.10 Cr
Total Capital Investmen	t Rs. 4.79 Cr
Rate of Return	27%
Break Even Point	64%
****	*****

#### **BINDING WIRE FOR CONSTRUCTION PURPOSE [3344]**

Binding wire is used for binding reinforcement construction. It is made of mild steel inker, which takes place in the form of thermal processing annealing. Binding wire is also called annealed wire. Mild Steel Binding Wire is easy to weld and has good ductility & malleability properties. Mild Steel Binding Wire is extensively used construction, agriculture, and in manufacturing industries. Mild Steel Binding Wire available in various types of thickness and lengths.

#### COST ESTIMATION Plant Capacity 80 MT/Day Land & Building (5000 sq.mt) Rs. 4.45 Cr Plant & Machinery Rs. 3.36 Cr

Rs 17 80 Cr Total Capital Investment Rs. 26.05 Cr Rate of Return 43% Break Even Point

#### **BIOMASS BRIQUETTES [3345]**

41%

Briquetting is the technology to convert all types of agricultural and forestry waste into solid fuel. Briquettes are formed in cylindrical logs using high mechanical pressure without the use of chemical or binder. The product is a replacement to conventional fossil fuels and can be used across various manufacturing industries such as boilers, furnaces and kilns. Bio-Briquette is an eco friendly solid biofuel which helps to reduce pollution, contributing to greener environment and save worthy foreign exchange. Briquetting works on the basic concept of "Wealth from Waste" The briquettes are used for energy generation helping farmers to earn money from the waste. Briquetting of residues takes place with the application of pressure heat and on the loose materials to produce the briquettes. No addition of any binder chemicals is required so it is 100 % natural Fuel is the primary need for any country that whose backbone lies in the Industrial sector. More and more exhaustible sources of energy are diminishing each day. As a result, there is an immediate need to adopt new sources of energy which can help sustain the economic growth without any negative repercussions. India has approximately 141 million hectares of arable land and agricultural output is around 800 million tones, which in itself generates 750 million tones waste. Even after deducting 450 million tones, which is used as fodder 300 million tones could be used for biomass generation. Crop residues which are not used as animal fodder, such as cane trash paddy straw, coconut stalks, branches and mustard waste, are estimated to total around 75 million tons per annum. All the biomass and wood wastes are collected in large storage units and are recycled to produce solid fuel that can be used to heat industrial boilers. This is a renewable source of energy and is perfect in countries that produce tones of agriculture and forest waste each year. Every year millions of tons of agricultural waste are generated These are either non-used or burn inefficiently in their loose form causing air pollution. Handling and transportation of these materials is difficult due to their low bulk density. These wastes can provide a renewable source of energy by converting into high-density fuel briquettes without addition of any binder. Not only does it put the agro-forest waste to good use, but it also becomes a source of revenue and saves the Global environment by producing clean and green energy. The advantages of biomass briggetting are by no means limited to its use in modern industrial plants or solid fuel boilers. Indeed

# **Top Industries to Start**

in developing countries a far bigger percentage of the population cover their energy needs with biomass alone, where their primary need is for heat energy for cooking and heating. International development cooperation has accordingly long been focused on improving the basic energy supply in many countries around the world. It is notable that biomass briquettes have played a bigger part in many projects over recent years, such as those for distributing better stove technologies, for example. Next to adapted cooking behaviors and improved cooking appliances, the fuel can play one important role in improving the overall situation of households. Biomass briquettes can be produced out of many field or process residues and burning them in cooking appliances instead of traditional fuels as logged and collected wood or charcoal can be an interesting alternative for business makers but also for fuel clients

 COST ESTIMATION

 Plant Capacity
 72 MT/Day

 Land & Building (1800 sq.mt) Rs.78.82 Lacs

 Plant & Machinery
 Rs. 66.60 Lacs

 W.C. for 2 Months
 Rs. 1.73 Cr.

 Total Capital Investment
 Rs. 3.81 Cr.

 Rate of Return
 48%

 Break Even Point
 44%

#### LAMI TUBE MANUFACTURING FOR PHARMA INDUSTRY [3346]

The laminated tube is created bringing together the advantages of both aluminum and plastic. Laminated tube suppliers in India, like Sorbead India, make use of the latest technology to create a tube, which 1) offers protection against light, air and humidity, 2) provides sufficient space for graphics and lastly 3) has the most aesthetic minimal seam. Laminated tubes find the maximum use in the pharmaceutical industry. High-end laminated tubes are mainly used to pack medicines that are in gel form. As they are manufactured as gels, one needs to be extra careful while packing and transporting these medicines as the chances of them getting spilled over are very high. This is where laminated tubes prove useful as their high gloss protective lacquer will keep the medicine safe and unadulterated. In the market, laminated tubes are available in many graphic modes and in different sizes and styles. There is something for everyone in the wide range of laminated tubes up for offer. They are made from a poly- foil-poly premise having polyethylene on both sides of a light gauge of foil. In some cases, paper is also used. In the first step, the laminate feed-stock material is enhanced by using letterpress or rotogravure printing. Next, the laminate tubes are created by placing the laminate material rolls onto the machine. Then the material is transferred onto a flat state and

moved through forming rolls where the tubes are shaped into different sizes, as per the demand. It then passes through hot temperatures, which joins the sides together to create the final cylindrical tube. In the third step, the tube moves towards the heading operation section where the preformed head and shoulder are attached to the tube top. This is done using heat generated from high-frequency energy The last stop is the capping section where the cap style, be it flat, fez or pedestal, is finally decided upon. Once the cap is fitted it is torqued according to customer requirements. Then the tube moves towards packing and is finally ready to be used. Laminated tubes are a perfect pressing answer for spillage evidence; carefully designed, safe pressing, while giving long life to the bundled item. It's not difficult to utilize and fabricate and financially savvy. There are numerous profits of covered tubes and not very many dangers. Other than being for all intents and purpose suitable to pharma restorative, oral forethought, nourishment commercial enterprises, Aluminum Tubes offer a huge scope of variety of designs and labeling on the packaging itself. Today, because of their high solidness, covered tubes are suitable for bundling a mixture of items in areas, for example, oral consideration, nourishment, beautifying agents, pharmaceuticals and mechanical utilize as well. Whether it is your general toothpaste, cake icing or a sunscreen moisturizer, all these are stuffed in Laminated Tubes, which make it simple and advantageous to utilize. COST ESTIMATION

Plant Capacity	1,00,000 Nos/Day
Land & Building (1500s	sq.mt) Rs.1.85 Cr
Plant & Machinery	Rs. 90 Lacs
W.C. for 2 Months	Rs. 87.88 Lacs
Total Capital Investmer	nt Rs. 3.76 Cr
Rate of Return	38%
Break Even Point	47%

#### SOLVENT EXTRACTION PLANT (SILK WORM PUPAE) [3347]

Silkworm pupae oil derived from reeling waste is a rich source of a-linolenic acid (ALA), which has multipal applications ALAs were added in sn-1, 3 positions in a triacylglycerol (TAG) to produce an APA human milk fat analogues (APA-HMFAs A: a-linolenic acid, P: palmitic acid). The optimum condition is that tripalmitin to free fatty acids of 1:12 (mole ratio) at 65°C for 48h using lipase Lipozyme RM IM. Results show that, the major TAG species that comprised APA-HMFAs were rich in ALA and palmitic acid, which contained 64.52% total unsaturated fatty acids (UFAs) and 97.05% PA at the sn-2 position. The melting point of APA was -27.5°C which is much lower than tripalmitin (40.5°C) indicating more plastic character. In addition, the practical application of alkyl caffeates as

liposoluble antioxidants in APA was developed. Alkyl caffeate showed a superior IC50 (1.25-1.66µg/mL) compared to butyl hydroxy anisd (1.67µg/mL) and Lascorbic acid-6-palmitate (L-AP) (1.87µg/ mL) in DPPH analysis. The addition of ethyl caffeate to oil achieved a higher UFAs content (73.58%) at hiah temperatures Overall APA was obtained from silkworm pupae oil successfully. and the addition of caffeates extended storage ranges for APA-HMFAs. Fats and oils are one of the most energy-rich food materials, which have the highest caloric values compared to other nutritional components. Current processes for the production of structured triacylglycerols (TAGs) from vegetable and animal oil focus or enzymatic transesterification to create the novel fat replacements. TAGs and human milk fat substitutes have been synthesized by enzymatic catalysis in many studies Compared with the chemical methods, enzymatic approaches for lipid modification are more attractive due to the production of desirable acyl moieties or esters via specific enzymatic catalysis. Enzymatic processes are environmentally friendly and can be applied under mild conditions ensuring greater product safety. Currently organic solvents with low water content are usually employed to improve enzyme performance, which is important to protect or controlacyl group migration to ensure a desired product synthesis. Human milk fat (HMF) is one of the major components of breast milk for newborn, term, and preterm infants. Thus, it supplies the highest fraction of an infant's required dietary energy and nutrients. The structure of HMF must be simulated to manufacture human milk fat analogues (HMFAs) for better digestion. The steric configu-ration of fatty acid is determined by chain length unsaturated and degree, and polyunsaturated fatty acids have higher steric hindrance. It was not clear if the polyunsaturated fatty acid could be served as feedstock in the lipase-catalyed HMF production. Human milk is characterized by the dominance of TAGs (>98% of HMF) which contain palmitic acid (C16:0, 20-40% of total FA) in the sn-2 position (70% of all palmitic acid) and unsaturated fatty acids (UFAs) on sn-1 and sn-3 positions Therefore, research on the synthesis of desirable structured TAGs focuses on the creation of TAGs rich in specific fatty acids in sn-2 position. Qin et al. investigated the incorpo-ration of different fatty acids (C8:0-C18:2) into PPP-enriched TAGs to produce HMFA through lipase-catalyzed reactions, and they also reported the degree of incorporation of different FAs into PPPenriched TAGs through acidolysis catalyzed by lipase. Essential fatty acids, such as a-linolenic acid (ALA, C18:3, ?-3), from agricultural Figure. Biosynthesis diagram of APA-style HMFAs from

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silkworm pupae oil via enzymatic transesterification. The photos were taken and modified by X. L., and the diagram was drawn by X. W. Sources, may be used as the substrate to formulate APAstyle HMFA for infant formula. A possible method would be to blend this product and 1. 3-dioleovl-2-palmitovlglycerol (OPO) enriched fats and minor lipids based on the chemical composition of HMF.

COST ESTIMATION Plant Capacity 12 Ton/Day Land & Building (6 Acres) Rs. 7.76 Cr Plant & Machinery Rs. 4.78 Cr W.C. for 3 Months Rs. 3.64 Cr Total Capital Investment Rs. 17.43 Cr Rate of Return 19% Break Even Point 56%

AEROSOL - PESTICIDES [3348] Aerosols are dispersions of liquid droplets or small solid particles in gases. Gaseous dispersions can be produced from atomizers, nebulizers, or insufflators. Pressurized containers utilizing various propellent gases for delivering chemical products through appropriately designed valve systems and actuator devices have been available. These propellent include liquefied gases or gas mixturers. Nonliquefied compressed gases are also used. The products can be produced in the form of suspensions, emulsion, gel, solutions, foam depending on the formulation, valve system, dip-tube, propellant, actuator and container. The word "aerosol" was first employed in the field of colloid chemistry to describe a suspension of small particles in air or gas in which radius of the particles was less than 50 micron. The suspended particles could be either solid or liquid. Dust, smoke and fog are examples of this class of aerosol. The particles in dusts may have diameter as small as 0.1 micron or less. The suspensions produce haze smoke is an aerosol consisting of solid particles, usually carbon, in air. Carbon smoke is composed of small particles with a radius of about 0.01 micron. The particle sizes in fogs are longer and range from about 4-50 micron in The first aerosol of any diameter. commercial significance, the aerosol insecticide, was defined in 1949 as a system of particles suspended in air where 80 % of the particles were less than 30 microns in diameter and no particles were larger than 50 micron. According to a recent CSMA glossary of terms, aerosol packaging is defined as " pressurizing sealed containers with liquefied or compressed gases so that the product is self-dispensing". The present aerosol industry is generally considered to have received its stimulus from the development of the aerosol insecticide used in world war II. The need for a portable insecticide dispenser became imperative because of the disease caused among overseas troops by insects. Packaging

technology plays an important role for aerosols containers which are usually made of metal, such as tinplate. (Sheet metal plated with tin) or aluminium generally with a protective coat of lacquer on the inside. The other components are valve & spring nozzle. The selection of nozzle is crucial for the tublence and particle size of spray. To ensure stability metal containers may be internally coated. These coatings must be acceptable in term of safety & product compatibility. The type of valve used depends upon the product use. It can be designed to deliver metered doses or to control the size of the delivered liquid droplets or solid particles. Various actuators or adaptor units can be attached for different purposes. (eg. to obtain different spray pattern). The aerosol insecticides were packaged in 1-lb heavy steel containers. The containers were made of two shells, drawn of 0.044 in steel and welded together. The cylinders were fitted with an oil-burner-type valve with swirl chambers. The containers were filled with a mixture of 90 wt % freon 12 and 10 wt % of a pyrethrin and sesame oil concentrate. A 4-inch metal dip tube, 0.017 inch in diameter, was attached to the valve, inside the container. The pressure in the aerosols was about 70 psig at 70 oF, and the blow-off release was set at 300 psig. The aerosol insecticides were named "big bombs" by westing house employees because of their resemblance to a small bomb. The insecticides were sold at 80 locations including department stores, groceries, supermarkets, hardware stores and filling stations. COST ESTIMATION

Plant Capacity	10,000 Cans/Day
Land & Building (1000 S	q.mt) Rs.83 Lacs
Plant & Machinery	Rs. 1.1 Cr.
W.C. for 1 Month	Rs. 1.7 Cr.
Total Capital Investment	Rs. 3.05 Cr.
Rate of Return	48%
Break Even Point	44%

#### **OIL DRILLING STARCH [3349]**

Starches are an environment-friendly drilling mud additive for water-based fluids. A drilling- mud additive used to control fluid loss in water muds ranging from freshwater to saturated- salt to high-pH lime muds. Starches have thermal stability. They are subject to bacterial attack unless protected by high salinity or bactericide. Drilling-grade natural starch has API/ISO specifications for quality. The use of starch typically causes a minimal increase in viscosity while effectively controlling fluid loss. Modified starch polymers provide improved high temperature fluid loss performance when incorporated into well drilling fluids. Starches are an environment-friendly drilling mud additive for water-based fluids. These starches are used as viscosifiers in oil well drilling and are exported 100% to the Middle East. These are also one of the key ingredients of a mud chemical system.

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# **Start Your Own Industry**

A drilling-mud additive used to control fluid loss in water muds ranging from freshwater to saturated-salt to high-pH lime muds. Starches have thermal stability to about 250°F [121°C]. They are subject to bacterial attack unless protected by high salinity or bactericide. Drilling-grade natural starch has API/ISO specifications for quality. Starches are carbohydrates of a general formula (C6H10O5)n and are derived from corn, wheat, oats, rice, potatoes, yucca and similar plants and vegetables. They consist of about 27% linear polymer (amylose) and about 73% branched polymer (amylopectin). The two polymers are intertwined within starch granules. Granules are insoluble in cold water, but soaking in hot water or under steam pressure ruptures their covering and the polymers hydrate into a colloidal suspension. This product is a pregelatinized starch and has been used in muds for many years. Amylose and amylopectin are nonionic polymers that do not interact with electrolytes. Derivatized starches, such as hydroxypropyl and carboxymethyl starches, are used in drillin fluids, completion fluids and various brine systems as well as in drilling-mud systems. The use of starch typically causes a minimal increase in viscosity while effectively controlling fluid loss. It is used for reducing fluid loss in a variety of water based drilling fluids and has beneficial secondary effects on mud rheology. In drilling wells, a liquid (mud) is pumped into the hole to clean and cool the drill bit and to flush to the surface the drill bit cuttings and suspending the drill cuttings while drilling is paused. The most important physical characteristics of the drilling fluid is the viscosity and the water holding/retaining characteristics. Starch is traditionally supplied as cold water soluble - either made by a semi moist/dry thermo-mechanical gelatinisation on screw extruders or by suspension reactions and subsequent drying on drum dryers. Wet reactions carried out in starch suspensions are easy to control and the resulting precisely engineered starches are of high uniform quality with wider applications. Potato starch retain fluids better than other starches due to the large size of its molecules.

#### COST ESTIMATION

 Plant Capacity
 5 MT/Day

 Land & Building (1200 Sq.mt)
 Rs.1.52 Cr

 Plant & Machinery
 Rs. 70 Lacs

 W.C. for 2 Months
 Rs. 92.87 Lacs

 Total Capital Investment
 Rs. 3.29 Cr

 Rate of Return
 15%

 Break Even Point
 67%

#### NEEM OIL PLANT (20 MT. SEED PROCESSING PER DAY) [3350]

Neem oil is a vegetable oil pressed from the fruits and seeds of the neem (Azadirachta indica), an evergreen tree which is endemic to the Indian subcontinent and has been introduced to many other areas in the tropics. It is the most important of the commercially available products of neem for organic farming and medicines. Neem oil varies in color; it can be golden yellow, yellowish brown, reddish brown, dark brown, greenish brown, or bright red. It has a rather strong odor that is said to combine the odours of peanut and garlic. It is composed mainly of triglycerides and contains many triterpenoid compounds which are responsible for the bitter taste It is hydrophobic in nature; in order to emulsify it in water for application purposes, it is formulated with surfactants. Azadirachtin is the most well known and studied triterpenoid in neem oil. The azadirachtin content of neem oil varies from 300ppm to over 2500ppm depending on the extraction technology and guality of the neem seeds crushed. Nimbin is another triterpenoid which has been credited with some of neem oil's properties as an antiseptic, antifungal, antipyretic and antihistamine.[1] Neem oil also contains several sterols, including (campesterol beta-sitosterol, stigmasterol)

COST ESTIMATION Plant Capacity 5 MT/Da Land & Building (4000 Sq.mt) Rs. 2.25 C Plant & Machinery Rs. 2.50 C Rs. 2.94 C W.C. for 2 Months Rs. 7.91 C Total Capital Investment Rate of Return 33% Break Even Point 49% E-RICKSHAW (5000 UNIT/MONTH)

#### [3351]

Electric rickshaws (also known as Tuk Tuk e-rickshaw) have been becoming more popular in some cities since 2008 as an alternative to auto rickshaws and pulled rickshaw because of their low fuel cost and less human effort compared to pulled rickshaws. They are being widely accepted as an alternative to Petrol/Diesel/CNG auto rickshaws. They are 3 wheels pulled by an electric motor ranging from 650-1400 Watts. They are mostly manufactured in China, only a few other countries manufacture these vehicles. Battery-run rickshaws could be a low-emitter complementary transport for the lowincome people, who suffer most from a lack of transport facility, if introduced in a systematic manner according to experts. The electric automobile did not easily develop into a viable means of transportation Research waned from 1920-1960 until environmental issues of pollution and diminishing natural resources reawakened the need of a more environmentally friendly means of transportation. Technologies that support a reliable battery and the weight of the needed number of batteries elevated the price of making an electric vehicle.[6] In 1837, Robert Davidson of Scotland appears to have been the builder of the first electric car, but it wasn't until the 1890s that electric cars were manufactured

and sold in Europe and America. During the late 1890s. United States roads were populated by more electric automobiles than those with internal combustion engines. E-Rickshaw is the most convenient and safe mode of local transportation of two or four passengers. E-rickshaw are commonly available in India and other parts under developed & developing countries for hiring on small rentals for limited time. Apart from E-Rickshaw, company will also make E-Rickshaw which can carry weight up to 300 kgs. E-Rickshaw drivers will obtain licence through which he/she can drive E-rickshaw in city. The entire assembly and fabrication work for mfg. E-Rickshaw performed in a highly automatic plants. Rims, Tyres, Brakes, Headlight, Taillight, Horn, Turning Lights & Traction Batteries, wire Harness, Throttle, Motor, & Controllers are purchased from the AIS approved companies. Whereas Company will make chasis & assemble the body parts alongwith painting & testing of the vehicle within the premises.

#### COST ESTIMATION

	Plant Capacity Land & Building (8000 Sq.mt) Plant & Machinery W.C. for 1 Month	200 Nos/Day
y	Land & Building (8000 Sq.mt)	Rs. 7.30 Cr
r	Plant & Machinery	Rs. 1.50 Cr
r	W.C. for 1 Month	Rs. 29.95 Cr
~	Total Capital Investment	Rs. 39.15 Cr
1	Rate of Return	62%
6	Break Even Point	24%
6	****	******

#### COPPER WIRE AND PVC CABLE [3352]

Wire is used to carry the current from one place to another A wire is a single conductor (material most commonly being copper or aluminium) while cable is two or more insulated wires wrapped in one jacket. Multiple conductors that have no insulation around would be classified as a single conductor. There are two main types of wires: solid or stranded. A solid wire is a single conductor that is either bare or insulated by a protective colored sheath. It offers low resistance and is perfect for use in higher frequencies. When inside a covering there are many thin strands of wires twisted together, it is called a stranded wire. Stranded wires are used where flexibility is important because which the wire can be used for a longer period. This type of wire have larger crosssectional area than solid wires for the same current carrying capacity. Stranding is process of twisting together of small wires to form a single larger conductor. Used to provide flexibility, ease of handling and vibration resistance. Copper Wire is a single electrical conductor manufactured out of Copper Ore. This widely used conductor can either be insulated or uninsulated. Having a moderate conductivity, it's used to transfer electricity with low voltage. Electrical wiring in buildings is the largest market for the copper industry worldwide. As per

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estimation, around half of the copper mines is consumed in manufacturing electrical wire and cable conductors.

#### COST ESTIMATION

Plant Capacity	1 MT/0
Land & Building	Ren
Plant & Machinery	Rs. 91.55 L
W.C. for 1 Month	Rs. 1.08
Total Capital Investment	Rs. 2.20
Rate of Return	14
Break Even Point	3

#### COPPER AND ALUMINIUM WIRE AND CABLE MANUFACTURING UNIT [3353]

Wire is used to carry the current from one place to another A wire is a single conductor (material most commonly being copper or aluminium) while cable is two or more insulated wires wrapped in one jacket Multiple conductors that have no insulation around would be classified as a single conductor. There are two main types of wires: solid or stranded. A solid wire is a single conductor that is either bare or insulated by a protective colored sheath It offers low resistance and is perfect for use in higher frequencies. When inside a covering there are many thin strands of wires twisted together, it is called a stranded wire. Stranded wires are used where flexibility is important because which the wire can be used for a longer period. This type of wire have larger crosssectional area than solid wires for the same current carrying capacity. Stranding is process of twisting together of small wires to form a single larger conductor. Used to provide flexibility, ease of handling and vibration resistance. Copper Wire is a single electrical conductor manufactured out of Copper Ore. This widely used conductor can either be insulated or uninsulated. Having a moderate it's used to transfer conductivity, electricity with low voltage. Electrical wiring in buildings is the largest market for the copper industry worldwide. As per estimation, around half of the copper mines is consumed in manufacturing electrical wire and cable conductors.

#### COST ESTIMATION

COST ESTIMATION			
Plant Capacity	3.12 MT/Day		
Land & Building	Rs. 4.49 Cr.		
Plant & Machinery	Rs. 2.56 Cr.		
W.C. for 2 Months	Rs. 6.27 Cr.		
Total Capital Investment	Rs. 13.65 Cr.		
Rate of Return	59%		
Break Even Point	33%		
*****	******		

#### GUL (TOBACCO TOOTH POWDER) [3354]

Gul is a oral tobacco powder which is rubbed over the gum and teeth. Being a tobacco preparation it is additive in nature. It is popular among rural persons in South Asian Countries. In India, tobacco is used mainly for smoking and oral use while nasal use

relatively infrequent. The term, is smokeless tobacco (SLT) is used to describe tobacco that is not burned before or at the time of use as opposed to Day cigarettes or bidis that are burned to liberate smoke. SLT products range in complexity nted from tobacco-only, to products containing acs numerous chemical ingredients and Cr C additives. This article deals specifically 3% with the chemistry and toxic effects of smokeless tobacco products. SLT products contain a number of toxic, mutagenic or carcinogenic chemicals that can contribute to the onset of non-communicable diseases including cancer, heart disease, diabetes, and other oral pathologies.

COST ESTIMATION		
Plant Capacity	4000 Kg/Day	
Land & Building	Renteo	
Plant & Machinery	Rs. 50 Lacs	
W.C. for 2 Months	Rs. 5.84 C	
Total Capital Investment	Rs. 6.39 Ci	
Rate of Return	18%	
Break Even Point	55%	

#### READY MIX MORTAR (READY MIX PLASTER, AAC BLOCK JOINTING MORTAR ADHESIVE, TILES ADHESIVE, TILE ON TILE CHEMICAL, WALL TILE CHEMICAL, GRANITE/MARBLE CHEMICALS) [3355]

Dry Mortar Mix is gaining eminence in modern times owing to its versatile superiority in regard to characteristics over the conventional in-situ mortars viz. better performance easy to uses easy to set and the quality of leaving no crakes and voiles. Besides it has preferably better and wider field of application as patching & repairing materials for plasting purposes and other construction works viz. internal external plastering masonry work etc. It is a very good substitute for conventional in-situ mortars. Various types of Ready mix dry mortar comprise internal plaster mortar, external plaster mortar masonry mortar, quick setting mortar high strength mortar repair mortar self leaving flooring mortar pre-mix RCC mortar etc. One specific advantage regarding manufacture of these ready mix dry mortar is that they can be manufactured in a single unit by variation in composition proportions as per different formulations. Ready mix dry mortar is particularly useful on congested siles or in road construction where little space for the mixing plant and for extensive aggregate stockpile is available but the greatest single advantage of ready mix dry mortar is that it may be made under better conditions of control than are normally possible on any large construction sites. COST ESTIMATION

V.C. for 2 Months	Rs. 1.29 Cr
otal Capital Investment	Rs. 1.95 Cr
Rate of Return	64%
Break Even Point	44%

#### STEEL DOORS AND FRAMES MANUFACTURING [3356]

Doors may be defined as an openable barrier secured in a wall opening. It is provided to give an access to inside of a room. The door is the main part of the building which provides safety and privacy Different varieties of doors are available according to the material, manufacturer etc. There are different types of doors like flush doors, sliding doors, revolving doors, collapsible doors, rolling shutter doors, etc. A steel door allow us opening or passage into a house, building, room apartment or closet by which persons enter. It is more strong other than normal wood door or others type of doors. Steel Doors. Steel or other such metal construction has been used for years as they are efficient and are a sturdy option for exterior and interior doors alike. These doors can be either be solid or hollow. It has been found to be a good substitute for wood and is being used extensively for making frames. The frames can be made out of angles, Tee, channels or pressed steel plates. Holdfasts and hinges are normally welded to the frame in case of steel frames. Normal shutters made out of wood etc can be fixed on these steel frames. Steel frames are quite popular and are being used extensively for houses and other locations as they are economical than the conventional wooden frames Shutters can also be made out of Mild Steel (MS) sheets, welded or riveted to a frame of angle iron or channel section properly braced. Steel doors can also be made in high quality in cold rolled mild steel, precision engineered. They are long lasting requiring minimum maintenance They are available in beautiful shades with various wood grain texturing. These can invariably be used where security is of a greater concern. Steel doors are widely used in houses, apartments and in places where door operating conditions require a higher resistance to loads, mechanical damages and corrosion. The use of metal materials does not preclude the creation of interesting and structurally advanced products. Well integrated doors may constitute an architectural detail that bonds the whole interior. The precision of performance combined with a high-quality powder coating in any color, enables manufacturing of a product. COST ESTIMATION

Plant Capacity 75 Nos/Dav Land & Building Rented Plant & Machinery Rs. 1.01 Cr W.C. for 3 Months Rs. 2.07 Cr Total Capital Investment Rs. 3.37 Cr 24 MT/Day Rate of Return 37% Rs. 40 Lacs Break Even Point 56% Rs. 16.05 Lacs

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Plant Capacity

Plant & Machinery

Land & Building (6000 Sq.ft)

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Bra & panty (eou) ladies under garments Buffalo meat/frozen meat with slaughter house	vegétables by iqf technology Detergent powder (nirma type) fully automatic plant Door hinges (mild steel and stainless steel) Egg powder (dried) 100% eou Extraction of essential oils (by super critical method) Feed mill for poultry Floriculture (cut flower rose) with green house Flush door and wooden panel door Food dehydration (fruits & vegetables)	Avail One Free Copy of HI-TECH PROJECTS Industrial Monthly Magazine by Email, Contact at: eiriprojects@gmail.com Eiritechnology@gmail.com tomato powder, tomato products, canned fruits & vegetables, tomato puree, groundnut oil, refined oil, dehydrated grapes etc. Frozen food by iqf technology (individual quick freezing) (peas, cauliflower, spinich, carrot, beans, okra, mango, strawberry, corn etc.) Frozen meat Fruit juice, squashes, sauce & ketchup, jam, jelly, vinegar etc. Fruit pulp & tomato paste	FIGURE TREPORT ENGINEERS INDIA RESEARCH INSTITUTE UNIVERSIGNATION FILL IS AN EXPERT Industrial Consultant working over 35 years and specialized to prepare all types of Detailed Project Reports based on clients requirements. Do Contact Today at:
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Grape wine	Activated Carbon viz	input capacity:1280 kgs per	Chilli powder
Insurance claim processing		day (without the option of	Chocolate
centre (eou)	Husk, Straw, Cashewnut	cnsl extraction)	Chocolate (milk)
Kitchen products made of	Shell,Coir Pitch,Wood	Rice sheller	Citric acid from grape pulp
stainless steel viz.(kitchen	Charcoal, Powdered	Sanding sealer, lacquer, pu	Coal briquettes from agro waste
rack folding and fix, tokri for	Activated Carbon, Activated	wood coating & varnish	Coconut & its products
keeping vegetables	Fuller Earth, Pelleted	manufacturing with formulae	Coconut fibre
patre, frooti for vegetables	Activated Carbon (EAC),		Coconut oil from copra
(wire, round pipe, square pipe)	Impregnated carbon,	Agro based industries	Coconut processing complex
shelf,towel stand,cylinder	Polymers coated, Granula		(coco oil, coco flour, coco
trolley, kitchen stand wire,	Activated bleaching earth	Activated carbon powder &	cream, coco water, decinated
pipe,sheet)	Activated bleaching earth	granules from coconut shell	coconut etc.)
Leather tanning & garments	(activated fuller earth)	Amla fruit products with	Coconut squash & jam
(eou)	Activated carbon & sodium	preservation tomato sauce,	Coconut water (coco jal) packed
Liquid detergents for wool	silicate from paddy/rice husk	pickles, jams & jellies	Coffee roasting of green coffee
Maize & its by products	Activated carbon from	Asafoetida (compound)	beans
Malachite green	cashewnut shell	Ayurvedic/herbal pharmacy	Cold storage (controlled
Mango juice	Activated carbon from	Baby cereal food and milk	atmosphere or ca) for potato,
Mango processing & canning	coconut shell	powder	capacity: 100,000 bags (50 kg
(mango pulp)	Activated carbon from rice	Bakers yeast	per bag), storing capacity: 5000
Mushroom cultivation &	husk	Bakery gel (translucent semi	mt
processing	Activated carbon from saw	solid paste)	Confectionery
N.c. thinners used in	dust, rice husk and coconut shell	Bakery unit (pastries, bread,	Corn oil (maize oil)
automobiles		buns,cake, toffee etc.)	Cotton ginning & processing
Namkeens (kurkure type	Activated carbon from wood Activated carbon from wood	Baking powder Banana wafers	Cotton seed oil
snack food)	charcoal		Cow and buffalo farm to
Non woven carry/ shopping		Banana, apple & other fruit	produce raw milk with gobar gas
bags	Activated carbon granulated	chips	plant and bottling of urine
Packaged drinking water	Activated carbon industry (coconut shell)	Banana, mango powder &	Curry powder
(packed in 330 ml cup, 500 ml	Activated carbon plant	other freeze dried products Barley malt	Custard powder
pet bottle, 1500 ml pet bottle	Activated carbon powder &	Barley malt for beer etc.	Dairy farming & milk processing
and 20 ltr. jar)	granules from coconut shell	Basmati rice export	Dairy products milk packaging in
Pan masala (meetha, sada,	Activated charcoal	Basmati rice trading	pouch (ghee, butter etc)
zarda)	Activated fuller earth	Beer plant	Dal mill
Pan masala, tobacco, zarda &	Carbon black (petroleum	Biscuit industry	Dehulled sesame seed
kimam	based)	Bottling plant country liquor	Dehydrated garlic & ginger-100%
Pharmaceutical unit (eou) with	Carbon black from fertilizer	from rectified spirit	eou
formulations, injectables etc.	waste	Brandy	Dehydrated onions & onion
Piggery/meat/chicken	Carbon black from natural gas		powder
processing	Carbon black from tyres	Bread plant	Dehydrated vegetables (100%
Piston ring automobile	Carbon less paper	Button mushroom	eou)
Porcelain and ceramic tiles	Carbon paper	Canning of mango pulp &	Dehydration of canning of fruits & vegetables
Potato & onion flakes	Carbon/metal film resistors	mango slices	Dehydration of fruits &
Potato & onion powder	Cashew nut processing	Caramel (acid proof/spirit	vegetables by vacuum drying
Potato chips Pressure cookers (bard	Cashew nut processing plant	proof)	method
Pressure cookers (hard	(cap: 3 ton/day)	Cardamom oil	Dehydration of jackfruit
anodized) and utensils (capacity 10,000 pressure	Cashew nut shell liquid and	Casein from deoiled soya	Dehydration of raw mango
cookers and 20,000 utensils	kernels	flour	Desiccated coconut powder
per month)	CULTIVATION OF RICE &	Cashew feni	from coconuts
Processing of fruits &	WHEAT COMMERCIAL &	Cashew nut decortication	Dextrose powder (anhydrous
vegetables	MECHANISED	Cashew nut shell liquid &	from starch)
Readymade garments (pants/	DEVELOPMENT	kernel processing	Dextrose powder from potatoes
trousers)	Extraction of precipitated	Cashewnut (dried & fried)	Dicalcium phosphate from rock
Readymade garments with	silica from rice husk ash	Castor oil & its derivatives	phosphate
computer aided designs (cad)-	Friction dust (liquid & powder)	oleoresin, turkey red oil,	Drip irrigation system
hi tech automatic and imported	from cnsl	dco, hco, sebacic acid, 12-	Edible vegetable oil
machinery	Katha from cashew husk	hydroxy stearic acid	Egg powder (dried) 100% eou
Rubber hoses for automobile	Powder coating chamber type	Castor oil derivative	Extraction of soyabean oil from
Spices/masala with packaging	Powder coating manufacturing	oleoresins	oil seeds & cattle feed
Tooth paste (gel type)	Powder coating paint	Cattle & poultry feed	(expander extrusion cooking
Wooden cane furniture with	Powder paint for powder	Cattle feed from tapioca	process)
export potential	coating	Chana Dall and Besan Plant	Feed mill for poultry
	Precipitated silica from rice	Chewing & bubble gum	Finest & Smart Project Report
<u>Visit us at :</u>	husk ash (cap:200 ton/day)	Chewing tobacco (khaine	On Cold Storage
	Raw cashew nut kernel	kuber type)	Fish processing unit
www.eiriindia.org	processing (steam boiler	Chewing, ginger & amloki	Floriculture (cut flower rose) with
	roasting) modern machinery	Chicken soups	green house
1	output capacity: 320 kgs and	Chicken/mutton processing	1

Food colour	straw mushrooms	Acentic acid & naphthalene	Aluminium sulphate (non
Food processing industry	Mushroom growing &	Acetanilide	ferrous) (17%-18% alumina
Freeze drying coffee	processing with air	Acetic acid (glacial)	content) in granules (2 mm to
manufacturing unit processing	conditioning	Acetic acid from ethanol	4 mm) and flakes
and packaging	Neem cultivation &	Acetic acid from molasses	Amines
Freezing of fresh vegetables	processing	Acetic anhydride	Amino acid
Frozen food by iqf technology	Neem oil from seeds	Acetone	Amino acid by protein
Fruit juice (mango, guava,	Neem plantations	Acetyl chloride	hydrolysis
banana, grape, orange, apple)	commercialisation & neem	Acetylene black	Amino acid use for poultry
& pulp, jams, jellies,	based	Acetylene gas and oxygen	feed
squashes, chutney, sauces,	Oleoresin from spices	(integrated unit)	Amino resin
ketchup, coconut water etc.	Onion Powder (Export	Acid black dye	Ammonia gas
Fruit juice concentrate	Oriented Unit)	Acid fume inhibitor	Ammonia gas bottling
Fruit juice, jam, jellies & allied	Organic manure	Acid slurry	Ammonia liquor
products	Packaged drinking water	Activated alumina	Ammonium acetate
Fruit pulp & tomato paste	(packed in 330 ml cup, 500 ml	Activated alumina balls/	Ammonium biocarbonate
(mango pulp, tomato paste &	pet bottle, 1500 ml pet bottle	spheres	Ammonium chloride (pure and
others)	and 20 ltr. jar)	Activated bleaching earth	technical)
Furfural from rice hull/husk	Packaged drinking water in	Activated calcium carbonate	Ammonium chloride block
Garlic flakes & powder	bottles & jars	Activated carbon from	(lump)
(dehydrated)	Papaya & tomato cultivation	coconut shell	Ammonium nitrate
Gelatin 100%eou (edible,	Papaya cultivation & papain	Activated carbon from rice	Ammonium sulphate
pharmaceuticals &	Pesticide and insecticide	husk	Ammonium thio sulphate
photographic grades)	Piggery farm	Activated carbon from saw	solution
Ginger processing plant	Potato chips/wafers	dust, rice husk and coconut	Amyl acetate
Grain based alcohol-distillery	Processing & utilisation of	shell	Amyl alcohol
(alcohol from grain)	coconut	Activated carbon from wood	Amylase
Green house for crops	Processing of sheep hair to	Activated carbon granulated	Anesthesia (all types) used in
production (10 green houses)	produce wool	Activated carbon powder &	hospitals
Green peas processing and	Protein and protein based	granules from coconut shell	Anhydrous ferric chloride
canning	products	Activated charcoal	Anhydrous sodium dithionite
Honey coated cashew nuts,	Protein hydrolysate from	Active zinc oxide	production
peanuts and other nuts	soyabean/groundnut	Aerosol insecticides spray	Anhydrous sodium dithionite
Hybrid seeds	Purification of casein	(baygon, hit, mortein type)	production (sodium formate
Import of Almonds from US	Rice flakes, corn flakes &	Agricultural chemicals (plant	process)
and Packaging Unit	wheat flakes (integrated unit)	growth promoter and plant	Aniline
Instant coffee	Rice sorting and grading plant	growth regulator) (agricultural	Anthracene
lodized salt	Roasting and salting with	chemicals)	Anthranilic acid from phthalic
Katha & cutch		Alcohol and vodka from potato	anhydride
Khandsari sugar & imfl	spices and packing of almonds, peanuts and mixed	Alcohol from broken rice	Anthraquinone
Maize processing for glucose		Alcohol from molasses	Anti corrosion chemicals
Maize starch, liquid glucose,	nuts in 25g, 50g, 250g and	Alcohol from rice grain	(s.t.p.p. and nano2)
dextrose (maize and its allied	500g sachets (capacity 30	Alcohol from rice straw	Anti corrosion chemicals
products)	tons per month)	Alcohol, beer, starch, liquid	(s.t.p.p. and nano2)
Malt & malt extract	Sorbitol from maize starch	glucose, dextrose, sorbitol,	Anti foaming agent (silicone
Malto dextrin from barley	Sugarcane juice in tetrapack	vitamin-c	based) for distillery, sugar
Mango juice	(aseptic packaging)	Alkyd resin	industry, paper plant etc.
Mango powder	Tea industry	Alkylated phenol, likenonyl	Anti rust chemical solution
Mango pulp	Tea processing and packaging	phenol, dodecyl phenol	Anti scale compound for
Margarine/fat	Tomato paste (tomato puree)	Alpha amino acetic acid	adding in sugar boilers
Menthol & dementholised oil	Tomato processing unit Trout fish farming,canning &	Alprazolam	Antimony oxide from lead
Micro irrigation product		Alum (ferric)	scrap
manufacturing plant	preservation with aqua feed	Alum (non ferric)	Antimony trioxide
Milk plant with pouch packing	manufacturing (intregrated	Alum for water treatment	Argon gas
Milk powder & ghee	complex) Vegetable seeds cleaning	Aluminium chloride	Ariel type detergent powder
Mill board from rice & wheat	5	Aluminium chloride from	Ary rainbow colour on gold
straws	Vermicilli	aluminium ore	(gold pendant) ary rainbow
Mini flour mill (atta, maida, suji	Vinegar & malt vinegar for industrial & domestic use	Aluminium fluoride	heart gold pendant)
& wheat bran)	Vitamin water	Aluminium ingot by bauxite	Aspirin
Mini flour mill (maize,		Aluminium nitrate	Atenolol
sorghum, millet)	Walnut coating	Aluminium oxide (activated	Auramine"o"
Modern chilly powder	White oats	alumina balls)	Azo dyes stuff
Modified starch		Aluminium phosphate	Azo-di-carbonamide
Mushroom cultivation &	Chemical & Allied industries		
	chemical & Ameu muustries	Aluminium phosphide	Azodicarbonamide
processing Mushroom cultivation &	1,4-butanediol	Aluminium silicate Aluminium sulphate	B.o.n. acid
processing unit dehydration &	2,4-dichlorophenoxyacetic acid	Aluminium sulphate	Baking soda
pickling of oyster & paddy	6-amino penicillanic acid		Bar soap (all varieties) using
picking of oyster & paudy		ferric)	soap noodles

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Barium carbonate Barium carbonate Barium compounds Barium nitrate Barium peroxide Barium sulphate Barium-thio-sulphate banzene Barley malt Baryte powder Battery grade (99.5% Pure) Borax sulphuric acid plant Battery plates Beer industry and alcoholic beverages Beer plant Bees wax refining & bleaching Brandy Belt paste Beneficiation of chromite ore processing charge chrome Bentonite and bentonite processing Butanol Bentonite powder Benzalkonium chloride Benzene Benzidine Benzoic acid Benzoyl peroxide Benzyl acetate, benzyl benzoate, benzvl alcohol Benzyl alcohol from benzyl chloride using water Benzyl konium chloride (bkc) Benzylalkonium chloride (bkc) Beta ionone Beta ionone Beta naphthol Beta-naphthol Bi-chromate of sodium, potassium & ammonium Bi-functional black manufacturer reactive dye (dye from cotton yarn dyeing) Bio coal briquettes fromagricultural cellulose waste Bio fertilisers Bio gas filling in cylinder Bio gas plant Bio gas plant Bio oil for power generation from coffee husk Bio-fuel (jatropha cultivation and extraction) Biodiesel from algae Biopesticides (mineral oil based) for killing white flies Biotech laboratory equipments Bituminious road emulsion process Bituminous felts for water & damp proofing process Black japan (bituminous based corrosion resistant) Black phenyl

Black sulphur Bleaching liquor (calcium hypochlorite liquor) Bleaching powder Bleaching powder (stable) Boiler descaling compound Bone meal (calcined) enrichment with calcium & nhosnhorous Boric acid Boric acid Bottling plant (whisky, brandy, rum, vodka, gin) from rectified spirit/ena Bromine gas plant Buffing mops and compositions (metal polishing bar & liquid) Butyl acetate Cable jelly compound Calcination of bauxite to produce high grade alumina Calcined lime (dead burnt dolomite) Calcining of magnesite & dead burnt magnesite Calcium aluminate Calcium carbide Calcium carbonate Calcium carbonate Calcium carbonate (activated & precipitated) Calcium carbonate (precipitated) from by product (lime slurry & carbon dioxide) Calcium chloride Calcium chloride using lime stone and hydrochloric acid Calcium chloride using lime stone and hydrochloric acid Calcium fluoride Calcium fluoride Calcium gluconate Calcium magnesium sulphate mixing plant Calcium nitrate Calcium oxide (burnt line) Calcium silicate Calcium silicate Calcium silicate Calcium silicate board Calcium silicate bricks Calcium stearate Calcium stearate by fusion . Calcium stearate by fusion . Camphor powder (synthetic) Candle making Capric chloride

Carbon black (petroleum Citric acid based) Carbon black from fertilizer waste Carbon black from natural gas Carbon dioxide Carbon dioxide bottling plant Carbon mono oxide Carbon tetra chloride from calcium carbide Carboxy methyl cellulose ore Carboxy methyl cellulose (cmc) Carboxy methyl starch Casein and by products Casein from milk Cationic softener (stearic acid based) Cationic softner (stearic acid based) Caustic soda Caustic soda (liquid) by electrolytic process Caustic soda (sodium hydroxide (naoh) Caustic soda (sodium hydroxide) Caustic soda from electrolysis Caustic soda from soda ash Caustic soda from sodium chloride Caustic soda from trona Caustic soda lye Caustic soda, chlorine and hydrogen gas by electrolysis brine solution Caustic soda/sodium 10) hydroxide (naoh) Cellulose acetate moulding powder . Cellulose powder & micro crystalline celulose powder Cement colour Cement from fly ash & lime Cement paint and distemper Cement tiles (glazed) Cephalexin from 7-adca Chelated zinc (zn edta 12% Chemicals for colour photography Chemicals from prawn head Chemicals made of dolomite Chitin & chitosan from prawn shell waste Chloral hydrate Chloramphenicol Chlorinated paraffin wax (cpw) Chlorinated paraffin wax (cpw) Chromic acid Chromic acid (oxide) & blue oxide Chromic acid (with pollution control)

Citric acid from lemon Citric acid from molasses Cleaning of cooling system and boiler Cnsl based resin in liquid and powder form . Coal tar distillation Coal washing unit Cobalt carbonate from cobalt Cobalt chloride Cobalt octoate Colchicine and thiocolchicine Cold supply chain Compost for mushroom Construction chemicals Copper oxchloride Copper oxychloride Copper phthalocyanine blue and green Copper sulphate Correction fluid Cupric chloride Cupric sulphate Cutting oil Cyanoacrylate adhesive Cyanuric chloride Defoaming agent for paper industry Denickeling (electrolytic process) . Deodorized kerosene Detergent (anionic) Detergent cake & powder Detergent concentrate (idet Detergent powder Dextrin from starch Dextrose monohydrate & dextrose anhydrous powder from tapioca starch Dextrose monohydrate & dextrose anhydrous powder from tapioca starch Dextrose saline (i.v. fluid) in plastic bottles Di basic lead stearate Di calcium (feed grade) Di calcium phosphate (animal feed grade from hydrochloric acid route) Di calcium phosphate (animal feed grade) from hydrochloric acid route Di calcium phosphate from rock phosphate & haifa process Di ethyl oxalate Di ethyl phthalate (dep) Di methyl orthophthalate Di-calcium phosphate from rock phosphate haifa process

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District ather	Ethyl vanillin	autor at	oxidation process)
Di-ethyl ether Di-methyl phthalate	Eva (ethylene vinyl	extract	Hydroxy ethyl cellulose
Diammonium phosphate (dap)	acetate)compound	Friction dust (liquid & powder) from cnsl	Ice packs (solutions type,
Diammonium phosphate (dap)	Extra temperature lubricating	Fruit flavours	white gel type, violet semi
Dibasic lead stearate	grease	Fumaric acid	solid polymer type)
Dicalcium phosphate	Extraction of acid oil from	Furfural from rice hull/husk	Imfl (whisky) & country liquor
Dicalcium phosphate (animal	soap stock	Fused aluminium oxide	Improving drop point paraffin
feed grade from hydro chloric	Extraction of essential oils by	Fused silica	wax from 45-50 deg. c to 75-
acid route)	super critical fluid (carbon	Garlic acid	80 deg. c
Dicalcium phosphate from	dioxide) method from flowers,	Gasket shellac compound	Industrial alcohol
rock phosphate	herbs & spices	Gear oil	Industrial alcohol from
Dichlord isocyanurate	Extraction of vanadium	Gibberellic acid	molasses
Dichloro isocyanurate	pentoxide	Ginger and garlic paste	Industrial gases
Diclofenac gel	Fabric stain remover	Ginger processing	Ink plastisol (phthalate free)
Diclofenal sodium slow	Fatty acid	Glass putty	Insoluble saccharine (using
release (sr) tables 100mg	Ferric & non ferric alum	Gluconic acid	solid ingredients)
Diethyl phthalate	Ferric alum	Glycerine	Insta whitening system (ujala
Diethyl phthalate (Cap:5 tpd)	Ferric alum	Glycerol monostearate	type)
Dinitro-chloro benzene	Ferric and non ferric alum	Gobar gas	Integrated complex of ester
Dioctyl adipate	Ferric chloride from ferric	Gold electroplating	and allied products (d.o.p;
Dioctylphthalate (dop)	oxide and hydrochloric acid	Gold jewellery	d.b.p, ethyl acetate, wire
Diphenyl glycerine	(hcl)	Gold potassium cyanide	enamel & cable jelly) International standard
Distilled water	Ferric sulphate (powder)	(g.p.c.)	laboratory
Distillery	Ferro chrome	Gold potassium cyanide	Investment casting
Dodecyl benzene sulphonate	Ferro chrome ligno sulphonate Ferro manganese	(g.p.c.) by alkali method	Iron oxide for making ferrite
Dop and other plasticizer	Ferro silicon (from mineral	Gossypol (poly phenol) from	Iron sulphide
Double firing (heating) Dustless chalk	ingredients)	cotton seed oil Grape wine	Iso-borneol
Dye & dye intermediates	Ferro silicone	Greylead oxide	Isoborneol
Dye and dye intermediate	Ferro vanadium from	Guar gum powder	Isocyanates (tdi/mdi)
Dye intermediates	vanadium sludge	Gum (sodium silicate based)	Isopropyl alcohol from
Dye levelling agent	Ferrous silicate	Gum (sodium silicate based)	acetone feed stock
Edta & its salts	Ferrous sulphate	Gypsum plaster board	(cap:50,000 tpa)
Electroless nickel plating on	Ferrous sulphide	H acid	J. acid
plastics	Fertilizer from animal blood &	H- acid	Jatropha (biodiesel) cultivation
Electropolishing on gold	leather waste	Hair fixer (hair gel type)	and extraction
jewellery	Fibre reinforced plastic (high	Henna hair dye	Jewellery casting investment
Electropolishing on various	pressure moulding with smc,	Henna paste making	powder
metals	bmc & dmc)	Heptaldehyde	Jute batching oil
Emulsifier for cutting oil	Fire extinguisher dry powder	Heptaldehyde & undecylenic	Kaolin for road making (project
Endosulfan	Fire extinguisher dry powder	acid (c7 & c11) & its	report)
Engine coolant	(sodium	derivatives	Kesh kala tel (hair dye lotion)
Ephedrine hydrochloride	bicarbonate,potassium	Herbal beer	(vasmol 33, godrej, black nite
Epoxy resin based compound	bicarbonate and mono	High carbon ferro chrome	type)
Epoxy resins and metal filling	ammonium phosphate based	Hosiery cloth in the dyeing	L-lysine monohydrochloride Lacquer (electrophoretic) for
Ethanol from molasses	Flocculants Fluorescent tube light powder	process	jewllery acrylic based
(biofuel)	Foamed pvc compounding	Hot dip galvanizing	Lacquer electrophoretic for
Ethyl acetate Ethyl acetate	and its products	Humic acid Humic acid	gold jewellery polyurethane
Ethyl alcohol (potable liquor)	Formal dehyde	Hydrated calcium silicate	based
Ethyl alcohol from corn	Formaldehyde	brick	Lactic acid
Ethyl alcohol from crude	Formalin from methanol	Hydrated lime	Lactic acid from white sugar
alcohol (by fractional	Formulation for ddi, bhc,	Hydrated lime	by fermentation process
distillation or redistilled	melathion	Hydrated lime from sea shell	Ldpe granules from virgin
method	Fractional distillation of d.m.o.	Hydrazine	(Idpe resin)
Ethyl alcohol from molasses	(dementholized oil)	Hydro fluoric acid	Lead extraction from scrap
Ethyl ether	Fractional distillation of	Hydrochloric acid	battery
		,	I
Ethyl hexanol	essential oil & medicinal plant	Hydrogen peroxide (by auto	Lead oxide (a) lead monoxide

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	Food Emulsifiers 1575/- 156 * Technology of Food	
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