# **HI-TECH PROJECTS**

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

> MARCH 2018 Issue (E-copy)



## ENGINEERS INDIA RESEARCH INSTITUTE

Regd. Off : 4449, Nal Sarak, Main Road, Delhi - 110 006 (India)

\* Ph: +91 9811437895, 9811151047, 91-11-23918117, 43658117, 45120361 \* E-Mail : eiri@eiriindia.org, eiritechnology@gmail.com

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

Deposit the amount in "EIRI "Account with HDFC BANK CA- 05532020001279 (RTGS/NEFT/IFSC CODE: HDFC0000553) OR ICICI BANK CA - 038705000994 (RTGS/NEFT/IFSC CODE: ICIC0000387) OR AXIS Bank Ltd. CA - 054010200006248 (RTGS/ NEFT/IFSC CODE:UTIB0000054) OR UNION BAK OF INDIA CA-307201010015149 (RTGS/NEFT/IFSC CODE: UBIN0530727) OR STATE BANK OF INDIA CA-30408535340 (RTGS/NEFT/IFSC CODE: SBIN0001067) AND JUST SMS US ON PH. 09811437895

## JUST PREPARED NEW PROJECTS FOR YOU

LIVE STOCK AND FARMING

(INTEGRATED UNIT) [EIRI/3197] Odisha has 13million Deshi (Non descript zebu) cattle yielding only @ 0.46 liters of milk (average) per day including 67000 Binjharpuri breed cattle in Jajpur district cows of which yield @ 4liters/day av. People rear zebu mainly for manure and work. On the other hand cattle cross- breeds! (actually meaning crossing of 2 breeds) has failed to be popular. Yet we need to reach at least 5 times the present production 1350,000 MT (Ref. India Livestock Census: Basic A. H. Statistics 2006 Govt. of India) To boost up milk production in Odisha 5 breeds of Bos Taurus were introduced in sixties but farmers did not like to propagate exotic blood and the rapid disillusionment was seen in the dwindling Jersey & Holstein cross numbers after 1995 (Refer Livestock in Orissa: The Socio- Economic Perspective by M.P.G Kurup: page 46 ). Till date, in spite of vigorous, constant & unreasonable effort by the Govt. to promote Jersey & Holstein as donor breeds, the exercise has not sustained. The importance of milk in human diet especially for children and expectant and nursing matters is vital. To meet the demand of the increasing population milk production in India has to be increased upto about 64 million tones. It is neither possible nor desirable to increase the cattle and buffalo population to achieve this target.

COST ESTIMATION		
Land & Building (50 Acres)	Rs.	5.82 Cr.
Plant & Machinery	Rs.	42 Lacs
W.C. for 3 Months	Rs.	45 Lacs
Total Capital Investment	Rs.	7.55 Cr.
Rate of Return		19%
Break Even Point		58%
*******************************	****	*******

## COLD ROLLED STEEL SHEET MANUFACTURING PLANT [EIRI/3198]

Metal sheets in coil form are flat products wound into rolls and having a rectangular cross-section, the width of which is much larger than the thickness. A distinction is drawn between hot- and cold-rolled sheet. Hot-rolled sheet in coil form is produced from semifinished products (slabs or billets), which are reduced to certain thicknesses by rolling and annealing and wound into a roll. Cold-rolled sheet in coil form is produced by removing rust from hot-rolled sheet by "pickling" it in a weak acid solution, then washing, brushing drying, oiling and unrolling the sheet and finally performing cold-rolling by passing the sheet through a reducing mill under pressure and winding it into a roll. Coldrolled steel is a more highly finished product and has a smoother surface, greater dimensional accuracy (thickness, width, length) and greater strength. Cold rolled sheet is produced from a precisely manufactured hot rolled processed sheet which is then cold-reduced to the desired

thickness. These sheets are rolled to a close tolerance and possess a fine surface finish, superior to pickled and oiled. Typical thickness between 0.15 - 3 mm. Typical width between 600 - 2100 mm. The primary feature of cold reduction is to reduce the thickness of hot-rolled coils into thinner thicknesses that are not generally attainable in the hot rolled state.

Plant Capacity	400 MT/Day
Land (10,000 sq.mt.)	Rs. 11.04 Cr.
Plant & Machinery	Rs. 5.75 Cr.
W.C. for 2 Months	Rs. 90 Cr.
Total Capital Investment	Rs. 107.43 Cr.
Rate of Return	83%
Break Even Point	21%
*****	*****

## MAIZE DRY MILLING PLANT [EIRI/3200]

Maize/corn dry milling process is a less versatile, less capital intensive process that focuses primarily on the production of grain ethanol. In this process, the corn kernel are hammer milled into a medium to fine grind meal for introduction to the ethanol production process. The products of a traditional dry grind ethanol facility and dried distillers grain (DDG) a low value animal feed product. Dry milling technology has been standardized by Central Food Technological Research Institute (CFTRI) Mysore. The grits is the main product of dry milling process, which is used as porridge by boiling domestically. The processing units, use grits for manufacture of products like ready to eat snacks (Corn flakes), manufacture of glucose by direct hydrolysis etc. Maize is one of the staple foods in India. The annual maize production in India is around 21 million tons with the highest maize cultivation in Karnataka Andhra Pradesh and Raiasthan India is one of the largest cultivators of maize in the world, and it is a crop suitable for all the growing seasons in nearly every agroclimatic zone within the country's borders India has seen a dramatic increase in maize cultivation over the past few years, which explains its pre-eminence as a starch source among processors.

## COST ESTIMATION

COST ESTIMATION			l tr
Plant Capacity		Ton/Day	
Land & Building (8000 sq.mt.)			
Plant & Machinery	Rs.	65 Lacs	Р
W.C. for 2 Months	Rs.	2.71 Cr.	l c
Total Capital Investment	Rs.	5.12 Cr.	P
Rate of Return		17%	Ŵ
Break Even Point		62%	Τ
******	****	******	R

## GLYCERINE [EIRI/3201]

Glycerine or glycerol to speak in terms of chemical phraseology is a trihydric alcohol. It is usually found in combination with fatty acids in natural fats and oils. It has been the tendency to designate the name glycerine to the technically prepared pure substance which is the nearest approach to glycerol, represented by the formula,

OH. CH2CH. OH. CH2OH. Glycerine is a basic constituent of oils and fats of which a large variety is available abundantly ir this country. The British Pharmacopoeia describes glycerine (glycerinum) as a clear colourless odourless, syrupy liquid, having a sweet taste, which is followed by a sensation of warmth. It is hygroscopic and is optically inactive and neutral to indicators. Its molecular weight is 92.06 and specific gravity (15.5oC/15.5oC) 1.260-1.265. Glycerin (Glycerol) is a simple polyol compound with a clear, odorless viscous liquid and a naturally sweet taste It is derived from both natural and petrochemical feed stocks.

### COST ESTIMATION

	••••
Plant Capacity	100 Ton/Day
Land & Building (4 Acres)	Rs. 5.20 Cr.
Plant & Machinery	Rs. 4.65 Cr.
W.C. for 1 Month	Rs. 18.74 Cr.
Total Capital Investment	Rs. 28.93 Cr.
Rate of Return	33%
Break Even Point	40%
**********	******

## RADIO TAXI (ONLINE TAXI SERVICE) [EIRI/3205]

Radio Taxi is a great concept for comfortable travel and particularly for traveling long distances across the city as driving or taking the ordinary taxi is not a very good option. Current State: The not very modern taxi company has asked you to develop a computer-based booking and planning system. At present, there is an operator receiving phone calls from customers. The customer can book a tax for a future occasion. The operator registers such bookings in a schedule. The customer can also ask for a transport at soon as possible. The operator then makes a request by phone to a planner, who has radio communication with the taxi cars. The planner gives an estimated time it would take to reach the customer. If booking is acknowledged by the customers: ear fact customers Wright reserves many invoices and emers which pay directly to the tax driver. Future System: The company has sketched on the system they would like o have.

## COST ESTIMATION

Plant Capacity	1100 Vehicles
Office & Yard	RENTED
Plant & Machinery	Rs. 12.25 Cr.
W.C. for 3 Months	Rs. 7.72 Cr.
Total Capital Investment	Rs. 20.24 Cr.
Rate of Return	39%
Break Even Point	49%
***************************************	

Patrons, deposit amount in EIRI Account ICICI BANK LTD. CA-038705000994 (RTGS/NEFT/IFSC Code: ICIC0000387)

## Best Industries to Start and Grow

MANUFACTURING MEDICAL PLASTICS LIKE CATHETERS, SYRINGE, DEXTROSE SALINE (I.V. FLUID) IN PLASTIC BOTTLE, IV SET CANNULA AND RELATED

MATERIALS (CODE NO. 1995) There is a huge demand of Medical Plastics in India and abroad. Many items can be produces in this category. A catheter is a flexible tube made of latex. silicone, or Teflon that can be inserted into the body creating a channel for the passage of fluid or the entry of a medical device. For many years, the epidermal catheters used were plain tubes made of available industrial compounds, and design was largely based on current need In the 1950s and early 1960s, a very common practice was to cut a suitable length of industrial polyvinyl chloride (PVC) or nylon tubing and have it sterilized with the other surgical equipment. Nowadays, there are many specialized catheter designs. For example, specific catheter designs allow catheters to be used in pulmonary, cardiac (vascular), neonatal, central nervous system, and epidural tissues. Catheters are designed to perform tissue ablation (tissue removal) and even serve as conduits for thermal. optics, and various medical devices. The three major types of catheters are coronary, renal, and infusion. Coronary catheters are used for angiography (xray of blood vessels after injection of radiopaque substance), angioplasty (altering the structure of a vessel), and ultrasound procedures in the heart or in peripheral veins and arteries.

### COST ESTIMATION

Land & Building(15000Sq.Yd) Rs. 22.90 Cr Rs. 37.32 Cr lant & Machinery W.C. for 2 Months Rs. 6.81 Cr Total Capital Investment Rs. 70.28 Cr Rate of Return 19% Break Even Point 60%

## INVESTMENT CASTING (CODE NO.1994)

Ceramic Shell Investment Casting (CSIC) is one of the near net shape casting technologies. The process is based on expendable wax patterns for producing ioint-less moulds that are required for near net shape castings. The main difference between investment casting and ceramic shell investment casting is that, in the former process, before dewaxing the wax pattern, it is immersed in a refractory aggregate. Whereas in the ceramic shell investment casting, a ceramic shell gets built around the tree assembly through repeated dipping of the pattern into slurry (refractory material such as zircon with binder). After getting the required thickness of cross section, the tree assembly is de-waxed. The shell obtained

and the metal is poured into it. In this process, a wax pattern assembly is first dipped into a ceramic slurry bath for its primary coating. Thereafter, the pattern is withdrawn from the slurry and is manipulated to drain of the excess slurry to produce a uniform coating layer. COST ESTIMATION

Plant capacity		MT/d	
Land & Building (2000	Sq.mt) Rs. 7	1.05	Cr
lant & Machinery	Rs. 93.9		
W.C. for 1 Month	Rs.	1.25	Cr
Total Capital Investme	nt Rs. 3	3.38	Cr
Rate of Return		80	)%
Break Even Point		42	2%
******	**********	****	***

POLYOL FROM PROPYLENE OXIDE [CODE NO. 1993]

Polyol is a polyhydric alcohol, ie. one containing three or more hvdroxv groups. Those having three hydroxyl groups (trihydric) are glycerols, those with more than three are called sugar alcohols. with general formula CH2OH (CHOH)n CH2OH, where n may be from 2 to 5. Polyurethane system comprises polyol and isocyanate used for thermoware/ Non-thermoware panel (sandwich) refrigeration bloch wood imitation and commercial refrigerator, industries with or without blowing agent. Polyols are glycol's of high molecular weight of polyether, polyester and hydrocarbon Polyether polyols types. are manufactured bv ethoxylation propoxylation of a polyhydric alcohol in the presence of a catalyst. The alchohols used are ethylene glycol's, dipropylene glycol's, diethyleneglycols, glycerols, sorbitol, mannitol and sucrose. Polyether polyols are produced by anionic ring opening addition polymerization of ethylene oxide or propylene oxide. COST ESTIMATION

Plant capacity	20 MT./day
Land & Building (4200 Sq.mt	) Rs. 3.25 Cr
lant & Machinery W.C. for 2 Months	Rs. 5 Cr
W.C. for 2 Months	Rs. 10.27 Cr
Total Capital Investment	Rs. 19 Cr
Rate of Return	34%
Break Even Point	43%
**********	***********

## AYURVEDIC AND UNANI PHARMACY [CODE NO.1992]

Ayurvedic system of medicine is as old as the Vedic age. Now-a-days people give preference to the Ayurvedic medicines as the allopathic medicines are costlier and have side effects. Ayurvedic medicines are based on plants, animals extract and minerals both in single ingredient drugs and compound formulations, however, Ayurveda does not rule out any substances from being used as a potential source of medicine. Avurvedic compound formulations are mainly divided into two groups viz. (1) Kasthausadhi (predominantly plant drugs)

is further immersed in a refractory coating and (2). Rasausadhi (predominantly metals and minerals). There are several categories of Kasthausadhi formulations such as Asavaristra, Avleha, Grafa Churena, Taila etc. and of Rasausadhis such as Bhasma, Pisti, Lauha Kapibadkva, Rasayana etc. The Ayurvedic drugs are derived from vegetable sources from the various parts of the plant like root, leaf, flower, fruit extrude or plant as a whole. Ayurvedic system has its origin in antiquity in our country which has been dedicated to the cure of innumerable ailments.

## COST ESTIMATION

Land & Building (800 S	q.mt) Rs. 1.50 Cr
lant & Machinery	Rs. 57 Lacs
W.C. for 2 Months	Rs. 61.37 Lacs
Total Capital Investment	Rs. 3 Cr
Rate of Return	50%
Break Even Point	42%
*****	******

## **RADIAL TYRE MANUFACTURING** UNIT [CODE NO. 1990]

Tyres and tubes, the strategic rubber products and basic supplements to the automotive vehicles are of most importance to the country's economy The tyre industry sector is providing direct empolyment to over 40,000 people and indirect empolyment to lakhs of people. This industry sector is now being considered as a core industry sector. The manufacturing of automobile tyres as essential ancillary for the an development of automobile sector came into being in India during 1930's when the Dunlop India Ltd, the first tyre manufacturing transnational company started its operation in 1935 at Sahagan in West Bengal. Today, one cannot imagine a world without automobiles even though India has a large network of railway lines, considering the vastnes of the country and the thrust given for balanced development, road transport would have decisine role to play in the coming years. Vehicle would become more and more part of not only the commercial like but even the personal like. The Indian tyre and tube industry has been continuously in the process of up gradation of product quality to satisfy the requirements of Indian automotive manufactures, users of automobiles and the road conditions prevailing in the country.

## COST ESTIMATION

(ALL FIGURE	IN LACS)
Plant Capacity	10000 Tyres/day
Land & Building (10 Ad	cres) Rs. 1,980
lant & Machinery	Rs. 40,000
W.C. for 3 Months	Rs. 28,602
Total Capital Investme	nt Rs. 70,922
Rate of Return	25%
Break Even Point	58%
*****	*******

## **Start Your Own Industry**

## INSTANT MIX UNIT (IDLI MIX, DOSA MIX, SAMBAR MASALA MIX, UDIDWADA MIX, GULABJAMUN MIX, DHOKLI MIX

ETC.) [CODE 2049] Modern age has evolved an immense

relish for fast food items which have become quite prevalant in view of their variety and palatability. Their demand is also enhancing at a tremendous pace. Among such food item, Dhokli, Dosa, Sambhar, Gulabjamun, UdisWada mix etc. constitute. Instant food mix. Their speciality owes to the significant progress in food technology. One great speciality is the facile availability of these food items at various shapes, vendors, and mobile food snacks parlours and these are very economical items. A new entrepreneur can well venture into the production of such items in view of their tremendous demand.

## COST ESTIMATION

Plant Capacity600 KGS/dayLand & Building (400)Rs. 50.25 LacsPlant & MachineryRs. 12.13 LacsW.C. for 2 MonthsRs. 27.00 LacsTotal Capital InvestmentRs. 95.00 LacsRate of Return98%Break Even Point29%

MANUFACTURING OF PRECISION

PARTS OF STEEL MATERIALS, SURGICAL EQUIPMENTS, CUTLERY ICODE NO. 20481

Surgical Instruments can be defined as specially designed tools or devices used in surgery. More specifically, surgeons or healthcare provider perform specific actions of carrying out desired effects during a surgery or operation, such as as cutting, dissecting, grasping, holding, retracting, or suturing using different types of surgical instruments. You'll find most of these instruments made from stainless steel. However, other metals like titanium, chromium, vanadium, and molybdenum, are also used. Surgical instruments are used by surgeons dentists, physicians, and many other Surgical health care providers. instruments facilitate a variety of procedures and operations. Specialized surgical packs contain the most common instruments needed for particular surgeries. In the United States, surgical instruments are used in all hospitals. outpatient facilities & most professional offices.

### COST ESTIMATION Plant Capacity 3 MT/day

Rs. 4.60 Cr

Land & Building (4000) Plant & Machinery W.C. for 2 Months Total Capital Investment Rate of Return Break Even Point

## CORN FLAKES WITH DETAILS OF MACHINES AND ITS SUPPLIERS SOURCES [CODE NO. 2047]

Corn flakes being one of most nutritious foods and is consumed as breakfast food not only in India but-elsewhere in the world. Basically, it is prepared from maize, this is the main raw material. Flavours, like sugar or salt, are also added. Corn flakes are food made by combining corn with sugar, vitamins and minerals to make them as nutritious as possible. For producing the fancy flakes specially designed flaker will be used. At present corn flakes are popularly known as breakfast food in the world at large and generally taken with milk. Maize is the major raw material used for the manufacture of corn flakes.

COST ESTIMATION

COOT LOTIMATION			
Plant Capacity	2 MT/day		
Land & Building (1500)	Rs. 1.93 Cr		
Plant & Machinery	Rs. 1.05 Cr		
W.C. for 2 Months	Rs. 55.47 Lacs		
Total Capital Investment	Rs. 3.65 Cr		
Rate of Return	26%		
Break Even Point	57%		
***************************************			

## FORMULA OF PRINTING INKS ON HDPE LAMINATED OR UNLAMINATED BAGS [CODE No. 2045]

HDPE Ink is used for surface printed application on HDPE Woven Sacks specially for fertilizer grade packing suitable for roll to bag and bag to bag printing. The printing on the Bags is done using these printing Inks through flexographic printing technology. Today's printing inks are composed of a pigment a binder (an oil, resin or varnish of some kind), a solvent and various additives such as drying and chelating agents. The exact recipe for a given ink depends on the type of surface that it will be printing on and the printing method that will be used. Inks have been designed to print on a wide range of surfaces from metals. plastics and fabrics through to papers. COST ESTIMATION

Plant Capacity	1000 KGS/day	
Land & Building (1000)	Rs. 1.17 Cr	
Plant & Machinery	Rs. 25.00 Lacs	Healthc
W.C. for 2 Months	Rs. 61.80 Lacs	largest s
Total Capital Investment	Rs. 2.09 Cr	and emp
Rate of Return	33%	hospitals
Break Even Point	49%	outsour
********	*******	

## SOLAR PV MODULE MANUFACTURING UNIT (20 MW <u>PER ANNUM) [CODE NO. 2044]</u> Solar Panels are in general Silicon made

Rs. 2.10 Cr Rs. 1.63 Cr Rs. 8.77 Cr 37% 47%

## 14 POTATO & POTATO BASED PROJECTS

ALCOHOL FROM POTATOES DEXTROSE POWDER FROM POTATOE

- FROZEN FINGER CHIPS
- IM F L (WHISKY) FROM POTATOES
- LIQUID GLUCOSE POTATO CHIPS/WAFFERS
- POTATO POWDER(AUTOMATICPLANT) POTATO STARCH
- 8. POTATO STARCH 9 POTATO CHIPS

1. 2.

3.

5

6.

7.

- 10. POTATO AND ONION FLAKES 11. POTABLE BEER (ALCOHOLIC) BASED ON POTATO & BARLEY/MALT
- 12 POTATO POWDER
- 13. SAGO SEEDS (SABOO DANA)
- 14. VODKAFROMPOTATOES

Each Project Report covers in this CD contains Introduction, Uses, Market, Process with Product Formulae, Suppliers of Plant and Equipments, Cost Economics with Profitability Analysis, BEP, Resources of Finance etc.

Ask Price of this CD containing all above 14 Project Reports. Payable fully in advance through Draft/M.O. in favour of ENGINEERS INDIA RESEARCH INSTITUTE, DELHI. Delivery within 1 day. (To Order please dial : 98114-37895).

to be converted by a Solar Inverter to Alternating Current (AC) Electricity to be used by Consumers .Note Solar Electricity can also be supplied to the Electricity Grid if allowed by your Utility. However, In India, the industry is still immature and interconnections are not given to ordinary consumers in general. So you can use an Energy Storage Device to store Electricity. However Energy Storage Products like Chemical Batteries are quite expensive. Solar Panel produced Electricity usually costs between Rs. 15-18 /KwH (much higher than the Rs. 3-6/ unit paid normally) which makes if uneconomical except in special cases like off grid applications.

 COST ESTIMATION

 Plant Capacity
 67 KW/Day

 Land & Building (2500 Sq.mt) Rs. 1.95 Cr

 Plant & Machinery
 Rs. 90.00 Lacs

 Total Capital Investment
 Rs. 13.16 Cr

 Rate of Return
 66%

 Break Even Point
 32%

## HOSPITAL (40 BEDS)

## [CODE NO. 2043]

Healthcare has become one of India's
 Iargest sectors - both in terms of revenue
 and employment. Healthcare comprises
 hospitals, medical devices, clinical trials,
 outsourcing, telemedicine, medical
 tourism, health insurance & medical
 equipment.

COST ESTIMATION			
Plant Capacity 40	BEDS HOSPITAL		
and & Building (500)	Rs. 1.10 Cr		
Plant & Machinery	Rs. 1.95 Cr		
Total Capital Investment	Rs. 3.31 Cr		
Rate of Return	27%		
Break Even Point 62%			
* * * * * * * * * * * * * * * * * * * *			

## Start Your Own Industry

## **CALCIUM SILICATE** [CODE NO. 2042]

shortened trade name Cal-Sil or Calsil) is the chemical compound Ca2SiO4, also known as calcium orthosilicate and sometimes formulated 2CaO.SiO2. It is one of a group of compounds obtained by reacting calcium oxide and silica in various ratios e.g. 3CaO+SiO2, Ca3SiO5; 2CaO•SiO2, Ca2SiO4; 3CaO•2SiO2, Ca3Si2O7 and CaO.SiO2, CaSiO3 Calcium silicate is a white free-flowing powder derived from limestone and diatomaceous earth. It has a low bulk density and high physical water absorption. It is used in roads, insulation, bricks, roof tiles, table salt and occurs in cements, where it is known as belite (or in cement chemist notation C2S). It is used as an anti-caking agent in food preparation and an antacid. It is approved by the United Nations' FAO and WHO bodies as a safe food additive in a large variety of products.

COST ESTIMATION Plant Capacity 5.00 MT./da Land & Building (4000) Rs. 2.96 C Rs. 77.50 Lac Plant & Machinery Total Capital Investment Rs. 5.74 C Rate of Return 709 Break Even Point 32%

SURGICAL AND EXAMINATION HAND GLOVES (STERILE AND NON STERILE) (CODE NO. 2041)

Medical gloves are disposable gloves used during medical examinations and procedures that help prevent crosscontamination between caregivers and patients. Medical gloves are made of different polymers including latex, nitrile rubber, vinyl and neoprene; they come unpowdered, or powdered with cornstarch to lubricate the gloves, making them easier to put on the hands Cornstarch replaced tissue-irritating Lycopodium powder and talc, but even cornstarch can impede healing if it gets into tissues (as during surgery). As such, unpowdered gloves are used more often during surgery and other sensitive procedures. Due to the increasing rate of latex allergy among health professionals, and in the general population, gloves made of non-latex materials such as vinyl, nitrile rubber, or neoprene have become widely used.

## COST ESTIMATION

Plant Cap. 1000000 PAIRS/ANNUM Land & Building (700sq.mt.) Rs.1.05 Cr Plant & Machinery Rs. 45.00 Lacs Total Capital Investment Rs 168 Cr Rate of Return 21% Break Even Point 61% \*\*\*\*\*\*\*\*\*\*\*\*\*

Patrons, deposit amount in EIRI Account ICICI BANK LTD. CA-038705000994 (RTGS/NEFT/IFSC Code: ICIC0000387)

## **DIETHYL PHTHALATE** [CODE NO. 2040]

Calcium silicate (often referred to by its Government of India has reserved the manufacture of D.E.P. in small scale sector only to secure small scale manufacturers. So all the facilities regarding raw materials procurement. marketability levies and taxes concessions etc are available to this unit also. All the plant & machineries are also indigenously available. Therefore there is no hurdle in setting up this unit either with in it or by the addition of an added substance which is knows as plasticizers. Without this, it would not be possible to make plastic sheeting, film & other flexible forms of plastics. There are more than 350 types of plasticizers in the market all over the world and they are classified on the basis of chemical composition such as phthalates, phosphates, adipates epoxy etc. and on the basis of performance character such as primary secondary etc

e	COSTESTIMATIO	N
	Plant Capacity	5 Ton/day
	Land & Building (6000Sq.Mt)	Rs. 2.25 Cr
ıy	Plant & Machinery	Rs. 1.24 Cr
Cr	W.C. for 2 Months	Rs. 2.53 Cr
s	Total Capital Investment	Rs. 6.18 Cr
Cr	Rate of Return	55%
%	Break Even Point	35%

**PROCESSING UNIT OF LARGE** CARDAMOM [CODE NO. 2039]

large genus of rhizomatic herbs, 3high, comprising 100 palaeotropical 12' species, of which 30 are met with in India and Burma. The spicy aromatic seeds of some species of ammonium, also called cardamoms, are cheaper substitutes true cardamom (Elettaria for cardamomum), which they resemble. A. aromaticum and A. subulatum are cultivated in India. The seeds of A. xanthioides Wall., Malabar or Tavoy cardamom (Burma, Siam, and the Malay Peninsula), are imported. They are pale brown, somewhat smaller in size than true cardamom seeds, and possess a strong but agreeable odour. COST ESTIMATION

Plant Cap.	500.00 Kgs./day	
Land & Building (1000 S	g.Mt) Rs. 1.29 Cr	PLANT [CODE NO
Plant & Machinery	Rs. 38.00 Lacs	LPG in India has reached
W.C. for 1 Month	Rs. 1.61 Cr	(15.43 crore as on 1-7-201
Total Capital Investment	Rs. 3.38 Cr	which roughly translates to r
Rate of Return	28%	of the population. LPG we
Break Even Point	54%	acquire this popularity one
*****	******	COST ESTIMATI
M.S. BARREL A	ND DRUMS	Plant Capacity 150
[CODE NO		Land & Building (1.5 Acre)
		Plant & Machinery
The construction of dru		W.C. for 1 Month
applicable regulations		Total Capital Investment
matched for compatibilit		Rate of Return
product shipped. Drum		Break Even Point
barrels in common usage	ge. The drums are	*****

typically made of steel with a ribbed outer wall to improve rigidity and for rolling The lids can be welded or secured with a head gasket and bolt ring. Drums can also be made of durable plastic or paperboard. They are commonly used for transporting oils, fuels, chemicals, and dry goods. The barrels are, made of 1mm and 1.25mm thickness CRCA sheet Availability of steel locally and opening up of the Indian economy resulted in a spurt in demand and consequently, the growth of barrel and drum plants across India accelerated. The construction standards for these drums are even higher than for commercial drums and manufacturers have to pay particular attention to the requirements.

## COST ESTIMATION

Plant Capacity	4000	Nos/c	lay
Land & Building (5000Sq.Mt	) Rs.	4.32	Cr
Plant & Machinery	Rs.	1.42	Cr
W.C. for 2 Months	Rs. 2	20.45	Cr
Total Capital Investment	Rs. 2	26.46	Cr
Rate of Return		5	5%
Break Even Point		2	8%
*****	*****	*****	***

## **CABLE TRAY MANUFACTURING** (G.I. LADDER AND PERFORATED TRAYS) [CODE NO. 2037]

A cable tray system is used to suppor insulated electric cables used for power distribution and communication. Cable trays are used as an alternative to oper wiring or electrical conduit systems, and commonly used for cable are management in commercial and industrial construction. They are especially useful in situations where changes to a wiring system are anticipated, since new cables can be installed by laying them in the tray, instead of pulling them through a pipe

## COST ESTIMATION

Plant Capacity	500 Mtr./day
and & Building (3000Sq.N	At) Rs. 3.02 Cr
Plant & Machinery	Rs. 98.90 Lacs
V.C. for 2 Months	Rs. 7341 Lacs
Total Capital Investment	Rs. 4.97 Cr
Rate of Return	30%
Break Even Point	59%
*****	*****

## **PG STORAGE & BOTTLING** O. 2036]

over 15 crore 3) households more than 60% vould go on to e day. **FION** 

	Plant Capacity 1500	) Cylinder/day
	Land & Building (1.5 Acre)	Rs. 2.28 Cr
	Plant & Machinerv	Rs. 1.00 Cr
t	W.C. for 1 Month	Rs. 2.96 Cr
Y	Total Capital Investment	Rs. 6.80 Cr
2	Rate of Return	19%
t	Break Even Point	56%

## **Top Industries to Start**

## POLYVINYL ACETATE EMULSION (PVA- FOR PAINTS

PRODUCTION) (CODE NO. 2035) 1. An emulsion is a very fine dispersion of one liquid in another with which it is immiscible. 2. An emulsion is a system containing two liquid phases, one of which is dispersed as globules in the other. 3. Emulsions are mechanical mixtures of liquids that are immiscible under ordinary conditions, and which may be separated into layers on standing, heating, freezing, by agitation or the addition of other chemicals. 4. An emulsion is a twophase liquid system consisting of fairly coarse dispersions of one liquid in another with which it is it is not miscible. 5. Emulsions are intimate mixtures of two immiscible liquids, one of them being dispersed in the other in the form of fine droplets.

### COST ESTIMATION

Plant Capacity	6000 LTRS/day
Land & Building (1500	Sq.mt) Rs. 1.83 Cr
Plant & Machinery	Rs. 55.00 Lacs
W.C. for 2 Months	Rs. 1.95 Cr
Total Capital Investmer	nt Rs. 4.42 Cr
Rate of Return	34%
Break Even Point	44%
*****	*****

## QUARTZ POWDER FROM

QUARTZ ROCK [CODE NO. 2034] The term 'quartz' is often referred to as a synonym for silica. Silica (SiO2) is one of the ubiquitous materials in the earth's crust. Quartz, quartz crystals, quartzite, silica sand, sand (others) and moulding sand are all coined together in one generic name 'silica minerals'. This is because all these commodities are essentially crystalline silicon dioxide (SiO2) with variations mostly related to their crystalline structure and presence of minor or trace impurities.

### COST ESTIMATION

Plant Capacity	4800 Ton/day
Land & Building (155 Acre)	Rs. 17.35 Cr
Plant & Machinery	Rs. 11.90 Cr
W.C. for 1 Month	Rs. 26.00 Cr
Total Capital Investment	Rs. 55.92 Cr
Rate of Return	39%
Break Even Point	42%
*****	******

## SANITARY NAPKINS (SEMI –

AUTOMATIC UNIT) [CODE 2033] Sanitary napkin is a hygiene absorbent product used by women during menstrual periods. It is a product of technical textile. A sanitary napkin, sanitary towel, sanitary pad, menstrual pad, maxi pad, or pad is an absorbent item worn by a woman while she is menstruating, recovering from vaginal surgery, for lochia (post birth bleeding), abortion, or any other situation where it is necessary to absorb a flow of blood from a woman's vagina. The menstrual cycle stars for young women

between the ages 11-17, frequently around 12-13 years. On average a woman experiences a period every 28th day, 12-13 times in a year. A menstrual period normally lasts 3-7 days. The loss of fluid in a period is on average half a cup or 65-80 ml. On small scale, the processed cotton is purchased which is spinned and woren. Sanitary napkin is a product used by women during the menstrual period to treat menstruation. It is one of the daily necessities for women.

## COST ESTIMATION

Plant Capacity	9000 Nos./day
Land & Building (500Sq.M	t) Rented
Plant & Machinery	Rs. 20.00 Lacs
W.C. for 2 Months	Rs. 14.70 Lacs
Total Capital Investment	Rs. 38.57 Lacs
Rate of Return	39%
Break Even Point	62%

## ACTIVATED CARBON FROM COCONUT SHELL/WOOD/COAL & LIGNITE [CODE NO. 2032]

Carbon is probably the most widely distributed element in nature. It occurs in two allotropic crystalline forms viz. graphite (hexagonal system) and diamond (isomeric system), the former is soft and black while diamond is hard and transparent. Charcoal, coke and carbon black, classified as emorphous carbon: are considered by some to represent a third allotropic form. They are said to be composed of very minute crystals of graphite by others. Carbon is an essential constituent of all vegetable and animal matter in which it occurs in combination with hydrogen, nitrogen, oxygen and other elements in immense variety of compounds. In combination with hydrogen it occurs as hydrocarbons in petroleum It is also found in carbon dioxide in air (0.03% as sodium bicarbonate in sea water, and as calcium and magnesium carbonate in sedimentary rocks such as chalk and dolomite.

COST ESTIMATION		
Plant Capacity	14.00 MT./day	(
Land & Building (1.5 Acre)	Rs. 3.50 Cr	
Plant & Machinery	Rs. 2.50 Cr	v
W.C. for 2 Months	Rs. 2.69 Cr	d
Total Capital Investment	Rs. 8.86 Cr	h
Rate of Return	22%	is
Break Even Point	60%	p
*****	******	e
DISPOSABLE SYRINGES AND		
NEEDLE PLANT [CODE NO. 2031]		
A syringe is a simple pum		L
a plunger that fits tightly		Ρ
plunger can be pulled and		V

a plunger that his tightly in a tube. The plunger can be pulled and pushed along I inside a cylindrical tube (called a barrel), allowing the syringe to take in and expel a liquid or gas through an orifice at the open end of the tube. The open end of the syringe may be fitted with a hypodermic needle, a nozzle, or tubing to help direct the flow into and out of the

barrel. Syringes are often used to administer injections, insert intravenous drugs into the bloodstream, apply compounds such as glue or lubricant, and measure liquids.

## COST ESTIMATION

Land & Building (30000sq.mt)	Rs. 17.55 Cr
Plant & Machinery	Rs. 12.00 Cr
W.C. for 2 Months	Rs. 18.54 Cr
Total Capital Investment	Rs. 48.83 Cr
Rate of Return	35%
Break Even Point	44%
******	

## GARBAGE TRUCK MANUFACTURING UNIT (ASSEMBLY PLANT) [CODE NO. 2030]

Waste is a global issue. If not properly dealt with, waste poses a threat to public health and the environment. It is growing issue linked directly to the way society produces and consumes. It concerns everyone. Waste management is one of the essential utility services underpinning society in the 21st century, particularly in urban areas. Waste management is a basic human need and can also be regarded as a basic human right. Ensuring proper sanitation and solid waste management sits alongside the provision of potable water, shelter, food, energy, transport and communications as essential to society and to the economy as a whole, both the public health problems of uncollected waste as well as the solutions

#### COST ESTIMATION Plant Capacity 110 Nos/day Land & Building (54000 Sq.Mt) Rs. 26.49 C Plant & Machinery Rs. 6.00 Ci W.C. for 1 Month Rs. 51.43 Ci Total Capital Investment Rs. 84.46 Ci Rate of Return 32% Break Even Point 38% \*\*\*\*\*

## WASTE MANAGEMENT ASSEMBLY (GARBAGE CONTAINER ASSEMBLY PLANT) [CODE NO. 2029]

Waste is a global issue. If not properly dealt with, waste poses a threat to public health and the environment. It is growing issue linked directly to the way society produces and consumes. It concerns everyone.

## COST ESTIMATION Plant Capacity 10 Nos/day

Land & Building (54000 Sq.Mt)	Rs. 26.49 Cr	
Plant & Machinery	Rs. 6.00 Cr	
W.C. for 1 Month	Rs. 51.43 Cr	
Total Capital Investment	Rs. 84.46 Cr	
Rate of Return	32%	
Break Even Point	38%	
***************************************		
Deposit amount in EIRI Account		

AXIS BANK LTD. 054010200006248 (IFS Code: UTIB0000054)

## **Best Industries to Start and Grow**

## HDPE/PP WOVEN SACKS [CODE NO. 2028]

HDPE/PP oriented sacks are becoming popular through out the world. This is because they are chemically inert & are water repellent & lighter in weight. They are free & possess sufficient strength & can easily be handled. They are competitive in price with other type of bags also. Air permissible sacks made of polythene strips are used for packing potatoes, coconut etc. The only problem is that the Conventional using of hooks to lift cannot be used with HDPE/PP bags.

## COST ESTIMATION

	120000 Bag/day
Land & Building (7500Sc	1.Mt) Rs. 8.64Cr
Plant & Machinery	Rs. 7.93 Cr
W.C. for 2 Months	Rs. 6.78 Cr
Total Capital Investment	Rs. 24.25 Cr
Rate of Return	62%
Break Even Point	34%
	*************

CANDLES MANUFACTURING (PARAFFIN WAX CANDLE, NON DRIP CANDLE, CONTAINER CANDLE, BEESWAX CANDLE, TRANSPARENT CANDLE, SMOKELESS CANDLE, MAGIC CANDLE, MOSQUITO REPELLENT CANDLE) (CODE NO. 2027)

The candle making has been practiced and despite the introduction of mass production methods, candles can still be made by well-established methods which require only simple equipment. Much of this equipment can be made by rural craft men. A candle is simply a solid cylinder of tallow, wax or other solid fat, containing a wick to give off light when burning. When the wick is lit, the flame radiates sufficient heat to melt a small pool of wax at the top of the candle.

## COST ESTIMATION

		E0 1111/			
Plant	Cap.	600	0 PACK	ETS/E	)ay
Land	& Building	(1000Sq	.Mt) Rs	.1.46	Cr
Plant	& Machiner	y	Rs.	12 La	ics
W.C.	for 2 Mont	hs	Rs. 85.	27 La	CS
Total	Capital Inv	estment	Rs.	2.45	Cr
Rate	of Return			18	3%
Break	Even Point	t		63	3%
***************************************					

## STAINLESS STEEL WIRE DRAWING [CODE NO. 2026]

Stainless steel wire is produced by colddrawn from stainless steel wire rod of appropriate composition through one or more carbide or diamond dies. As the steel rod passes through each die, the diameter is reduced and the length is necessarily increased. Variables such as initial rod diameter, final wire diameter, and enduse applications determine the number of

Patrons, deposit amount in EIRI Account STATE BANK OF INDIA CA-30408535340 (RTGS/NEFT/IFSC Code: SBIN0001273)

reductions that must take place. The percent of reduction in cross-sectional area occurring at each die determines the extent of work hardening and dictates whether or not further reduction can take place prior to annealing. Annealing is required to soften the work-hardened wire per minute. Due to appearance, hardness, smoothness, non corrosiveness, and resistance to elevated temperatures stainless steel wire is required. COST ESTIMATION

Plant Cap.	20 MT/Day
Land & Building (5000 Sq	.Mt) Rs.6.20Cr
Plant & Machinery	Rs. 1.50 Cr
W.C. for 2 Months	Rs. 16.16 Cr
Total Capital Investment	Rs. 24.21 Cr
Rate of Return	50%
Break Even Point	32%
******	*******

**ONION PASTE AND POWDER** MAKING UNIT [CODE NO.2025] Onion powder is dehydrated, ground onion that is commonly used as a seasoning. It is a common ingredient in seasoned salt and spice mixes, such as beau monde seasoning. Some varieties are prepared using toasted onion. White, yellow and red onions may be used. Onion powder is a commercially-prepared food product that has several culinary uses. COST ESTIMATION

Plant Capacity	2 TON/Day
Land & Building (1500 S	q.Mt) Rs. 1.83 Cr
Plant & Machinery	Rs. 46 Lacs
W.C. for 2 Months	Rs. 188 Lacs
Total Capital Investment	Rs. 3.26 Cr
Rate of Return	19%
Break Even Point	60%

## **GUNNY BAG MANUFACTURING** PLANT [CODE NO.2024]

Jute is a naturally occurring, inexpensive fiber that is biodegradable and environmentally friendly. Because of its natural golden shine, jute is also known as "the golden fiber." Jute is most commonly used to make consumer goods such as bags and rugs. When the jute industry started in India, one of the earlier developments was the manufacture of jute sacks. The bulk of jute sack production is used for all types of jute bags. Sacking bags, woven wholly from jute fabrics, are available as plain and twill bags. Jute bags, the other name for sacking bags are mainly used to pack cement, sugar and other bulky articles, which are packed in weight range from 50 to 100kgs.

#### COST ESTIMATION Plant Cap. 10,000 Nos/Day Land & Building (2000Sq.Mt) Rs. 69Lacs Plant & Machinery Rs. 28 Lacs W.C. for 1 Month Rs. 1.08 Cr Total Capital Investment Rs. 2.11 Cr Rate of Return 45% Break Even Point 45%

**Hi-Tech Projects** Date of Posting 24th to 30th of Every Month

Weight of Magazine- Upto 48 Gram) An Industrial Monthly Magazine on Hi-Tech Projects & developed and underdeveloping Technologies with lucrative Project opportunities Editor

Sudhir Gupta

## Asst. Editor

Ankur Gupta SUBSCRIPTION RATES

FOR INDIA

Single Copy Rs. 20/-One Year Rs. 225/-Three Years Rs. 650/-Add Rs. 100/- for outstation cheques Please make the Draft/Cheque in favour of "Engineers India Research

> Institute, Delhi" FOR OVERSEAS

Single Copy US\$ 10/-One Year US\$ 120/-

## CAUTION

Project Reports/Profiles provided in this issue had been prepared on datas available at the time of preparing these reports. Entrepreneurs/Industrialists are requested to please update the data before venturing into any project mentioned herein.



lENGINEERS INDIA RESEARCH INSTITUT( 449 Nai Sarak, Main Road, Delhi - 110006 (INDIA) Ph : 9111- 23916431, 23918117 45120361, 9811437895, 9811151047 E-Mail : eiritechnology@gmail.com, eiriprojects@gmail.com Website: www.eiriindia.org www.eiribooksandprojectreports.com Patrons may also directly transfer the fund for Project Reports & Books in following EIRI current accounts: HDFC BANK - 05532020001279 (RTGS/NEFT/IFSC CODE: HDFC0001981) ICICI BANK - 038705000994 (RTGS/NEFT/IFSC CODE: ICIC0000387) AXIS Bank Ltd. - 054010200006248 (RTGS/NEFT/IFSC CODE:UTIB0000054)

UNION BAK OF INDIA -307201010015149 RTGS/NEFT/IFSC CODE: UBIN0530727)

STATE BANK OF INDIA -30408535340 (RTGS/NEFT/IFSC CODE: SBIN0001273)

AND SMS US ON PH. +91 9811437895

## Start Your Own Industry

## RUBBER POWDER [CODE NO.2023]

By the application of heat and chemical agents followed by intense mechanical working to ground vulcanized scrap or worn out rubber tires, tubes and waste rubber articles, a substantial regeneration on devulcanisation of the rubber compound to its original plastic state is effected, thus permitting the product to be compounded, processed and revulcanised. There are several types of rubber powder made in different ways. They may be lightly vulcanized and may contain appreciable quantities of anti-agglomerating agents to prevent massing on storage. The trend now-adays is towards automation in production of rubber goods during handling, mixing and processing. The powder forms of rubber is very easy to be handled. The advantages of powder processing have been recognized and include (a) rapid and inexpensive mixing ; (b) flexibility in compounding.

COST ESTIMATION (US\$ DOLLAR) Plant Capacity 4416 Ton/Month Land & Building (2.5Acre) US\$ 9 Lacs US\$ 7.51 Lacs Plant & Machinery US\$ 22.16 Lacs W.C. for 2 Months Total Capital Investment US\$ 41.82 Lac Rate of Return 43% Break Even Point 41% 

## **ABC CABLE FACTORY** [CODE NO. 2022]

Aerial Bunched Cables (ABC) is a very novel concept for Over Head Power distribution. When compared to the conventional bare conductor over head distribution system. ABC provides higher safety and reliability, lower power losses and ultimate system economy by reducing installation, maintenance and operative cost. This system is ideal for rural distribution and specially attractive for installation in difficult terrains such as hilly areas, forest areas, coastal areas etc. Aerial Bunched Cables is also considered to be the best choice for power distribution congested urban areas with narrow lanes and by - lanes. In developing urban complex, Aerial Bunched Cables is the better choice because of flexibility for rerouting as demanded by changes in irban development plar

uiban uevelopinent plan.	
COST ESTIMATION (U	JS\$ DOLLAR)
Plant Capacity	205.36 KM/Day
Land & Building (18,000)	US\$ 19.75 Lac
Plant & Machinery	US\$ 9.78 Lacs
W.C. for 2 Months	US\$ 2.11 Cr
Total Capital Investment	US\$ 2.42 Ci
Rate of Return	35%
Break Even Point	35%
*****	*****

**EIRI Account HDFC BANK** 

CA-05532020001279

(RTGS/NEFT/IFSC Code: HDFC0001981)

## **EXTRACTION OF PRECIPITATED** SILICA FROM RICE HUSK ASH [CODE NO. 2021]

Rice is the seed of the monocot plants Oryza sativa (Asian rice) or Oryza glaberrima (African rice). It is normally prown as an annual plant, although in tropical areas it can survive as a perennial and can produce aratoon crop for up to 30 years. Since a large portion of maize crops are grown for purposes other than human consumption, rice is the most important grain with regard to human nutrition and caloric intake, providing more than one fifth of the calories consumed worldwide by the human species. The rice plant can grow to 1-1.8 m (3.3-5.9 ft) tall, occasionally more depending on the variety and soil fertility. It has long, slender leaves 50-100 cm (20-39 in) long and 2-2.5 cm (0.79-0.98 in) broad

## COST ESTIMATION

Plant Capacity	1 Ton/D	ay
Land & Building (4000Sq	.Mt) Rs.21La	cs
Plant & Machinery	Rs. 12.60 La	cs
W.C. for 3 Months	Rs. 35.53 La	cs
Total Capital Investment	Rs. 67.43 La	ac
Rate of Return	51	%۱
Break Even Point	40	)%
*******	*******	***

## ALLYL ISOTHIOCYANATE

### [CODE NO.2020] isothiocyanate (AITC) Allvi

is organosulfur compound with the formula responsible, for the pungent taste of mustard, radish, horse radish and wasabi. It is slightly soluble in water, but more soluble in most organic solvent. Allyl isothiocyanate can also be obtained from the seeds of black mustard (Brassica nigra) or brown Indian mustard (Brassica Juncea). When these mustard seed are broken, the enzyme myrosinase is released and acts or glucosinolate known as sinigrin to give allay isothiocyanate. Allyl isothiocyanate serves the plant as a defense against herbivores. Allyl isothiocyanate has as LD50 of 151mg/ kg and is a lachrymator

## COST ESTIMATION

Plant Capacity	300 KGS/Day	
Land & Building (800Sq.	Mt) Rs. 1.28 Cr	1
Plant & Machinery	Rs. 50 Lacs	•
W.C. for 1 Month	Rs. 35.35 Lacs	ľ
Total Capital Investment	Rs. 2.20 Cr	ľ
Rate of Return	11%	
Plant Capacity Land & Building (800Sq. Plant & Machinery W.C. for 1 Month Total Capital Investment Rate of Return Break Even Point	75%	ľ

## ALCOHOL FROM MAHUA FLOWERS [CODE NO.2019]

Energy is the lifeline of global economy diminishing fossil fuel reserves and increased concerns over environmental pollution accelerated the need to look for renewable and environmentally sustainable energy sources. In this

context, ethanol derived from biomass is means to meet our energy needs. Bioethanol is a sustainable and renewable transportation fuel that is a promising substitute to gasoline and represents an environment-friendly fuel because it reduces the amount of greenhouse gas emissions, which is a major cause of global warming. The development of alternative fuel and energy from biomass has therefore, resurfaced as a research priority in recent years.

## COST ESTIMATION

Plant Capacity 5000 Ltr/Dav Land&Building (10000Sq.Mt)Rs.10.60 Cr Plant & Machinery Rs. 1.46 Cr Rs. 68.90 Lacs W.C. for 2 Months Total Capital Investment Rs. 13.21 Cr Rate of Return 11% Break Even Point 67%

## COPPER WIRE MANUFACTURING FOR HOUSE AND INDUSTRIAL **APPLICATIONS (PVC WIRE AND** CABLES) [CODE NO. 2018]

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 CH2CHCH2NCS. This colourless oil is bare or insulated by a protective colored sheath.

## COST ESTIMATION

1.60 MT/I	Jav
	Juy
Rs. 3.32	Cr
Rs. 1.18	Cr
Rs. 2.99	Cr
Rs. 7.74	Cr
1	6%
6	6%
*******	****
	Rs. 3.32 Rs. 1.18 Rs. 2.99 Rs. 7.74

## HAZARDOUS WASTE RECYCLING [CODE NO. 2017]

The Hazardous Wastes (Management and Handling) Rules, 1989, notified under the Environment (Protection) Act 1986 and subsequent amendments in 2000, 2003. 2008 and 2009 as the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, regulate management of hazardous wastes generated within the country as well as export/import of such wastes.

## COST ESTIMATION

Plant Capacity	24 TON/Day
Land & Building (4000 Sq.	Mt) Rs. 1.54 Cr
Plant & Machinery	Rs. 1.35 Cr
W.C. for 1 Month	Rs. 30.25 Lacs
Total Capital Investment	Rs. 3.64 Cr
Rate of Return	23%
Break Even Point	67%
******	*****

## **Top Industries to Start**

## TEA & COFFEE PROCESSING AND PACKAGING [CODE NO. 2015]

The beverage's popularity grew, and its trade became an economic mainstay. Today, tea is arguably the most popular beverage in the world. Black and green tea is the two main types, defined by their respective manufacturing techniques. Green tea is consumed mostly in Japan, China, North Africa and the

Middle East; the remainder of the world uses black tea. Oolong tea, found in some regions of China, is an intermediate variant between black and green tea. Black and Green teas as lightly flavoured with other botanicals are sometimes seen; these include jasmine tea, scented with jasmine blossoms, and Earl Grey tea, fruit as lightly flavoured with other botanicals are sometimes seen; these include jasmine tea, scented with jasmine blossoms, and Earl Grey tea, flavoured with bergamot, a type of citrus fruit.

COST ESTIMATIONPlant Capacity4 MT./dayLand & Building (5000Sq.Mt)Rs. 5.28 CrPlant & MachineryRs.1.84 CrW.C. for 2 MonthsRs. 6.59 CrTotal Capital InvestmentRs. 14.26 CrRate of Return67%Break Even Point26%

## RECYCLE WASTE BLACK OIL USING ACID AND CLAY (CODE NO. 2014)

Re-refining of used oils is now accepted and recognised as a legitimate source of supplementing petroleum oils. Prior to the escalation of oil prices, petroleum lubricants and other industrial oils were very cheap and their conservation and saving was not economically attractive. Users did not care to recovery and preserve used oils, which were allowed to be lost or were disposed of by easiest possible means. Rise in Oil prices has compelled the users firstly to economise the use of oils and secondly to recover, grade and store the used oils. COST ESTIMATION

COST ESTIMA		N	
Plant Capacity		1.00 M	
Land & Building (2400Sq	.Mtr)	Rs. 2	4Lac
Plant & Machinery	R	s.6.78	Lacs
W.C. for 2 Months	Rs.	23.02	Lacs
Total Capital Investment	Rs.	54.80	Lac
Rate of Return			45%
Break Even Point			53%

SOLAR POWERED RICKSHAW [CODE NO. 2013]

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 impossible to have all the preceding ideal

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

its wheels pulled by an electric motor ranging ay. from 650-1400 Watts. They are mostly manufactured in China, only a few other countries manufacture these vehicles. by Battery-run rickshaws could be a lowing emitter complementary transport for the stly low-income people, who suffer most from the a lack of transport facility, if introduced in a systematic manner according to

### COST ESTIMATION

۱.	Project Name	10.00 NOS/day
d	Land & Building (6000 Sc	I.Mtr) Rs. 5 Cr
۱;	Plant & Machinery	Rs. 1.00 Cr
h	W.C. for 1 Month	Rs. 2.88 Cr
١,	Total Capital Investment	Rs. 8.46 Cr
	Rate of Return	30%
r	Break Even Point	46%
	********	******

## ABC CABLE FACTORY [CODE NO. 2012]

Aerial Bunched Cables (ABC) is a very novel concept for Over Head Power distribution. When compared to the conventional bare conductor over head distribution system. ABC provides higher safety and reliability, lower power losses and ultimate system economy by reducing installation, maintenance and operative cost. This system is ideal for rural distribution and specially attractive for installation in difficult terrains such as hilly areas, forest areas, coastal areas etc. Aerial Bunched Cables is also considered to be the best choice for power distribution congested urban areas with narrow lanes and by - lanes. In developing urban complex, Aerial Bunched Cables is the better choice because of flexibility for rerouting as demanded by changes in urban development plan. COST ESTIMATION (IN US\$)

 Plant Capacity
 205.36 KM/day

 Land & Bldg (18000 Sq.Mtr)US\$.20Lacs

 Plant & Machinery
 US\$ 9.78 Lacs

 W.C. for 2 Months
 US\$ 2.11 Cr

 Total Capital Investment
 US\$ 2.42 Cr

 Rate of Return
 35%

 Break Even Point
 33%

## MOTORCYCLE TYRE MANUFACTURING [CODE NO. 2011]

Motorcycle tyres are the only contact between the motorcycle vehicle and the ground. The contact surface of a motorcycle tyre is generally very small compared to a tyre used for larger vehicles such as cars, lorries and trucks. Hence, it is particularly vital for the motorcycle tyre to have good traction performance, good rolling and abrasion resistance and high wear resistance. It is impossible to have all the preceding ideal

physical properties in a rubber compound. However, with the right combination of rubber components and suitable amounts of additives, a good compromise between each of the desired physical properties can be achieved. Conventional motor cycle tyres are generally manufactured from synthetic rubber such as styrenebutadiene rubber (SBR) and polybutadiene rubber (PBR), which are derived from fossil fuels such as crude oil.

## COST ESTIMATION

Plant Capacity	3333.3	3 Tyr	es/Day
Land & Building(1400	0 Sq.M	t)Rs.	7.55Cr
Plant & Machinery		Rs.	100 Cr
W.C. for 3 Months		R	s. 26Cr
Total Capital Investm	ent	Rs.	135 Cr
Rate of Return			20%
Break Even Point			68%
*******************	*******	*****	*******

## THREE WHEELER TYRE MANUFACTURING [CODE NO. 2010]

Automotive Vehicles - Pneumatic Tyres means Tyres used for Two and Three Wheeled Motor Vehicles for general dimensional and performance requirements. Tyre: Tyre is an annular, torroidal shaped inflatable envelope made of elastic materials, natural and/or synthetic rubber or blend thereof reinforced with a textile/steel card fabric casing enclosing multi-coil wire beadings. The Tyre is so made that can be used by mounting and inflating on the appropriate rim. The type of Pneumatic Tyres normal road use, special use tyre for mixed use both on and off the road and are restricted speed, snow tyre of structures, diagonal (bias ply) and radial.

## COST ESTIMATION

COST LOTIMA	
Project Name 5,00,00	0 Tyres/Annum
and & Building(8000 Sq.M	VIt) Rs. 4 Cr
Plant & Machinery	Rs. 70 Cr
V.C. for 2 Months	Rs. 5.91 Cr
otal Capital Investment	Rs. 80.86 Cr
Rate of Return	19%
Break Even Point	67%
*******	***********

## BATH FITTINGS [CODE NO. 2009]

A bath fitting is a faucet device used for delivering water from a plumbing system. These faucets provide water control to the user in Bathing & Washbasin areas. With the help of these fixtures we can control flow of water, pressure of water and temperature of water while bathing & hand or face washing, brushing shaving etc.

### COST ESTIMATION

Project Name	600.00 Nos./day			
Land & Bldg (3000 Sq.	Mtr) Rs.2.62 Cr			
Plant & Machinery	Rs. 65.50 Lacs			
W.C. for 2 Months	Rs. 98.98 Lacs			
Total Capital Investment Rs. 4.48 Lacs				
Rate of Return	83%			
Break Even Point	34%			
******				

Market Survey Cum Detailed Techno Economic Feasibility Reports

To get Loan/Finance from Banks/Finacial Institutes. To set up your own Industry/Unit

To have Detailed & Exhaustive Data on any Project.



 \* EIRI Project Reports are prepared by highly qualified & experienced consultants & Market Research and Analysis supported by a panel of Experts and Computerised.
 \* Data provided are reliable and uptodate collected from manufacturers/suppliers, plant already commissioned in India.

A complete List of Industrial Project Reports are given on www.eiribooksandprojectreports.com

## EACH DETAILED PROJECT REPORT CONTAINS:

✓INTRODUCTION : Project Mix, Uses & Applications, Quality Control Measure & Their Introduction for Attaining Required Properties Economy & Productivity Competence.

◆MARKET SURVEY : Market Position, Installed Capacity Production, Anticipated Demand, Present Manufacturers, Statistics of Imports & Exports, Estimated Demand, Demand & Supply Gap (If available), LI/IL Issued Recently

◆ RAW MATERIALS : Raw Material Specifications, Market Codes & Raw Material Prices, Sources of Procurement of Raw Materials [Imported/Indigenous]

◆LAND & BUILDING : Total Land Area Requirement with Rates, Covered Area Break-up with Estimated Costs of Construction



"MARKET SURVEY CUM DETAILED TECHNO ECONOMIC FEASIBILITY REPORTS" on following lucrative products which are most viable and profitable and having bright future scope

Hi-Tech Projects, Mar'18, www.eiriindia.org # 11

Highly Profitable Projects for New Entrepreneurs "EIRI Market Survey Cum Detailed Techno Economic Feasibility Reports"			
<ul> <li>STEEL FABRICATION</li> <li>STEEL ROLLING MILL (REINFORCEMENT BAR)</li> <li>ACRYLIC BATH TUB BY ACRYLIC SHEET</li> <li>FABRICATION OF HEAT EXCHANGER</li> <li>KITCHEN PRODUCTS MADE OF STAINLESS STEEL</li> <li>ALUMINIUM BEVERAGE CAN</li> <li>STEEL ROLLING MILL (BY INDUCTION FURNACE FROM STEEL SCRAP &amp; SPONG IRON</li> <li>M.S. BILLET CASTING WITH INDUCTION FURNACE FROM STEEL SCRAP &amp; SPONGE IRON</li> <li>PROCESSING OF LOW GRADE TUNGESTEN ORE FULL BODY &amp; CHASSISS BUS PLANT</li> <li>ASSEMBLY OF AIR – CONDITIONER/CHEST FREEZER/REFRIGERATOR</li> <li>GILADDER &amp; PERFORATED TRAYS</li> <li>ALUMINIUM DOORS &amp; WINDOWS (ALUMINIUM FABRICATION)</li> <li>LEAF SPRINGS FOR TRACTOR DRAWN TROLLEYS &amp; FOUR WHEELER TEMPOS</li> <li>STEEL BRIGHT BARS</li> <li>AUTOMOTIVE ENGINE VALVE</li> <li>AUTOMOTIVE BRAKING SYSTEM</li> <li>DISPLAY COOLER</li> <li>ERW STEEL PIPES &amp; TUBES</li> <li>STEEL INGOTS</li> <li>TMT STEEL BARS (SARIYA)</li> <li>ALUMINIUM FOIL</li> <li>STONE WARE PIPE (S.W.PIPE)/ CLAY PIPE</li> <li>IRON ORE PELLETIZATION</li> <li>ELECTRIC CONTROL PANEL</li> <li>SOLAR PV POWER PLANT</li> <li>MACHINE SHOP (FOR OIL AND GAS ENGINEERING</li> </ul>	<ul> <li>ALUMINIUM COIL COATING FOR ACP AND ROOFING IND.</li> <li>PAVING BLOCK</li> <li>WIRE NAILS</li> <li>TMT STEEL BARS</li> <li>FASTENERS/NUT &amp; BOLTS (INDUSTRIAL &amp;AUTOMOBILE)</li> <li>HYDRAULIC CYLINDERS</li> <li>DISPOSABLE SYRINGES</li> <li>WITH NEEDLE PLANT</li> <li>FABRICATION UNIT (PRESSURE VESSEL, REACTOR VESSEL &amp; AGITATORS, HEAT EXCHANGERS) &amp; SEAMLESS PIPES AND TUBES</li> <li>COPPER POWDER FROM COPPER SCRAP</li> <li>STONE CRUSHER</li> <li>PRODUCTION OF ALL TYPES OF FANS SUCH AS AXIAL FANS, CENTRIFUGAL FANS (SMOKE EXTRACT FANS &amp; FRESH AIR SUPPLY FANS), BATHROOM FANSETC.</li> <li>STONE MINING</li> <li>MAHINDRA CAR DEALERSHIP WITH AUTOMOBILE SERVICE STATION/GARAGE</li> <li>AUTO FILTERS (AIR FILTERS, OIL FILTERS &amp; FUEL FILTERS)</li> <li>AAC &amp; ACSR ALUMINIUM CONDUCTORS</li> <li>MAGANESE ORE JIGGING</li> <li>STEEL TRANSMISSION LINE TOWERS AND ROLLING MILL TO PRODUCE STEEL SECTIONS</li> <li>FERRO SILICON (FROM MINERAL INGREDIENTS) STAINLESS STEEL TUBES</li> <li>M.S.FASTENERS AND S.S. FASTENERS AND S.S. FASTENERS PREFABRICATED STEEL FRAMED BUILDING MANUFACTURING PLANT</li> <li>LEAD ACID BATTERY</li> <li>GALVANISED WIRE</li> <li>POWER TRANSFORMER (50 KVA TO 2000 KVA)</li> <li>M.S. PIPE</li> </ul>	REQUIRED FOR PRESSURE COOKERS, NON STICK COOKWARES & CIRCLES * LPG CYLINDER * ALUMINIUM COMPOSITE PANNELS * DEEP FREEZER ENVIRONMENTAL CLEARANCE FOR EXPANSION OF INGOTS/ BILLETS PLANT * FERRO SILICON BY SMELTING PROCESS * ALUMINIUM CONDUCTOR * PRESTRESSED CONCRETE POLES * FASTENERS (NUT & BOLT) USED IN OIL AND GAS * ALUMINIUM ALLOY PLANT * STAINLESS STEEL SINKS * ALUMINIUM ALLOY PLANT * STAINLESS STEEL SINKS * ALUMINIUM ALLOY PLANT * STAINLESS STEEL SINKS * ALUMINIUM ALLOY PLANT * DV.C BATTERYSEPARATOR * AUTOMOTIVE TYRE AND TUBE VALVES (VALVES MANUFACTURING) * PRESSURE COOKWARE ALUMINIUM, STAINLESS STEEL & HARD ANODIZED * ELECTRIC WATER HEATER DOMESTIC & INDUSTRIAL * CORRUGATED COLOURED ROOFING GALVANISED IRON SHEET * PRESSURE DIE CASTING * G.I.WIRE AM DARBED WIRE * G.I.WIRE & M.S. BINDING WIRE * HOT DIP GALVANIZING PLANT FOR STRUCTURAL STEEL AND PIPES * COLD ROLLING MILL * DOOR HINGES (MILD STEEL AND STAINLESS STEEL) * PRESSURIZED AEROSOLS (LIKE BODY SPRAYS, PERFUMES, SHAVING FOAM AND SHAVING LOTIONS ETC.)	<ul> <li>POULTRY AND HATHERY FARMING</li> <li>MILK PROCESSING PLANT</li> <li>ROASTED, SALTED ALMONDS, PEANUTS FOR PACKING IN 25g, 50g,250g &amp; 500g SACHET-S</li> <li>BEER FROM POTATOES</li> <li>GUAR GUM POWDER</li> <li>AUTOMATIC WHITE BREAD MAKING PLANT</li> <li>AUTOMATIC BISCUIT MAKING PLANT</li> <li>AUTOMATIC BISCUIT MAKING PLANT</li> <li>KOZEN FOOD BY IOF TECHNOLOGY</li> <li>WALNUT PROCESSING PLANT</li> <li>WHIPPING CREAM FRUITS &amp; VEGETABLES POWDER UNIT (EXPORTS ORIENTED UNIT)</li> <li>NATURAL MEDICINE &amp; RESEARCH INSTITUTE WITH 150 BEDS HOSPITAL</li> <li>PACKAGED DRINKING WATER (PACKED IN 330 ml CUP, 500ML BOTTLE, 1500 ML BOTTLE AND 20 LTR. JAR)</li> <li>COLD STORAGE (CONTROLLED ATMOSPHERE OR CA) FOR POTATO CAP: 1,00,000 BAGS (50 Kg/Bag)), STORING CAP: 5000 Mt, SOLVENT EXTRACTION &amp; REFINING (SOYABEAN) (Cap- 250mt/day &amp; 50mt/Day oil Refining)</li> <li>BOTTLING PLANT (WHISKY, BRANDY, RUM, VODKS, GIN) FROM RECTIFIED SPIRIT/ENA LUBE OIL BLENDING AND GREASES PLANT</li> <li>COLD STORAGE FOR POTATO 1,00,000 BAGS (50 KG/BAG)</li> <li>MAIZE FLOUR &amp; BY PRODUCT MANUFACTURING PLANT</li> <li>CUT FLOWER (GLADIOLI, MARIGOLD, STATICE, CHRYSANTHEMUM ROSE WITH GREEN HOUSE)</li> <li>CATTLE FARMING AND DAIRY PRODUCTS</li> <li>COLD STORAGE FOR POTATO AND OTHER HORTICULTURE PRODUCTS Cap: 5000 Mt</li> </ul>
* MACHINE SHOP (FOR OIL AND GAS ENGINEERING INDUSTRY, AEROSCAPE ENGINEERING INDUSTRY) * STEEL BRIGHT BARS	(50 KVA TO 2000 KVA) * M.S. PIPE * GALVANISED IRON SHEETS * M.S.BILLETS * STEEL GRATING	FOAM AND SHAVING LOTIONS ETC.) * ANHYDROUS SODIUM DITHIONITE PRODUCTION (SODIUM FORMATE	AND OTHER HORTICULTURE PRODUCTS Cap:- 5000 Mt or 100000 Bags (50 Kg/Bag) * DEXTROSE PLANT * SBR RUBBER SHEETS AND
* CEILING FAN * COPPER STRIP COILS FROM SCRAPS * PRODUCTION OF PV PANELS (SOLAR PV PANELS) * ROTARY AIR LOCKS, SCREW CONVEYOR, MOTORIZED/ PNEUMATIC DAMPER, FLAP VALVES, AIR SLIDES REQUIRED IN CEMENT PLANTS AND THERMAL POWER PLANT	(GALVANISING ELECTRO FORGED STEEL GRATING) * ALLOY WHEELS PLANT * ESTABLISHMENT OF MANUFACTURING OF REFRIGERATING APPLIANCE * WELDED WIRE MESH * ALUMINIUM COLD ROLLING MILL FOR SHEETS & CIRCLES * ALUMINIUM ROLLING MILL FOR MANUFACTURING	PROCESS) * SODA ASH PLANT (FROM SOLUTION BRINE) * SISAL FIBRE REINFORCED * CEMENT ROOFING SHEET * HIGH ALUMINA REFRACTORY BRICK PLANT * CATHETERS MANUFACTURING * SURGICAL RUBBER	SHOE MANUFACTURING * CASHEW NUT PROCESSING * PLYWOOD AND PLYBOARD PARTICLE BOARD AND LAMINATED PARTICLE BOARD * VENEER MAKING, PLYWOOD & PLYBOARD MAKING * WALNUT & PINUS(CHILGOZA) OIL, SHELL POWDER PROCESSING PLANT * COUNTRY LIQUOR BOTTLING PLANT (1,00,000 BOTTLES/
* ALUMINIUM EXTRUSION	ALUMINIUM CIRCLES	DISPOSABLE GOODS	DAY)

<b></b>			
* PLASTIC GRANULES FROM	* READY MADE GARMENT	FIBRE BLANKET, CERAMIC	* POLYALUMINIUM CHLORIDE
PLASTIC WASTE	(T-SHIRT/POLO GOLFER/	FIBRE BOARD AND CERAMIC	* NAMKEEN INDUSTRY
* ROPE AND SUTLI MAKING	WOVEN SHIRTING & SUITING		(BHUJIA, CHANACHUR ETC.)
PLANT	FOR UNIFORMS/SWEATERS)	* COLD SUPPLY CHAIN	* POLYOL USED FOR
* BOTTLING PLANT (COUNTRY	MANUFACTURING	* LAMI TUBE MANUFACTURING	POLYURETHANES
LIQUOR) 10,000 LTRS./DAY)	* BIO-DIESEL EXTRACTION	* EYE DROP 3 PIECES	* POLYSTYRENE POLY
* I.V. FLUID (FFS OR BFS	FROM JATROPHA,	(PLASTIC VIALS)	PROPYLENE OXIDE
TECHNOLOGY)	SOYABEAN, SUNFLOWER,	* PET BOTTLES (CAMBER/	* DIETHYL PHTHALATE
* TOXIN PAN MAŚALA,	RICE BRAN, ALGE &	CLEAR IN COLOUR) CAP:	* UREA FORMALDEHYDE AND
TOBACCO LESS GUTKHA	CULTIVATION OF JATROPHA	15ML,60ML 100ML,135ML,	MELAMINE
AND ZARDA	* FAST FOOD RESTAURANT	200ML & 500ML	* FORMALDEHYDE MOULDING
* RUBBER & FLAT	CHAIN WITH CENTRALLISED	* BENZYL ALKONIUM	POWDER
TRANSMISSION BELT	KITCHEN	CHLORIDE (BKC)	* INSTANT COFFEE
CONVEYOR BELT	* GUAR SPLIT POWDER AND	* NATURAL SUGAR WAX	* ANNATTO SEED COLOUR
* UPVC DOORS & WINDOWS	OTHER BY PRODUCTS	* MARGARINE BUTTERFROM	EXTRACTION
FABRICATING PLANT (Fixing	* SOLVENT EXTRACTION	VEGETABLE OIL	* FRUITS AND VEGETABLES
	PLANT (COTTON SEED)	* GREEN HOUSE FOR CROP	DRYING BY (FREEZE DRYING
and Installation of Door and	* RASGULLA MANUFACTURING	PRODUCTION	
Windows of uPVC profiles)		* ORGANIC DAIRY FARMING	
* RUBBER & FLAT			* BIO GAS PRODUCTION AND
TRANSMISSION BELT	* CULTIVATION OF RICE &	* E-WASTE	BOTTLING PLANT
CONVEYOR BELT	WHEAT COMMERCIAL &	* BIO-DIESEL FROM ALGAE	* JAM, JELLIES, FRUIT JUICE
* MUSTARD OIL PROCESSING	MECHANISED DEVELOPMNT	* VANADIUM PENT OXIDE	AND ALLIED PRODUCTS
PLANT (EXPELLER PROCESS)		GRAPHITE MINING AND	MATERNITY NURSING HOME
* MEDICAL COLLEGE WITH	PROCESSING -STARCH	BENEFICIATION PLANT	* CANNING & PRESERVATION
750 BEDS HOSPITAL FACILITY	MODIFIED STARCHES/LIQUID	* VITAMIN WATER	OF VEGETABLES
* MICRO IRRIGATION	GLUCOSE/DEXTROSE	* PET PREFORM CUM PET	* CURCUMIN & TURMERIC OIL
PRODUCT MANUFACTURING	MONOHYDRATE/GLUCOSE	BOTTLES	FROM TURMERIC
PLANT	SYRUPS/CORN SYRUP	* ORGANIC DAIRY FARMING	DETERGENT WASHING
* HOT DIP GALVANIZING	SOLIDS/HIGH MALTOSE	AND PRODUCING WHOLE	POWDER (ARIEL TYPE)
MUSTARD OIL PROCESSING	CORN SYRPS/ MAITO	MILK POWDER (WMP)	* GRANITE SLAB AND TILES
PLANT (EXPELLER PROCESS)	DEXTRINE POWDER/CORN	* HDPE BOTTLES	* TEA PACKAGING
CEMENT TILES, CANAL LINE	GLUTEN MEAL (60%) MAIZE	* CAUSTIC SODA FROM	* PAN MASALA & GUTKHA
SLAB, KERV STONE, PAYER	OIL/SORBITOL	SODIUM CHLORIDE	* PRESTRESSED CONCRETE
RCC PIPE, MANOHOLE	* TEAK FARMING	* COAL TAR PITCH	ELECTRIC POLES
COVER, ENTERLOCKING ETC.	* ARTIFICIAL MARBLE	* MOSQUITO REPELLANT	* LEATHER SHOES
MANUFACTURING PLANT	(SYNTHETIC)	* WRIST BAND	* ROTOGRAVURE PRINTING
* MEDICAL COLLEGE (100	* POTATO STARCH CARDANOL	* CASTOR OIL AND ITS	(FOR FLEXIBLE PACKAGING)
	FROM C.N.S.L. (CASHEWNUT	DERIVATIVES OLEO RESIN,	* AUTOCLAVED AERATED
STUDENT INTAKE	SHELL LIQVID	TURKEY RED OIL, DCO, HCO,	CONCRETE BLOCKS
CAP. MEDICAL COLLEGE			
WITH 500 BED HOSPITAL)	* INTEGRATED SCRAP YARD	SEBACIC ACID, 12-HYDROXY	* OXYGEN AND NITROGEN
* ESTABLISHMENT OF A		STEARIC ACID	GAS PLANT
PRIVATE UNIVERSITY	* MANGO PULP (5 TON/HOUR	* PAPAIN FROM PAPAYA	* MANGANESE ORE
* DIGITAL INKS	200 KG ASEPTIC PACKAGING)		BENEFICATION
* GALVANIZING PROCESS	* BOTTLING PLANT (WHISKY,	* MONOCHLOROBENZENE	* MINERAL WOOL
PLANT FOR ELECTRICAL	BRANDY, RUM, VODKA, GIN)	* EUGENOL FROM CINNAMON	* CALCIUM SILICATE
POLES	FROM RECTIFIED SPIRIT/ENA		* TOUGHENED GLASS
* MAIZE PROCESSING PLANT	* COW DAIRY FARMING	* SULPHUR 80% WDG	* HUMIC ACID
* STARCHES / MODIFIED	(AYRSHIRE/HOLSTEIN) AND	* CERAMIC FIBERS,	* OFFSET PRINTING UNIT
STARCHES/ LIQUID GLUCOSE		CERAMIC FIBRE BLANKET,	(5 COLOUR)
/ DEXTROSE MONOHYDRATE	CAP-50,000 LTR/DAY	CERAMIC FIBRE BOARD	* CASTOR OIL AND ITS
/GLUCOSE SYRUPS / CORN	* WHEAT FLOUR MILL	AND CERAMIC FIBRE ROPE	DERIVATIVES OLEORESIN
SYRUP SOLIDS / HIGH	* CHAKKI FLOUR MILL	* SCREEN PRINTING	* TISSUE PAPER PULPING
MALTOSE CORN SYRUPS /	* I.V. FLUID (FFSTECHNOLOGY)	* DI CALCIUM PHOSPHATE	FROM SAW DUST
MALTO DEXTRINE POWDER /	* LIQUID GLUCOSE FROM	FROM ROCK PHOSPHATE	* KNITTED GLOVES
CORN GLUTEN MEAL (60%)	POTATOES	& HAIFA PROCESS	* RADIATOR COOLANT
MAIZE OIL / SORBITOL.	* SORBITOL FROM MAIZE	* PVC FLEXIBLE PIPE	* LATEX FOAM RUBBER
* BABY CARE PRODUCTS	STARCH	* FLEX BANNER USED IN	(SPONG RUBBER)
* FAT LIQUOR (CHLORINATED	* WALNUT PROCESSINGPLANT	DIGITAL PRINTING	* GARLIC OIL AND POWDER
PARAFFIN WAX)	* SOLVENT EXTRACTION AND	* PIGMENTS BINDERS FOR	* ACTIVATED CARBON &
* BOTTLING OF WHISKY	OIL REFINERY CUM PACKING	TEXTILE PRINTING	SODIUM SILICATE FROM
* UPVC DOORS & WINDOWS	OF RICE BRAN OIL	* POULTRY & HATCHERY FARM	PADDY/ RICE HUSK
PROFILES	* COTTON SEED OIL SOLVENT	* ALOEVERA JUICE AND GEL	* TRIETHYLENE GLYCOL
	EXTRACTION PLANT	* LIME PUTTY	* RAMMING MASS
* EPDM RUBBER PROFILES	* MARINE TRAINING INSTITUTE		* WOOD PEELING &
* FAT LIQUOR (CHLORINATED			
PARAFFIN WAX)	& PLACEMENT SERVICE		
* FAST FOOD RESTAURANT		* EGG TRAY FROM PULP	
WITH CENTRALLISED	* I.V.FLUID (FFS TECHNOLOGY)		* DAIRY FARM (COW &
KITCHEN	* CERAMIC FIBERS, CERAMIC	* OXYGEN GAS	BUFFALO) TO PRODUCE
Market Survey Cum	Detailed Techno Economic Fae		are available contact:
	ENGINEERS INDIA RI		

ENGINEERS INDIA RESEARCH INSTITUTE 4449, Nai Sarak, Main Road, Delhi - 110 006 (India) \* Ph. : +91 9811437895, 9811151047, 91-11-23918117, 23916431, 23947058, 45120361 Email: eiritechnology@gmail.com, eiriprojects@gmail.com Website: www.eiriindia.org, www.eiribooksandprojectreports.com

Highly Profitable Projects for New Entrepreneurs "EIRI Market Survey Cum Detailed Techno			
"EIRI Market Survey Cum Detailed Techno			
	conomic Feas	ibility Reports	
MILK & PACKAGING IN	* MEDICAL DISPOSABLE	YARN, DYEING & WEAVING	* DUSTLESS CHALK
POUCHES	PLASTIC SYRINGES		(SCHOOL CHALK) * TOMATO POWDER
* CUTTING OIL LIQUID GOLD		* AMINES & ALLIED PRODUCT * SPINNING COTTON	* BIODEGRADABLE /
(IN PASTE FORM) * P.V.C. LEATHER CLOTH	* SANITARY NAPKINS & BABY DIAPERS	* SILICONE FROM RICE HUSK	COMPOSTABLE PLASTICS
(REXINE)	* PERFUMES/ATTAR	* ADHESIVE (FEVICOL TYPE)	* ACRYLIC CO POLYMER
* COAL TAR DISTILLATION	* GEMS AND JEWELLERY	* CAUSTIC SODA FROM	EMULSION
* ALUMINIUM LABEL PRINTING	* MULTIAXIAL GLASS FABRIC	ELECTROLYSIS * CAMPHOR TABLETS	* ESTER GUM (FOOD GRADE) * PROTEIN BASED FOAMING
* FOLDING CARTNS/MONO CARTONS		* CERAMIC GLAZED WALL	AGENT
* SURGICAL DISPOSABLE	* COPPER PHTHALOCYANINE * TURMERIC OIL EXTRACTION	AND FLOOR TILES	* LECITHIN (SOYA BASED)
GLOVES (DIPPED RUBBER	FROM DRY TURMERIC	* ZINC SULPHATE MONO	* SOYA OIL AND CATTLE
GOODS)	* CNSL BASED RESIN IN	* ETHANOL (BIO FUEL)	FEED FROM SOYA
* AGRICULTURAL CHEMICAL	LIQUID & POWDER FORM	FROM RICE STRAW * GYPSUM MOULDING AND	BEAN * COMPARISON BETWEEN
(PLANT GROWTH PROMOTER AND PLANT GROWTH	BOPP FILM * BETA IONONE	GYPSUM BOARD	FLY ASH AND CELLULAR
REGULATOR)	* BIO-FERTILIZER	* SMOKELESS COAL	LIGHTWEIGHT CONCRETE
* MENTHOL BOLD CRYSTALS	* ZINC & COPPER SULPHATE	* ACID (SILICA) AND BASIC	(CLC) BRICKS
FROM MENTHOL FLAKES	* PAPER BASED PHENOLIC	RAMMING MASS	* CELL CAST ACRYLIC SHEET
	SHEET (FOR ELECTRICAL	* UNSATURATED POLYESTER RESINS	* ACRYLIC BATH TUB AND
* CORRUGATED POLYCARBONATE SHEET	APPLIANCE) * THINNERS (WHITE SPIRIT	* DAIRY (BUFFALO) FARMING	SHOWER TRAY
* COLD STORAGE	BASED)	SILICONE FROM RICE HUSK	* THERMOCOLE BASED
* FLAT PVC LAMINATED	* SINGLÉ SUPER PHOSPHATE	* N-ACETYL THIOZOLIDINE-	DISPOSABLE PLATES
* SAFTY GLASS/TOUGHENED	& SULPHURIC ACID	4-CARBOXYLIC ACID (NATCA) * PE BASED CARBON BLACK	* SODIUM SILICATE FROM RICE HUSK
GLASS * PLASTIC GRANULES FROM	* MONO CALCIUM PHOSPHATE	COMPOUND	* ETHYL METHACRYLATE
WASTE	& DI-CALCIUM PHOSPHATE * FLEXIBLE P.U. FOAM	* ONION DEHYDRATION	* SODIUM LAURYL ETHER
* DRY WALL PUTTY (WHITE	* ASPIRIN	* PVC PIPES & FITTING	SULPHATE
CEMENT BASED)	* SORBITOL FROM MAIZE	* GLASS REINFORCED	* LATEX GLOVES,
	STARCH	* GYPSUM MOULDINGS ABSORBENT COTTON &	CONDOMS & CATHETER * CALCIUM NITRATE
* OXALIC ACID FROM MOLASSES	* SPICE OIL & OLEORESIN * ANTI-FOAMING AGENT	SURGICAL BANDAGES	GRAIN BASED ALCOHOL
* POTATO GRANULES	(SILICONE BASED) FOR	* CALCIUM STEARATE BY	DISTILLERY
* SANITARY NAPKINS & BABY	DISTILLERY, SUGAR, PAPER	FUSION PROCESS	* BULK DRUGS
DIAPERS	PLANT ETC.	* MANGO POWDER & OTHER	
* CORRUGATED BOXES * PLASTER OF PARIS	* LAUNDRY & DRY CLEANER	FREEZE DRIED PRODUCTS * MENTHOL OIL FROM	* CULTIVATION OF CAPSICUM IN GREEN
* RUBBER ROLLER FOR	* BRICKS FROM STONE DUST * CARBOXY METHYL STARCH	LEAVES AND MENTHOL	HOUSE
PRINTING MACHINE	* TITANIUM DIOXIDE	* CRYSTALS (PEPPERMINT)	* SULPHUR 90% WDG
* LACTIC ACID	* UNDECYENIC ACID	MANUFACTURE OF	* EGG POWDER
* EMERY PAPER (SAND PAPER)		CELLULOSE ACETATE * ANTIFOAMING /	* WOOD PLASTIC * COMPOSITE BOARD LINE
* RUBBER RECLAIM SHEET FROM USED BUTYL TYRE		DEFOAMING AGENT	* SODIUM LAURYL SULPHATE
AND TUBE	* SYNTHETIC IRON OXIDE * PVC INSULATION TAPE	* ALOEVERA CULTIVATION &	AND SODIUM LAURYL
* MANGO PULP	* TAMARIND KERNEL POWDER	PROCESSING	ETHER SULPHATE
* PARTICLE BOARD FROM	* ORGANIC CHEMICAL &	* SYNTHETIC MAGNESIUM	* FISH PROCESSING * BABY CEREAL FOOD & MILK
BAGASSE AND RICE HUSK * TOILET PAPER & NAPKINS	SOLVENTS	SILICATES * EPHEDRINE	POWDERS (BABY FOOD)
* TENDER COCONUT WATER	* PLASTICIZERS * ICE PACK (SOLUTIONS	HYDROCHLORIDE	* GUR (JAGGERY)
* CALCIUM CARBONATE	TYPE, VIOLET-SEMI SOLID	* ACTIVATED BLEACHNG	* DAIRY PRODUCTS
* LIME CALCINATION PLANT	POLYMER TYPE)	EARTH	
* INJECTION MOULDED		* TECHNICAL TEXTILES * FORMALIN FROM	WAX (CPW) * HAND WASHING
PLASTIC COMPONENTS * HYDRATED LIME	* PEARL SUGAR CANDY	METHANOL	DETERGENT POWDER
* BLACK PEPPER	(MISHRI) * GOAT & SHEEP FARMING	* CATIONIC SOFTNER	USING THE DRY MIX
* MULTIAXIAL GLASS FABRIC	* GYPSUM PLASTIC BOARD	(STEARIC ACID BASED)	PROCESS INCLUDING
	(AUTOMATIC PLANT)	* PRECIPITATED SILICA	FORMULA OF DIFFERENT
	* NON-WOVEN INDUSTRY	* PU BASED FOOT WEARS * FORMALDEHYDE RESIN	TYPES QUALITIES (LOW/ MEDIUM/HIGH COST)
* LIME & PRECIPITATED * CALCIUM CARBONATE	(CARRY BAGS, SURGICAL GOWN, FACE MASK, ROUND	(UREA, PHENOL, MELAMINE)	* HANDWASHING DETERGENT
* LIQUID GLUCOSE FROM	CAPS, SHOE COVER, GLOVE)	* HDPE MONO FILAMEN NET	POWDER USING THE DRY
BROKEN RICE	* COTTON SPINNING, SIZING,	* POTATO & ONION FLAKES	MIX PROCESS INCLUDING
Market Survey Cum I	Detailed Techno Economic Eae	asibility Report on all Projects a	re available contact:
		ESEARCH INSTITUTE	

ENGINEERS INDIA RESEARCH INSTITUTE 4449, Nai Sarak, Main Road, Delhi - 110 006 (India) \* Ph. : +91 9811437895, 9811151047, 91-11-23918117, 23916431, 23947058, 45120361 Email: eiritechnology@gmail.com, eiriprojects@gmail.com Website: www.eiriindia.org, www.eiribooksandprojectreports.com

	·		
FORMULA OF DIFFERENT	OUTSOURCE (B.P.O.)	* EPDM RUBBER PROFILES	PACKAGING
TYPES QUALITIES (LOW/	* EMPTY HARD GELATINE	(WEATHER STRIPS,	* NYLONE 66 CURING TAPE
MEDIUM/HIGH COST)	CAPSULES	INDUSTRIAL MONOSTRIPS	USED IN RUBBER HOSE PIPE
* DIGITAL PHOTOPAPER/	* BIOFERTILIZER	ETC)	WRAPPING
INKJET PHOTOPAPER	* PLASTIC MOULDING UNIT	* GRANITE CUTTING AND	* ANTIFOAMING/DEFOAMING
* KAOLIN FOR ROAD MAKING	(CHAIR, TABLES &	POLISHING UNIT (100% EOU)	AGENT LIKE ANTAROL T-709
* PEPPERMINT CULTIVATION &		* SURGICAL COTTON, ROLLER	* SOY AND GLUTEN BASED
PROCESSING	* GOLD POTASSIUM CYANIDE	BANDAGE, CREPE BANDAGE	MOCK MEAT
* PEPPERMINT CULTIVATION &		& PLASTER CART (READY	* KRAFT PAPER USING WASTE
PROCESSING	* HDPE, PVC & CPVC PIPES	MADE) E.G. GYPSONA 3M	PAPER AND OLD
* HDPE PIPE	AND FITTINGS		CORRUGATED CARTONS
* ACTIVATED CARBON FROM	* NO CARB PASTE	* ENTERTAINMENT CLUB,	* GLASS BOTTLE FOR BEER
RICE HUSK	(ANTICARBURIZING PASTE-	HOLIDAY RESORT, 4 STAR HOTEL, AMUSEMENT PARK	AND BEER MUG (TUMBLER) * DISPOSABLE SYRINGES AND
* HT & LT INSULATOR, HT AIR	WATER SOLUBLE) FOR HEAT	CUM WATER PARK,	NEEDLE PLANT (Single Use
BRAKE SWITCH D.O. FUSE,		MUSHROOM & ITS	Syringes, Single Use Needles &
	* CONVERSION WASTE	PRODUCTS, FISH FARMING,	As Syringes)
* PET BOTTLES IN CAP: 500ML, 1 LTR. 2 LTRS. 5 LTRS. USED	PLASTIC WITH TYRE INTO ACTIVATED CARBON AND	LAKE FOR BOATING, DEER	* DIRECT FILLED BALL PEN
, , , , , , , , , , , , , , , , , , , ,		PARK ETC.	(USE AND THROW)
FOR PACKAGED DRINKING WATER, EDIBLE OILS	INDUSTRIAL FUEL * PYROLYSIS PLANT FROM	* HDPE, PVC, LLDPE PIPES/	* BENZALKONIUM CHLORIDE
* ALCOHOLIC BEVERAGES	PLASTIC & RUBBER	TUBES AND FITTING	* SPINNING COTTON (COTTON
(COUNTRY LIQUOR & IMFL)	* COMPARISON BETWEEN FLY	* EPOXIDIZED SOYABEAN OIL	SPINNING PLANT)
* QUARTZ BASED INDUSTRIES		(SECONDARY PLASTICIZER)	* CALCIUM CHLORIDE USING
(QUARTZ POWDER SILICA	LIGHTWEIGHT CONCRETE	USED IN PVC COMPOUND	LIME STONE AND
SAND SILICA RAMMING	(CLC) BRICKS	* POULTRY PROCESSING	HYDROCHLORIC ACID
MASS FUSED SILICA)	* AGAR AGAR	PLANT	* RUBBER POWDER FROM
* BEEDI (BIDI) BY MACHINE	* NAIL POLISH	* B.O.P.P. SELF ADHESIVE	WASTE TYRES
* RICE SHELLER	* PLASTIC GRANULES FROM	TAPES	* CALCINATION PLANT FOR
* FRUIT RIPENING CHAMBER	WASTE	* I.V.SET	PYROPHYLLITE AND
* MINERAL WATER AND PET	* AGARBATTI SYNTHETIC	* MANGANESE OXIDE AND	DIASPORE MINERALS BY
BOTTLING PLANT	PERFUMERY COMPOUNDS &	MANGANESE SULPHATE	VERTICAL SHAFT KILN
* DIAGNOSTIC LAB AND	AGARBATTI COMPOUNDS	* ODOURLESS NYLON	PROCESS
* ONLINE TRADING BUSINESS	LIKE (CHAMPA, MOGRA,	GRANULES FROM FIBER OF	* ONION, GARLIC & GINGER
* CEREAL MILLING	SANDAL WOOD & LOBAN)	WASTE TYRE WITHOUT	DEHYDRATION PLANT
* MINI OIL PLANT SUITABLE	* PET PREFORM AND PET	CHANGING PROPERTIES OF	* POTASSIUM NITRATE
FOR GROUNDNUT OIL AND	JARS (20 LTRS CAPACITY)		* POTASSIUM SULPHATE
COTTON SEED OIL	* KRAFT PAPER FROM 100%	* PARTICLE BOARD FROM RICE	* N.P.K. FERTILIZER
* CHANACHUR, BHUJIA,		HUSK OR WOOD WASTE OR	
	* PRIVATE UNIVERSITY	SUGAR CANE BAGASSE OR MIXED OF ALL ABOVE	(ROASTED CHICORY GRANULES/CUBES, LIQUID
	* LIQUID GLUCOSE AND	POULTRY LAYER AND	EXTRACT ETC.)
* KHADYA SURAKSHA (FOOD	MALTODEXTRIN FROM BROKEN RICE	BROILER FARMING	* SOLID WASTE SEGREGATION
SECURITY) * PLASTIC WATER STORAGE	* DRY WALL PUTTY (WHITE	* TOMATO, GUAVA AND MANGO	* LAMITUBE MANUFACTURE
TANKS	CEMENT BASED)	PULP	* BOARDING SCHOOL
* ZINC SULPHATE,	* CONSTRUCTION CHEMICALS	* GREEN HOUSE	* CERAMIC FUSE TUBE/
MONOHYDRATE & HEPTA	OT PASTE	* HYDROXY PROPYL GUAR	BARRELS USED IN HRC FUSE
HYDRATE	* FUSED SILICA FROM SILICA	(HPG) AND CARBOXY	* SODIUM POLYACRYLATE
* CIGARETTE	SAND	METHYL HYDROXY PROPYL	DISPERSANT FOR USE IN
MANUFACTURING UNIT	* BANANA CHIPS, BANANA	GUAR	WATER BASED PAINT WITH
* CATTLE FEED PELLETS	PULP & BANANA POWDER	* BATHSOAP MANUFACTURE	DISPERSANT FOR PIGMENT
PLANT FOR COW &	(BANANA PRODUCTS)	* PLASTIC MOULDED CHAIRS	* NAIL POLISH, LIPSTICKS,
BUFFALOE FOR BOOSTING	* CONFECTIONERY UNIT	FROZEN POTATO PATTY	NAIL POLISH REMOVER
MILK AND GROWTH	(TOFFEE, CANDY /LOLLIPOP	* CALCIUM ALUMINATE	* SOYA PRODUCTS (MILK,
TYRE RECYCLING UNIT	CHEWING GUM, BUBBLE	* ACTIVATED CARBON FROM	PANEER, TOFU, BUTTER,
* PAPAIN EXTRACTION	GUM CHOCOLATE)	COCONUT SHELL	CHEESE CURD/YOGURT, ICE
INDUSTRY	* FORMALDEHYDE RESIN	* RIGID PVC FILM	CREAM) WITH PACKAGING
* CAKE SHOP	(UREA, PHENOL, MELAMINE	MANUFACTURE FOR	
* BUSINESS PROCESS	& THEIR MODIFIED RESINS)	PHARMACEUTICALS BLISTER	GREASE MANUFACTURING
TERMS AND CONDITIONS			
Ask	for the quotation for	r the required proje	ct report at
	•		
eiritechnology@gmail.com or eiriprojects@gmail.com			
-	Mob: +91 9811437	7895 or +91 981115	51047
1		Deposit the amount in "EIRI "	

CALC Deposit the amount in "EIRI "Account with HDFC BANK CA-D5532020001279 (RTGS/NEFT/IFSC CODE: HDFC00001981) OR ICICI BANK CA - 038705000994 (RTGS/IFSC CODE: HDFC00001981) OR ICICI BANK CA - 038705000994 (RTGS/IFSC CODE: ICIC0000387) OR AXIS Bank Ltd. CA - 054010200006248 (RTGS/IFSC CODE: UBIN0530727) OR STATE BANK OF INDIA CA-30408535340 (RTGS/IFSC CODE: BIN0001273) & SMS ON PH. 09811437895

Hi-Tech Projects, Mar'18, www.eiriindia.org # 15

AVAILABLE PROCESS	TECHNOLOGY BOOKS AT	www.eiriindia.org
Name of Books Rs. US\$	Name of Books Rs. US\$	Name of Books Rs. US\$
CHEMICALS, DYES, LUBRICATING	PACKAGED DRINKING WATER	* Moulds Design & Processing
OILS, PETRO CHEMICALS	* Technology of Water and	Hand Book 495/- 50
ELECTROPLATING	Packaged Drinking Water 1100/- 110	* Hand Book of Plastic Materials
* Small Medium & Large Chemical Industries 375/- 40	PRINTING & PACKAGING	& Processing Technology 750/- 75 * Injection Moulding of Plastics750/-75
* Industrial Chemicals	* Complete Hand Book on Packaging Technology & Industries 1100/-110	* Plastic Processing &
Technology Hand Book 1100/-110	* Printing Process Tech&Indt. 375/- 40	Packaging Industries 975/-100
* Modern Technology of	* Hand Book of Printing Technology	* Plastic Waste Recycling Tech.750/-75
Organic & Inorganic Chemicals 1400/-140	(Offset, Screen, Flexo, Gravure,	<ul> <li>* Technology of Plastic Films 650/- 65</li> <li>* Rotational Moulding Technology</li> </ul>
Chemicals 1400/-140 * Electroplating, Anodizing &	Inkjet & Digital) 975/-100 * Hand Book of Offset Printing	HandBook 750/- 75
Surface Finishing Tech. 1100/-110	Technology 500/- 50	* Plastic Compounding, Master
* Hand Book of Agro Chemical	* Screen Printing with	Batches, PET & Other Plastics750/-75
Indust.(Insecticide & Pesticide) 900/- 90	Processes & Technology 350/- 35	* Synthetic Resins Technology with Formulations 800/- 80
* Technology of Synthetic Dyes, Pigments Intermediates 1100/-110	* Hand Book of Prepress 800/- 80	* Technology of PVC Compounding
* Petrochemicals, Lubricants,	<ul> <li>* Hand Book of Packaging Indus1300/-130</li> <li>* Modern Packaging Technology</li> </ul>	& Its Applications 900/- 90
Greases & Petroleum Refining 900/- 90	for Processing Food, Bakery,	* Polymer & Plastic Technology950/-90
* H.B.of Lubricants, Greases &	Snack Foods, Spices and	* H.B. of Fibre Glass Moulding450/-45
Petrochemicals Technology 750/- 75	Allied Food Products 900/- 90	* Techn. of Reinforced Plastics750/-75 * Plastic Additives Technology 950/- 95
GUMS, ADHESIVES & SEALANTS	* Food Packaging Tech. 900/- 90 * Tech. of Printing Inks 1150/-115	* Technology of PET Bottles,
* Technology of Gums, Adhesives	* Packaging Technoloy 1150/-115	Preform and PET Recycling 850/- 85
& Sealants with Formulations 950/- 95 * Hand Book of Adhesives	* Corrugated Boxes 1100/-110	* Modern Technology of
with their Formulae (2nd Edn.) 900/- 65	PAINT, VARNISH, SOLVENTS,	Extrusion & Extruded Products 800/- 80
* Adhesives Technology &	POWDER COATING & LACQUERS	<ul> <li>Technology of Synthetic Resins &amp; Emulsion Polymers 975/-100</li> </ul>
Formulations Hand Book 975/- 98	* Paint Pigment Varnish &	* Technology of Plastic Additives
* Technology of Glue &	Lacquer Manufacturing 450/- 45	with Processes and Packaging 900/- 90
Adhesives with Adhesives Bonding and Formulations 1100/-110	* Paint Varnish Solvents	* Complete Technology Book On
* Complete Hand Book on	& Coating Technology 800/- 80	Identification Of Plastics And Plastic Products Materials 975/-100
Adhesives and Adhesion	* Paint, Pigment, Solvent,	* Identification Of Plastics & Other
Tech. with Project Profiles 900/- 90	Coating, Emulsion, Paint Additives & Formulations 950/- 95	Plastic Process Industries 950/- 95
SMALL SCALE INDUSTRIES,	* Technology of Coatings, Resins,	* Complete Technology Book
STATIONERY, PAPER, INKS,	Pigments & Inks Industries 975/-100	Of Plastic Processing And
CANDLES & EXPORT BUSINESS	* Mfg. Tech. & Formulations H.B.	Recycling Of Plastics With Project Profiles 1250/-125
* Start Your Own Export	on Thinners, Putty, Wall & Indu. Finishes & Synthetic Resins 900/-90	* Complete Hand Book Of Blow
Business (How To Export) 450/- 45	* Technology of Synthetic	Moulding Plastics Technology
* Start Your Own Small Business and Industry 350/- 35	Resins & Emulsion Polymers 975/-100	With Project Profiles 975/- 98/-
* Candle Making Processes &	<ul> <li>Technology of Paints and</li> </ul>	* Modern Technology Of Injection
Formulations Hand-Book 750/- 75	Coatings with Formulations 1750/-175	Moulding, Blow Moulding,Plastic Extrusion,Pet & Other 975/-100
* Stationery, Paper Converting	<ul> <li>Powder Coating Technology 750/- 75</li> <li>Paint Technology Hand Book</li> </ul>	
& Packaging Industries 400/- 40	with Formulations (Acrylic	BEE-KEEPING & HONEY
* Modern Inks Formulaes & Manufacturing Industries 325/- 35	Emulsion, Powder Coating, Level	PROCESSING
* Profitable Businesses to	ling Agents, PU Ink Binders,	* Tech Book On Beekeeping And Honey Products With
Start for Entrepreneurs 400/- 40	Dispersing Agents,Formaldehyde,	Project Profiles 975/- 98
* Modern Small & Cottage	Polyester Resin, Acrylic Binders and PU Coatings) 1100/- 110	* Complete Technology Book on
Scale Industries 650/- 65	* Complete Hand Book on Paints,	Honey Processing and
* Profitable Small Cottage Tiny & Home Industries (2nd Edn.) 900/- 90	Varnish, Resins, Copolymers and	Formulations (Harvesting,
BIO FUEL, BIO GAS &	Coatings with Manufacturing	Extraction, Adulteration,
BIOPROCESSING	Process, Formulations/Tech 900/-90/-	Chemistry, Crystallization, Fermentation, Dried Honey,
* Technology of Bio-Fuel	<ul> <li>* Manufacture Of Nitrocellulose Lacquers, Pu Lacquer, Vacuum</li> </ul>	Uses, Applications and
(Ethanol & Biodiesel) 975/-100	Metallizing Lacquers And Other	Properties) 1100/- 110
* Mod. Tech. of Bioprocessing 1475/-150	Lacquers With Formulations	* Modern Bee Keeping &
* ModTech.of BioGas Production1975/-200	And Project Profiles 750/- 75/-	Honey Processing 375/- 40
SWEETS, NAMKEEN & SNACK FOOD	PLASTIC/POLYMER PROCESSING,	STARCH MANUFACTURING
* Tech of Sweets (Mithai) 1050/-110	COMPOUNDING, INJECTION	STARCH WANUFACTURING
* Technology of Sweets (Mithai),	MOULDING, ROTATIONAL	* Technology of Starch
Namkeen and Snacks Food	MOULDING, PLASTIC FILM, FIBRE	Manufacturing (Applications,
with Formulae 1750/- 175	GLASS, PLASTIC WASTE	Properties and Composition) with Proiect Profiles 1100/- 110
* Mfr. of Snacks Food, Namkeen, Pappad & Potato Products 900/- 90	RECYCLING, MOULDS, PET &	with Project Profiles 1100/- 110
1 appad & rotato riouucis 300/- 30	RESINS, ADDITIVES INDUSTRIES	

Hi-Tech Projects, Mar'18, www.eiriindia.org # 16

## LIST OF PUBLICATIONS/BOOKS PUBLISHED BY: ENGINEERS INDIA RESEARCH INSTITUTE 4449, NAI SARAK, MAIN ROAD, DELHI - 6 (INDIA)

Name of Books Rs. US\$	Name of Books Rs. US\$	Name of Books Rs. US\$
AGRO CULTIVATION, ANIMAL FARMING, AGRO PLANTATION & AGRO CHEMICAL/PESTICIDES/ FLORICULTURE/ALOEVERA	* Technology of Food Preservation & Processing1250/-125 * Food Packaging Tech 900/- 90 * Agro Based & Processed Food Products 1100/- 110	COSMETICS TECHNOLOGY (SYNTHETIC & HERBAL) * Cosmetics Processes & Formulations HandBook 1475/- 140 * Herbal Cosmetics & Beauty
* Poultry Farm & Feed Formulae 575/- 58     * Hand Book of Pig Farming 400/- 40     * Agro Based H.B. of Plantation, Cultivation & Farming 500/- 75     * Agro-Based Plantation	* Potato & Potato Process 750/- 75 * Technology of Maize & Allied Corn Products 650/- 65 * Technology of Food Processing Industries 975/- 100	Products withFormulations 950/- 95 * Profitable Small Scale Manufacture of Cosmetics 950/- 95 * Synthetic&Herbal Cosmetic 975/- 98
Cultivation & Farming 475/- 50 * Agro Chemical Industries (Insecticide & Pesticides) 900/- 90 * Technology of Modern Rice Milling and Basmati Rice 600/- 60	Complete Book on Banana Cultivation, Dehydration Ripening, Processing, Products & Packaging Tech 975/- 100 * Agro Food Processing	* Tech of Herbal Cosmetics & ToiletriesProducts/Formulae1100/- * Start Your Own Hair Shampoos and Conditioners with Manufacturing Processes 900/- 90
* Hand Book of Goat Farming 450/- 50 * Floriculture Hand Book (Flowers Growing Technology)1000/- 100 * Aloe Vera Cultivation, Processings, Formulations and	and Packaging Technology 1100/- 110 * Modern Tech. of Tomato Processing/Dehydration 1100/- 110 * Technology of Food Chemicals, Pigments	* Manufacturing Processes And Formulations Of Cleansing Creams, Baby Products, Face Powders 975/- 98 * Formulations & Mfg. Processes
Manufacturing Technology 2500/-250 DAIRY FARM, MILK PROCESSING AND ICE CREAM	& Food Aroma Compd. 1100/- 110 * Modern Technology of Agro Processing & Food Packaging Products with Project	of Vanishing all Purpose900/- 90 OILSEEDS AND FATS * Hand Book of Oils, Fats and Derivatives with Refining &
* Dairy Formulations, Processes & Milk Processing Industries 750/- 75 * Milk Processing and Dairy Products Industries 950/- 95 * Dairy Engine A Bradwas Milk	Profiles 1100/- 110 POULTRY FARM, HATCHERY & CHICKEN MEAT TECHNOLOGY * Technology of Chicken Meat	Packaging Technology     950/-     95       * Technology of Oilseeds     Processing, Oils & Fats     1400/-       and Refining     1400/-     140
* Dairy Farming to Produce Milk with Packaging 475/- 50 * Hand Book of Ice Cream Technology and Formulae 750/- 75 * Hand Book of Milk Processing,	and Poultry Products 1750/-175 * Poultry Farming, Hatchery & Broiler Production 975/-100 * Fresh processed meat & coated poultry products with	* Modern Technology of
Dairy Products and Packaging Technology 1675/-165 * Dairy Farming for Milk Production Technology 975/- 100 * Commercial Point Forming	manufacturing of dried meat emulsions and curing of poultry products 1100/- 110	* Technology of Perfumes, Flavours & Essential Oils 1175/- 120
* Commercial Dairy Farming with Project Profiles 750/- 75 HERBS CULTIVATION/MEDICINES	WOOD, PLYWOOD, PARTICLE, BOARD, BAMBOO & FOREST	PERFUMES AND FLAVOURS * Hand Book of Flavours & Each Colouring Transport
* Herbs, Medicinal & Aromatic Plants Cultivation 650/- 65 * Aushidhi and Sungndhit Paudho Ka Vaysayik (Hindi) 800/- 80 * Aromatic & Medicinal Plants	* Modern Technology of Wood, Veneer, Plywood, Particle Board, Fibreboard, Bamboo & Forest Products 1600/- 160 SOAP, DETERGENT & ACID SLURRY	Food Colourants Technology1400/- 140 * H. B. of Perfume & Flavours975/-98 * Hand Book of Perfumes with Formulations (2nd Edn.) 900/- 75 * Technology of Perfumes, Flavours & Essential Oils 1175/- 120
and Biodiesel (Jatropha) 1100/- 110 * Hand Book of Medicinal & Aromatic Plants 875/- 90 FOOD & AGRO PROCESS, TOMATO PROCESSING, PRESERVATION,	* Household Soap,Toilet Soap & Other Soap 750/- 75 * Soaps & Detergents 750/- 75 * Synthetic Detergents 975/- 90	* Complete Technology Book on Perfumes, Agarbatti, Dhoopbatti, Attar and other Products Manufacturing & Formulations with Project Profiles 950 95 * H.B. of Flavours Tech. 750/- 75
DEHYDRATION, FRUIT BEVERAGE, POTATO, MAIZE, MEAT, BANANA * Fruits & Vegetable Processing Hand Book (2nd Edn.) 900/- 75 * Fruit Beverage & Processing	* Acid Slurry, Surfactants, Soap & Detergents/Formulae 850/- 85 * Complete Tech Book on Detergents with Formula 950/- 95 * Manufacture of Washing Soap Teilet Seap Detergent	* Manufacture Of Perfumes, Fragrances, Scents, Essences And Incense Sticks (Agarbatti) With Formulations 975/-98
<ul> <li>with Mango</li> <li>Y50/- 75</li> <li>Food Processing &amp; Agro Based Industries (2nd Edn.) 975/- 100</li> <li>Preservation &amp; Canning of Fruits and Vegetables 1200/- 120</li> <li>Hand Book of Food Dehydration &amp; Drying 1100/- 110</li> <li>Meat Processing &amp; Meat</li> </ul>	Soap, Toilet Soap, Detergent Powders, Liquid Soap & Herbal Detergents & Perfumes 1100/- 110 * Mfg Tech of Surfactants, Washing Powders, Optical Brighteners &Chelating 1275 125 * Complete Tec. Book on Soaps, Detergents, Cleaners & Fragrance with Formulae 1100/ 110	SOLAR PV PANELS, ENERGY * Tech Of Solar Pv Panels,Energy, Cells, Lantern, Cooler, Light System, Photovoltaic System, Power Plant, Water Heater, Collector, Solar Cooling, Refrigeration, Solar Drying, Home System, Dish Engine &
Products Hand Book 900/- 90		Other Solar Products Mfg.1250/- 125

SPICE, SEASONING, CONDIMENTS	MINERAL AND MINERALS	ORGANIC FARMING & FOOD/NEEM
& COLD STORAGE	* Hand Book of Minerals and Minerals Based Industries 975/- 100	* Hand Book of Organic Farming
* Technology of Spices and		and Organic Foods with Vermi-
Seasoning of Spices with Formulae 975/-98	RUBBER CHEMICALS,	Composting & Neem Product 1100/-
* Technology Of Spices (Masala)	COMPOUNDS	FISH FARMING & FISHERY PRODUCTS
And Condiments With Project	* Rubber Chemicals & Processing Industries 400/- 40	* Hand Book of Fish Farming
Profiles (Cultivation, Uses, Extrn. Composition etc) 1100/-110	Processing Industries 400/- 40 * Modern Rubber Chemicals,	and Fishery Products 650/- 65
Extrn, Composition etc) 1100/-110 * Spices &Packaging with	Compounds & Rubber	<b>TEXTILE AUXILIARY &amp; CHEMICALS</b>
Formula 900/- 90	Goods Technology 1500/- 150	* Textile Auxiliaries & Chemicals
* Start Your Own Cold Storage Unit 900/- 90	* Technology of Rubber & Rubber Goods Industries 900/- 90	with Processes/Formula 1050/- 105
NON WOVEN TECHNOLOGY	AYURVEDIC/HERBAL MEDICINES	* Tech of Textile Chemicals with Formulations 1450/- 145
* Complete Tech. of Nonwovens	* Ayurvedic & Herbal	* Modern Technology of Textile
Fabrics, CarryBags, Composite, Geotextiles, Medical Textiles,	Medicines with Formulaes 750/- 75	Auxiliary and chemicals
Fibres, Felts, Apparels, Spunlace	* Hand Book of Ayurvedic	with formulations 1100/- 110
and Absorbent Nonwoven1175/- 120	Medicines with Formulations	<ul> <li>Textile Processing Chemicals, Enzymes, Dye Fixing Agents</li> </ul>
PHARMACEUTICALS & DRUGS	STAINLESS STEEL, NON FERROUS	and Other Finishes with
* Tablets, capsules, Injectables,	METALS, BILLETS & ROLLING MILL	Project Profiles 1275/- 125
Dry Strups, Oral & External	* Modern Technology of Non Ferrous Metals and Metal	DISINFECTANTS, CLEANERS,
Preparations, Eye, Ear1575/- 155	Extraction 1100/-110	PHENYL, DEODORANTS,
	* Processing Technology of	DISHWASHING DETERGENTS ETC.
LEATHER PRODUCTS	Steels and Stainless Steels 1900/-190	* Manufacture of Disinfectants,
* Hand Book of Leather &	<ul> <li>Modern Technology of Rolling Mill, Billets, Steel</li> </ul>	Cleaners, Phenly, Repellents, Deodorants, Dishwashing
Leather ProductsTechnology 850/-85	Wire, Galvanized Sheet,	Detergents with Formulae 900/- 90
BIOTECHNOLOGY	Forging & Castings 2500/-250	COFFEE & COFFEE PROCESSING
* Hand Book of Biotechnology900/-90	* Mfg Tech of Non-Ferrous	
CERAMICS & CERAMIC PROCESS	Metal Products 1750/- 175 FOOD ADDITIVES/CHEMICALS AND	* Coffee & Coffee Processing 525/- 53
* H.B.of Ceramics & Ceramics	SWEETENERS & FOOD EMULSIFIERS	ONION CULTIVATION/PROCESSING
Processing Technology 1975/- 200	* Modern Technology of Food	* OnionCultivation, Dehydration,
* Modern Tech Of Ceramic	Additives, Sweeteners and	Flakes, Powder, Processing
Products With Composition 1100/- 110	Food Emulsifiers 1575/- 156	
TREE FARMING	<ul> <li>Technology of Food</li> <li>Chemicals, Pigments and</li> </ul>	<b>BUILDING MATERIAL &amp; CHEMICALS</b>
* Hand Book of Tree Farming 800/-80	Food Aroma Compounds 1100/- 110	* Technology of Building Materials
MUSHROOM PROCESSING	DISPOSABLE MEDICAL PRODUCTS	& Chemicals with Processes950/- 95
* Hand Book of Mushroom	* Technology of Disposable	TEXTILE, GARMENTS, DYEING * Mod. Tech. of Bleaching, Dyeing,
Cultivation, Processing	Medical Products 1750/-175	Printing & Finishing of Textiles 750/- 75
& Packaging 550/- 55	SOYA MILK, TOFU & SOY PRODUCTS	* Technology of Textiles (Spinning
BIOFERTILIZERS & VERMICULTURE	* Technology of Soya Milk, Tofu,	& Weaving, Dyeing, Scouring,
* Biofertilizers & Vermiculture 900/-100	Hydrolyzate, Allied Soyabean	Drying, Printing and Bleaching) 900/- 90 * Garments Manufacturing Tech. 900/- 90
BIODEGRADABLE PLASTICS	Products with project Profile 975/- 100 * Technology of SOYBEAN	BAKERY, CONFECTIONERY,
AND POLYMERS		BISCUITS, COOKIES, BREAKFAST,
* Modern Technology of	PRODUCTS FROM WASTE	PASTA & CEREALS
Biodegradable Plastics and Polymers With Processes	* Technology of Products from	
(Bio-Plastic, Starch Plastics,	Wastes (Industrial, Agriculture,	* Technology of Biscuits, Rusks, Crackers & Cookies with
Cellulose Polymers & other) 975/- 100	Medical, Municipality, Organic	Formulations 975/- 98
* Production of Biodegradable	& Biological) By Panda 900/- 90	* Hand Book of Confectionery
Plastics & Bioplastics Tech 1500/-150	* Products from Waste Technology Hand Book 1100/- 110	with Formulations 900/- 90 * Breakfast, Dietary Food, Pasta
FROZEN FOOD/FREEZE DRYING	WINE PRODUCTION	& Cereal Products Tech 1150/-120
* Frozen Food Processing &	* Technology of Wine	* Modern Bakery Products 900/- 90
Freeze Drying Technology 1000/- 100	Production and Packaging 1750/- 175	* Modern Bakery Technology &
* Frozen Food Products 900/- 90	CASTING TECHNOLOGY	Fermented Cereal Products with Formulae 1250/-125
BEER, VODKA, BEVERAGE, WHISKY	* Casting Technology H.Book750/- 75	* Confectionery,Chocolates, Toffee,
	PULP & PAPER TECHNOLOGY	Candy, Chewing & Bubble Gums,
* Beer,Cereal Based Beverages, Soy		
* Beer,Cereal Based Beverages, Soy Beverages, Fruit Wine, Vodka, Tea	* H.B.of Pulp & Paper, Paper	Lollipop & Jelly Products 1750/-175
* Beer,Cereal Based Beverages, Soy Beverages, Fruit Wine, Vodka, Tea Beverages & Beverages 1100/- 110	* H.B.of Pulp & Paper, Paper Board & Paper Based Tech. 1150/- 120	Lollipop & Jelly Products 1750/-175 * H.Book of Bakery Industries 950/-95
<ul> <li>* Beer,Cereal Based Beverages, Soy Beverages, Fruit Wine, Vodka, Tea Beverages &amp; Beverages 1100/- 110</li> <li>* Mfg Tech Hand Book Of Gin, Rum, Whisky, Distillery Spirits,</li> </ul>	* H.B.of Pulp & Paper, Paper	Lollipop & Jelly Products 1750/-175
<ul> <li>* Beer,Cereal Based Beverages, Soy Beverages, Fruit Wine, Vodka, Tea Beverages &amp; Beverages 1100/- 110</li> <li>* Mfg Tech Hand Book Of Gin, Rum, Whisky, Distillery Spirits, Brandy, Fruit Spirits, Flavours,</li> </ul>	* H.B.ofPulp & Paper, Paper Board & Paper Based Tech. 1150/- 120 FLOUR MILL (ATTA MAIDA, SUJI) * Start Your Own Wheat Flour Mill	Lollipop & Jelly Products 1750/-175 * H.Book of Bakery Industries 950/-95 TECHNOLOGY OF FIBRES * Fibres With Manufacturing
<ul> <li>* Beer,Cereal Based Beverages, Soy Beverages, Fruit Wine, Vodka, Tea Beverages &amp; Beverages 1100/- 110</li> <li>* Mfg Tech Hand Book Of Gin, Rum, Whisky, Distillery Spirits,</li> </ul>	* H.B.ofPulp & Paper, Paper Board & Paper Based Tech. 1150/- 120 FLOUR MILL (ATTA MAIDA, SUJI)	Lollipop & Jelly Products 1750/-175 * H.Book of Bakery Industries 950/-95 TECHNOLOGY OF FIBRES

Hi-Tech Projects, Mar'18, www.eiriindia.org # 18