

Product Project Report on

PET BOTTLES

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-:Collage:-

**Shree Gyanyagna College of Science &
Management, Rajkot.**

-:Submitted To: -

Saurashtra University, Rajkot.

Guided by: - Prof. Jagdish Mulchandani

DECLARATION

I, the undersigned **Karapada Kuldip** a student of **T.Y.B.B.A.** hereby declare that the project work presented in this report is own my work & has been carried out under the supervision of **Pro. Jagdish Mulchandani** of Gyanyagna college of science and Management.

This work has not been previously submitted to another university for any examination.

Date: -
Student:

Sign. Of

Place: Rajkot

ACKNOWLEDGEMENT

I feel great pleasure that I get an opportunity to present my product project report (PPR) before you.

Firstly, I am thanking to my lecturer Pro. Jagdish Mulchandani, who is one of the faculty member of commerce (BBA). He has tried very hard & put lots of effort to guide me I am also thankful to him because he had put their valuable time to me.

And finally I am also very much thankful to my friends & my parents who guided me during preparation of product project (PPR).

Date:

Place:

Signature

(Kuldip Karapada)

PREFACE

Use of “SMALL” as a designation in industry differentiates one set of industries from others. Comparatively small in operation, employment, products, capital, technology etc. thus, this small sector share unique problems compared to other. In the case of manufacturing units, small industries are to be expected to have a unique set of problem in relation to their “smallness” that differentiates them from medium and large manufacturing units. At the same time, the small sector has unique advantages. And, as such small is not only beautiful, but also beneficial, efficient and reliable.

“Small is beautiful”, said E.F. Schumacher so small scale industries have comes to occupy a significant position in the planned industrialization of the economy. The small scale sector has a high potential for employment, dispersal of industries, promotion entrepreneurship and earning foreign exchanger to the country.

Saurashtra University has added this subject entrepreneurship and management of small business so as to provide knowledge about small scale industries to the business administration students. The study will equip the students, particularly in the small sector with analytical and decision

making skills to succeed in today's competitive environment. For those who wish to gain a deeper understanding of established principles in business strategy. His project report proves to be an asset.

INTRODUCTION

With the rapid progress in technology and science, people are moving towards fast moving but convenient life. People want product that are convenient and suitable to their lifestyle.

Regarding Packaging Industry, People wanted such a packing that could easy handle, easy moving from one place to another, no breakage, etc. specially in packing food items. To fulfill the needs of people in market, PET was invented in England in the 1940's and primarily used for fiber manufacturing. In the 60's it also began to be used for film production. In 1973 the PET bottle was patented in the USA/ Due to development of technology for pre-form blowing, impact resistance and design choices as well as the relatively low cost, today PET is mainly used for bottle manufacturing. The bottle are used for soft drinks, juices, mineral water, beer, vegetable oil, cosmetics, cleaning liquids, food and non-food containers etc.

Production of PET bottles started in 1985 in India. Hence Pet Bottles has opened new vistas of application in packaging variety of items. Today, PET Bottles has replaces

almost all areas of glass bottles due to its flexibility and some of the special features.

Keeping in view the demand and feasibility of this product, the project is to be undertaken to manufacture PET Bottles.

PROJECT AT GLANCE

Name of the Unit	:	TAC Industries
Product	:	PET Bottles
Address for Communication	:	201, “Sagar Complex”, B/h. Patel Wadi, Pedak Main Road, Ranchhodnagar, Rajkot-360 003.
Location of Unit	:	Plot No. 102-A 8-B Rajkot Gondal Highway, Shapar (Veraval).
Form of Unit	:	Partnership Firm
Size of Unit	:	Small Scale Unit
SSI Registration No.	:	Application is made.
Partners Names	:	 ⇒ <u>Karapada Kuldip.</u> ⇒ <u>Karapada Mahesh.</u> ⇒ <u>Aghara Bhavesh M.</u>

IMPLEMENTATION SCHEDULE

The Plant is expected to be commissioned in about 6 to 8 months from the zero date. The various activities will be synchronized and synergized in order to effectively keep down the cost of the project and timely completion.

A detailed implementation schedule for the project is given below: -

Sr.No.	Particulars	Month
1.	Preparation of Project Report	1
2.	Registration & Other Formalities	1/2
3.	Sanction of Loan by Financial	1/2
4.	Institution	2
5.	Acquisition Land & Building	1/2
6.	construction	2
7.	Appointment of Staff and Labour	1/2
8.	Acquisition of Machinery	1/2
9.	Installation of Machinery	1/2
	Arrangement of Raw Material	
	Trial Production	

PARTNERS BACKGROUND

PARTNER-1 : **Karapada Kuldip.**

Address : 201, "Sagar Complex",
"Baseri"
Narayan nagar,
Satyasai road
Rajkot-360 005.

Age : 21 years

Educational Qualification : B.B.A.

Experience : No

Profit Sharing Ratio : 40%

PARTNER-2 : **Karapada Mahesh.**

Address : 7/3 Lati Plot,
Sadgurunagar,
Rajkot-360 003.

Age : 27 years

Educational Qualification : B. Com.

Experience : 2 years in the same field

Profit Sharing Ratio : 30%

PARTNER-3 : **Aghara Bhavesh M.**
Address : 7/3 Lati Plot,
Sadgurunagar,
Rajkot-360 003.
Age : 25 years
Educational Qualification : B.B.A.
Experience : No
Profit Sharing Ratio : 30%

BASIS AND PRESUMPTION

1. The estimates are drawn for a production capacity generally considered techno-economically viable for model type of manufacturing activity.
2. The information supplied is based on the standard type of manufacturing activities, utilizing conventional techniques of production.
3. The cost of land and building, machinery and equipment, raw materials and selling price of the finished products etc. are those generally obtained at the time of preparation of project profile and may vary depending upon various factors.
4. The interest rate is according to the prevailing rates in the market.
5. The salary and wages have been decided on the basis of local market.

PROJECT DESCRIPTION

The Project involves setting up of an automated plant for manufacturing PET Bottles of high quality standards.

PROJECT CAPACITY

The aggregate installed capacity of the plant for PET Bottles would be 33,60,000 bottles per annum.

The proposed project under reference is based on 2 shift with 8 hours working. The project can achieve 50% capacity utilization in its first year of operation, 70% in the second year, 90% in the third year and onwards.

MARKET POTENTIAL

Since introduction PET Bottles became quite popular for packing foodstuffs, beverages, edible oils, vitamins, honey, condiments, liquor, mouthwash, coffee etc. There is a rapidly increasing demand for PET bottles worldwide. During the 1990's in Europe the consumption has increase from 3,00,000 tons to 1.5 million tons. Similar trends are also seen in other parts of the world. In Europe the amount of PET Bottles being recycled is growing rapidly. As in most areas of the world, the Indian packaging industry is growing, although accurate figures are hard to obtain. An estimate of 10% is probably close, and clearly plastics have made a significant contribution here. Market demands for higher performance packaging will generate a 19% annual growth rate for the next five years.

- It is roughly estimated that the total requirement of Pet Bottles will be 10,00,000 MT during 2008 for packaging various items.
- The major demand for PET Bottles are for soft drinks packaging in India and Total sales of soft drinks in India amounted to Rs.200 billion and almost 3,272 million litres in 2002. With growth of around 7% in current value and

17% in volume terms in that year, sales grew mostly on the back of renewed interest in carbonates as a result of supply-led strategies, strong demand for bottled water and interest in 100% reconstituted juices.

- Another area where PET Bottles is highly demanded is for packaging fruit juices and bottled water. Notwithstanding the growth in carbonates, it was bottled water and fruit/vegetable juices that registered the most robust year-on-year growth in 2002.
- Kirana (independent) stores, train stations and cinemas continued to account for the bulk of soft drinks sales in 2002. Consumers rarely buy from retail stores to take home for consumption. In fact, home consumption is still restricted largely to the middle and upper income households. This is however gradually increasing with the introduction and gradual push by manufacturers of Pet Bottles.

The major applications of PET are outlined below :-

➤ **Packaging of Food Products :-**

Items like tomato ketchup, syrup, jams, and jellies, fruit juices, edible oils, carbonated drinks, wine, mineral water, squashes, etc. are packed in PET Bottles.

➤ **Pharmaceutical Packaging :-**

For packaging of tablets and oral preparations, PET Bottles are used in place of conventional glass bottles.

➤ **Hard Liquor :-**

Conventional glass bottles are used for this and the market size though large is divided into smaller segments because distillers require them in different shaped and sizes for brand. As PET can be moulded into desired shapes, sizes, colors, there is a great scope for packaging hard liquor.

➤ **Chemicals and Pesticides Packaging :-**

HDPE/Tin/Aluminum containers are traditionally used for packaging pesticides. PET Bottles are now-a-days in great demand for packaging chemicals and pesticides. PET Bottles have slowly and steadily replace such above-mentioned containers. Besides items like shampoo, cosmetics, liquid detergents, paints, etc. could be packed in PET Bottles.

Thus the market potential for PET Bottles is vast and there is a good potential to develop this industry to meet demand of packaging various other items than mentioned above.

JUSTIFICATION OF LOCATION

The plant will be located at Shapar (Veraval) in industrial area. This area is an industrial zone and various facilities are economically and easily available here.

The project site enjoys the following locational advantages :-

- ✓ Transport Facility :- Transportation Facility is easily available at a cheaper rate.
- ✓ Availability of Raw Material :- Raw Materials to produce PET Bottles easily available at this site and it do not add so much to the cost of production as it is not bulky material.
- ✓ Manpower :- For the proposed unit, skilled and semi-skilled labourers are available without problems at reasonable rates.
- ✓ Proximity to Market :- The site is near to market ensuring quick and timely availability of products and helps in reducing transportation costs.
- ✓ Infrastructural Facility :- As the unit is located in an industrial zone, all the infrastructural facilities like water, power, etc. are adequately available.

PRODUCT DETAILS

❖What is PET?

You probably use PET every day, but you do not even know it! PET is the name of the resin used to manufacture transparent, lightweight, shatter proof bottles. I bet you use those bottles many times a day, whenever you feel thirsty! PET stands for Polyethylene Terephthalate a chemical compound produced by combining the Ethylene Glycol and Terephthalic Acid. Polyethylene Terephthalate's molecules consist of long chains of repeating units containing the organic elements Carbon (C), Oxygen (O) and Hydrogen (H).

The physical properties of PET make it an ideal material for many applications: packaging (containers, bottles, etc.) films, fibers, mouldings, etc. PET (Polyethylene Terephthalate) is a thermoplastic polyether of terephthalic acid and ethylene glycol. It is a Rigid, durable and light material.

<u>Sr. No.</u>	<u>Property</u>	<u>Value</u>	<u>Unit</u>
1.	Specific Density	1.36	Kg/dm ³
2.	Tensile Module	2.5 (2500)	N/mm ² (Mpa)
3.	Impact Strength	1.5 -3.5	KJ/m ²
4.	Melting Temperature	+260	°C
5.	Thermal Destruction Resistance	-40 to +200	°C
6.	Max. use Temperature	+70	°C

PET items are resistant to impact loads and cracking. PET is stable in conditions of diluted acids, oil, spirits (alcohol), mineral salts and most organic compounds except strong alkalines and some solvents. It has very small water absorption which guarantees a high stability of properties and dimensions of the products made of PET.

PET has no smell, no taste, is not poisonous and has a minimum absorption of smell. It also acts as a good gas barrier. Pet exists in both amorphous and crystalline states. During processing it converts into amorphous state by means of fast cooling of the melted material from the melting point (+260 degree c) to below the glass temperature (+73 degree

c), thereby obtaining a transparent and translucent form. Further it has certain additional features like squeezability, surface gloss, printability, scratch proof, etc.

During the processing PET has a low melt viscosity. It is processed by extrusion, vacuum pneumatic shaping, injection moulding, pulling or spinning from the melt, etc. For protection against destruction (oxidizing), PET is processed as a composition with thermostabilizers and other additives. The moisture content must not be higher than 0.02%, otherwise PET tends to get hydrolyzed. PET is safe for packaging foodstuff and therefore acceptable under food and drugs administration regulations of various countries. Bureau of Indian Standards has also specified that PET is safe for contact of food.

Because of those above properties of PET, it is largely used for manufacturing bottles. PET can be conveniently be moulded into desired shapes, sizes, and colors to produce different types of bottles. PET bottle has opened new vistas of applications in packaging variety of itmes. But after the introduction of PET Bottles in the market, it has replaced glass bottles almost in all areas.

PET Bottles are available in different sizes and with different thickness of their performs and their different width, which are listed below :-

<u>TYPE</u>	<u>WIDTH</u>
12gm	25mm & 28mm
18gm	
20gm	28mm & 32mm
22gm	
24gm	
26gm	28mm & 30mm
28gm	
32gm	

The shape of PET Bottles can be changed with the help of different shapes of moulds. 2 cavity, 4 cavity and 6 cavity moulds are used to produce PET Bottles.

TECHNICAL ASPECTS

A. RAW-MATERIAL :-

The Raw Material required to produce PET Bottles is the Natural Granules of plastic. Water is required in cooling tower and plastic bags are required for packaging of PET Bottles.

B. PRODUCTION PROCESS :-

PET can be processed by Injection Moulding to get PET preform, Stretch Blow Moulding for bottles.

- The manufacturing process of Pet Bottles is quite complex. It all starts with the PET resin. The resin is sold in the form of pellets, small masses similar in size of grains of rice. These pellets are first melted then they are injected into a first mould to produce preforms, the precursor of the bottle. Preforms look very much like test tubes. These preforms are given cooling to a suitable temperature at cooling tower. A cooling tower is used for this purpose.
- The second step in the bottle production process is the so-called “Stretch blow-moulding” phase. Heating the preform upto 10 to 15 seconds in a heating conveyor so it

becomes soft and fluid. Then the preform is set within a second mould. Next, hot air is blown inside the preform while at the same time it is being stretched. Since the preform is now soft, its walls are pushed against the walls of the mould giving the desired shapes to the container. The stretching may either by a stretch pin inside the preforms or by a stretch clamp from the outside of the preforms.

- Cooling of products to room temperature.
- The Product with cap/closure packed in a plastic bags.

ENVIRONMENT SAFETY

In many countries Pet Bottles are still thrown away with the household waste and burnt, or often just left on the streets, contaminating the environment. The growing concern about the environment and the limited natural resources demands implementation of systems for collecting and recycling of PET into valuable materials and new products.

PET AND THE ENVIRONMENT :-

PET containers are 100% recyclable. However, it is not only their recyclability quality that makes them environmentally friendly. Being extremely light, they help diminish the formation of packaging waste while at the same time they reduce the emission of contaminants during their transport. Furthermore, since they require less fuel during transport, they also help saving energy.

In order to give birth to a new product, used PET containers must first and foremost be collected. The second step into recovering used PET Bottles entails collected material to be sent to a storing plant where materials are separated according to their nature.

Recovered PET Bottles are then punctured and baled (i.e., compacted in a bundle) and are sent to a reclaimer. The reclaimer, is a factory that turns used bottles into PET flakes, the raw-material at the base of recycled PET products. The first thing the reclaimer has to do is de-baling the bundles. To make sure the final product will be as pure as possible, the de-baled bottles are sorted once again then they are pre-washed and are shredded into flakes. The flakes are washed and dried in their turn, and then they are stocked and sold. It is when the flakes are sold that the actual recycling sets into action; the flakes, the raw-material, are melted then manufactured into a new product. The market for secondary PET is almost unlimited and has a great growth potential. The price depends on various factors, such as the quality of the flakes, current world prices, the collecting system, etc.

Recycled PET has been given approval by the FDA for use in Food contact applications. Either mechanical cleaning or depolymerisation methods can be used for recycling.

Recycled PET finds many useful applications such as :-

- Fiberfill for sleeping bags.
- Fabric for T-shirt, long underwear, sweaters, athletic shoes, luggage, upholstery and carpenting.

- Automotive parts, such as luggage racks, headliners, fuse boxes, bumpers, grillers, and door panels.
- Industrial strapping, sheet and film.
- New containers for both food and non food products.

In India, recycling process of PET Bottles is started in Andhra Pradesh.

FINANCIAL ASPECTS

A) FIXED CAPITAL DETAILS :-

1. LAND AND BUILDING :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Land (1500sq.mt. x Rs. 900)	13,50,000
2.	Building (1000sq.mt. x Rs. 1200)	12,00,000
3.	Furniture	2,00,000
	TOTAL	27,50,000

2. MACHINERY & EQUIPMENTS :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>No.</u>	<u>Rs.</u>
1.	Injection Moulding	1	6,90,000
2.	Cooling Tower	1	2,25,000
3.	Heating Conveyor	1	2,25,000
4.	Blowing Machine (10HP)	1	5,25,000
5.	Air Compressor	1	2,25,000
	Electrification and Installation Charges		94,500
	Cost of Moulds		9,00,000
	TOTAL		28,84,500

3. PRE-OPERATIVE EXPENSES :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Pre-operative Expenses	90,000
	TOTAL	

4. TOTAL FIXED CAPITAL :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Land & Building	27,50,000
2.	Machinery & Equipments	28,84,500
3.	Pre-operative Expenses	90,000
	TOTAL	57,24,500

B) WORKING CAPITAL DETAILS (per month) :-

1. PERSONNEL (per month) :-

<u>Sr.</u> <u>No.</u>	<u>Designation</u>	<u>No.</u>	<u>Salary</u> <u>(Rs.)</u>	<u>TOTAL</u> <u>(Rs.)</u>
1.	General Manager	1	12,500	12,500
2.	Production Manager	1	7,500	7,500
3.	Machine Operator	1	6,000	6,000
4.	Unskilled / Semi-skilled workers	4	3,125	12,500
5.	Office Boy	1	1,000	1,000
6.	Accountant	1	2,500	2,500
7.	Peon / Chowkidar	1	700	700
	Add : 10% perks			<u>4,270</u>
	TOTAL			46,970
	Say			47,000

2. RAW MATERIALS (per month) :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Per Day (Rs.)</u>	<u>Rs.</u>
1.	Natural Plastic Granuels (@ Rs. 82 per Kg.)	12,833	3,84,990
2.	Packaging Bags	1,312.5	39,375
	TOTAL		4,24,365
	Say		4,24,400

3. UTILITIES (per month) :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Power	8,000
2.	Water	2,000
	TOTAL	10,000

4. OTHER CONTINGENT EXPENSES (per month) :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Postage and Stationary	625
2.	Telephone	1000
3.	Transportation Charges	3,125
4.	Repairs and Maintenance	1,250
5	Advertisement and Publicity	3,750
6.	Miscellaneous Expenses	625
7.	Sales Expenses	1,250
8.	Consumable Stores	1,250
	TOTAL	12,875

5. TOTAL RECURRING EXPENDITURE (per month) :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Personnel	47,000
2.	Raw Material	4,24,400
3.	Utilities	10,000
4.	Other Contingent Expenses	12,875
	TOTAL	4,94,275

6. TOTAL WORKING CAPITAL (on 3 months basis) :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Per Month</u>	<u>Rs.</u>
1.	Total Working Capital	4,94,275	14,82,825
	TOTAL		14,82,825

C) TOTAL CAPITAL INVESTMENT :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Fixed Capital	57,24,500
2.	Working Capital (3 months)	14,82,825
	TOTAL	72,07,325

D) MEANS OF FINANCE :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>%</u>	<u>Rs.</u>
1.	Own Capital	40%	28,82,930
2.	State Bank of Saurashtra	60%	43,24,395
	TOTAL		72,07,325

E) INTEREST OF CAPITAL :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>%</u>	<u>Rs.</u>
1.	Own Capital	10%	2,88,293
2.	State Bank of Saurashtra	14%	6,05,415.3
	TOTAL		8,93,708.3

F) DEPRECIATION :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Depreciation on Land & Building @ 10%	2,55,000
2.	Depreciation on Machinery & Equipments @ 10%	1,98,450
3.	Depreciation on Furniture @ 20%	40,000
4.	Depreciation on Moulds @ 25%	2,25,000
	TOTAL	7,18,450

FINANCIAL ANALYSIS

A) TOTAL COST OF PRODUCTION (per year) :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Total Recurring Cost per year	49,42,750
2.	Depreciation	7,18,450
3.	Interest on Total Investment	8,93,708.3
	TOTAL	65,54,908.3

B) TURNOVER (per year) :-

<u>Sr. No.</u>	<u>Item No.</u>	<u>Quantity No. Per Year</u>	<u>Rate (Per Piece)</u>	<u>Value (Rs.)</u>
1.	12gm	1,50,000	2.77	4,15,500
2.	18gm	1,50,000	3.52	5,28,000
3.	20gm	2,25,000	4.33	9,74,250
4.	22gm	2,25,000	4.38	9,85,500
5.	24gm	3,00,000	4.38	13,14,000
6.	26gm	3,00,000	4.67	14,01,000
7.	28gm	3,75,000	4.67	17,51,250
8.	32gm	3,75,000	5.25	19,68,750
	Total	21,00,000		93,38,250

C) PROFITABILITY ANALYSIS :-

<u>Particulars</u>	<u>Rs.</u>
Sales	93,38,250
Less : Cost of Production	<u>65,54,908.3</u>
PROFIT BEFORE INTEREST & TAX	27,83,341.7
Less : Interest on Total Investment	<u>8,93,708.3</u>
PROFIT BEFORE TAX	18,89,633.4
Less : Income Tax	<u>6,61,371.69</u>
NET PROFIT	<u>12,28,261.71</u>

D) RATIO ANALYSIS :-

$$\begin{aligned}\checkmark \text{ Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Turnover}} \times 100 \\ &= \frac{\text{Rs. 12,28,261.71}}{\text{Rs. 93,38,250}} \times 100 \\ &= 13.15 \%\end{aligned}$$

$$\begin{aligned}\checkmark \text{ Rate of Return} &= \frac{\text{Net Profit}}{\text{Total Investment}} \times 100 \\ &= \frac{\text{Rs. 12,28,261.71}}{\text{Rs. 72,07,325}} \times 100 \\ &= 17.04 \%\end{aligned}$$

E) BREAK EVEN ANYLYSIS :-

1. FIXED COST :-

<u>Sr. No.</u>	<u>Particulars</u>	<u>Rs.</u>
1.	Depreciation	7,18,450
2.	Interest on Total Investment	8,93,708.3
3.	40 % of Salaries	2,25,600
4.	40 % of Other Contingent Expenses	61,800
	TOTAL	18,99,558.3

2. BREAK EVEN POINT :-

$$\checkmark \text{ Break Even Point} = \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit (before tax)}}$$

$$= \frac{\text{Rs. } 18,99,558.3 \times 100}{\text{Rs. } 18,99,558.3 + \text{Rs. } 27,83,341.7}$$

$$= \frac{\text{Rs. } 18,99,558.3 \times 100}{\text{Rs. } 46,82,900}$$

$$= 40.5 \%$$

FUTURE PROJECTION

	<u>Particulars</u>			
<u>Year</u>	<u>Installed Capacity (No.)</u>	<u>Capacity Utilization</u>	<u>Operating Capacity (No.)</u>	<u>Income Sales (Rs.)</u>
1.	42,00,000	50%	21,00,000	93,38,250
2.	42,00,000	70%	29,40,000	1,29,05,100
3.	42,00,000	90%	37,80,000	1,64,71,950
4.	42,00,000	90%	37,80,000	1,64,71,950
5.	42,00,000	90%	37,80,000	1,64,71,950

ADDRESS OF RAW MATERIAL SUPPLIERS :-

❖ **RELIANCE PETROCHEM**

Hazira.

ADDRESS OF MACHINERY & EQUIPMENT SUPPLIERS :-

❖ **Polytech (Mfg. PET Blow Moulding Machines and Moulds)**

A-7, Aggrawal Industrial Estate, Chitalsar,
Manpada, Thane, Maharashtra.

❖ **Karma Engineers,**
Baroda.