

DELTA STYRO AFRICA (TZ) LIMITED

BUSINES PLAN AND PROJECT REPORT

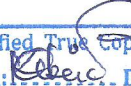
MANUFACTURING WATER STORAGE TANK PRODUCTS FROM LLDPE AND OTHER ITEMS FROM POLYPROPYLENE/ POLYMERS MONOMERS

1) INTRODUCTION

The Aim of this project to provide quality tanks at reasonable price to the market, roto moulded plastic water storage tanks are made from Linear Low Density Polyethylene / Low Density Polyethylene are ideal for economic and hygienic storage of potable water in residential buildings, industrial units, business complexes, in fact anywhere and everywhere. These tanks are molded in one piece. Water storage tanks are without any seams, joints or welds.

Because of their light weight, these tanks are easy to install and are extremely mobile. They are very light for the volume of water stored. A tank capable of storing 2000 liters of water weighs only 65 kgs. as against 0.5 MT in case of M.S. tank and 2 MT in case of RCC tank of a similar capacity. These tanks are rust proof and leak proof. Hence they practically require little or no maintenance.

These tanks have double the life than that of RCC tanks and three to four times than that of M.S. tanks. The temperature of water inside is maintained for a considerable longer time than an M.S. tank because polyethylene is a bad conductor of heat. These tanks keep water clean, odour free and maintain the quality of water stores intact. These tanks are economical, practical and hygienic alternative of storing potable water in single or multi storied residential units, industrial set-ups, commercial establishments and sites everywhere under the sun. These tanks are becoming increasingly popular in India and have caught the eyes of many users for their requirement of storing water for domestic and other purposes. These tanks are also used in hostels, hospitals, schools, cinema houses and construction sites.

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KHADIJA ABEID RAMADHAN
Advocate, Notary
Public & Commissioner for Oaths

2) PRODUCTS AND ITS APPLICATION

A water tank is a container for storing water. The need for water tanks is as old as civilization. Tanks were used to provide storage of water for use in many applications, drinking water, irrigation agriculture, fire suppression, agricultural farming, both for plants and livestock, chemical manufacturing, food preparation as well as many other uses.

3) OTHER ITEM AS BELOW WILL BE INTRODUCED AND MANUFACTURED GRADUALLY AS PER DEMAND AND REQUIREMENT

- ALL TYPES AND SIZE OF PIPES AND CONDUITS AD THEIR FITTINGS
- ALL TYPES OF FOOD CONTAINERS AND HOTPORTS
- TRAFFIC/SAFTY CORN AND BARRIER
- PLASTIC TRAY, PALLETS ETC FOR INDUSTRIES USE

4) PROCESS:

The rotational molding process for manufacturing water storage tank consists of the following major process steps.

- Loading of raw material
- Molding of the part
- Cooling or curing
- Unloading of finished part

Cycle time generally varies from 6 to 10 minutes. Cycle as low as 2 minutes can be achieved and extremely large part with heavy wall requires 15 minutes for each molding cycle.

- **Loading:** Raw material in the form of powder (35 to 40 mesh) or liquid state is loaded into the mold or cavities and mould halves are mechanically locked together. Loading is generally accomplished before the machine has completed its previous cycle and ready to accept the mold.
- **Molding the part:** The prepared mould is next placed in a closed chamber where it is subjected to intense heat up to 400^o C while rotating the mold bi- acially.

Rotation is at low speed generally in the range of 1 – 40 rpm on the minor axis and 1 – 12 rpm on the major axis. A 4:1 rotation is common however both variable speeds and variable ratios are used for molding unusual configuration.

- **Cooling or curing:** The mould containing formed part is then transferred to a second enclosed chamber where it is subjected to a combination of water spray a forced air cooling while continuing to rotate biaxial. This causes the part to cure evenly and mold to reach handling temperature.
- **Unloading:** Like loading this can be accomplished manually by simply opening the mold and physically removing the parts or automatically by using forced air to facilitate the ejection of the part.

5) **ENVIRONMENTAL IMPACT**

ENVIRONMENTAL ASPECT OF MANUFACTURING PROCESS

The manufacturing process employed by the unit is essentially a plastic processing operation wherein polythene material would be converted into powder form and then the polythene powder would be moulded in the form of tanks and other products. No gaseous or liquid effluents are discharged during the process of moulding.

Some solid scrap is generated during the manufacturing process in the form of incomplete moldings or defective moldings. A provision has been made for a scrap grinder in the list of machines, so that, the above said scrap generated during the process is ground and re-processed.

In the manufacturing process, the mould has to be heated in the heating chamber. The heating chamber has a provision of burners, which are run on LDO for heating the chamber. The provision of exhaust has been provided for removing the hot gases and fumes, however, if need be some additional ducts need to be installed for taking away the hot gases and fumes. Alternatively, the heating of the chamber could be switched over to another less polluting fuel viz LPG.

WASTE GENERATED AND MITIGATION MEASURES:

In the manufacturing process of roto moulded plastic containers, no liquid or gaseous effluents are generated. However, as mentioned above, some solid plastic scrap is generated during the roto moulding process in the form of incomplete mouldings or defective mouldings. A provision has been made for a scrap grinder to reprocess this waste which can again be used for molding of containers. The moulds would be heated by using LDO and provision of exhaust has been made for removal of hot gases. Besides, there would be some waste of metal scrap, wooden scrap, broken bricks, stone aggregates, etc during construction phase of the project. The waste generated during construction phase is mainly used for earth filling & flooring. The details of the waste generated during construction phase and project operation phase along with mitigation measures are given below in subsequent paras.

6) DETAILS OF THE COMPANY

The proposed business of manufacturing storage water tank is to be carried out in the name and style of Delta Styro Africa (TZ) Limited being a private company incorporated as per Tanzania Laws. The Manufacturing unit of the company shall be located at DAR ES SALAAM DESTRIC

7) DETAILS OF THE PROMOTERS

The Promoter should have preferably a basic degree in plastic engineering/ processing or a degree/ diploma in engineering / or a degree in chemistry. Experience of at least two to three years in plastic industry is desirable.

Sl. No.	Name	Qualification	Expertise
1.	Naran Fatak	Investor	Finance Director
2.	Dhiraj Patel	Investor	Finance Director
3.	Arif Khurshid Shaikh	Diploma	Director
4.	Mukesh Chand	Graduate	Technical(O&M) Director

8) COST OF PROJECT

Sr. No.	Particulars	Value in USD
1	Plant and Machinery	364,274.16
2	Vehicles	74,000.00
3	Furniture and Fittings	20,000.00
4	Pre-Expenses	10,000.00
5	Other	40,000.00
6	Working Capital	221,700.00
TOTAL		729,974.16

9) MEANS OF FINANCE

Sr. No.	Particulars	% Contribution
1	Promoter's contribution	90%
2	Bank Finance	10%
3	Total	100%

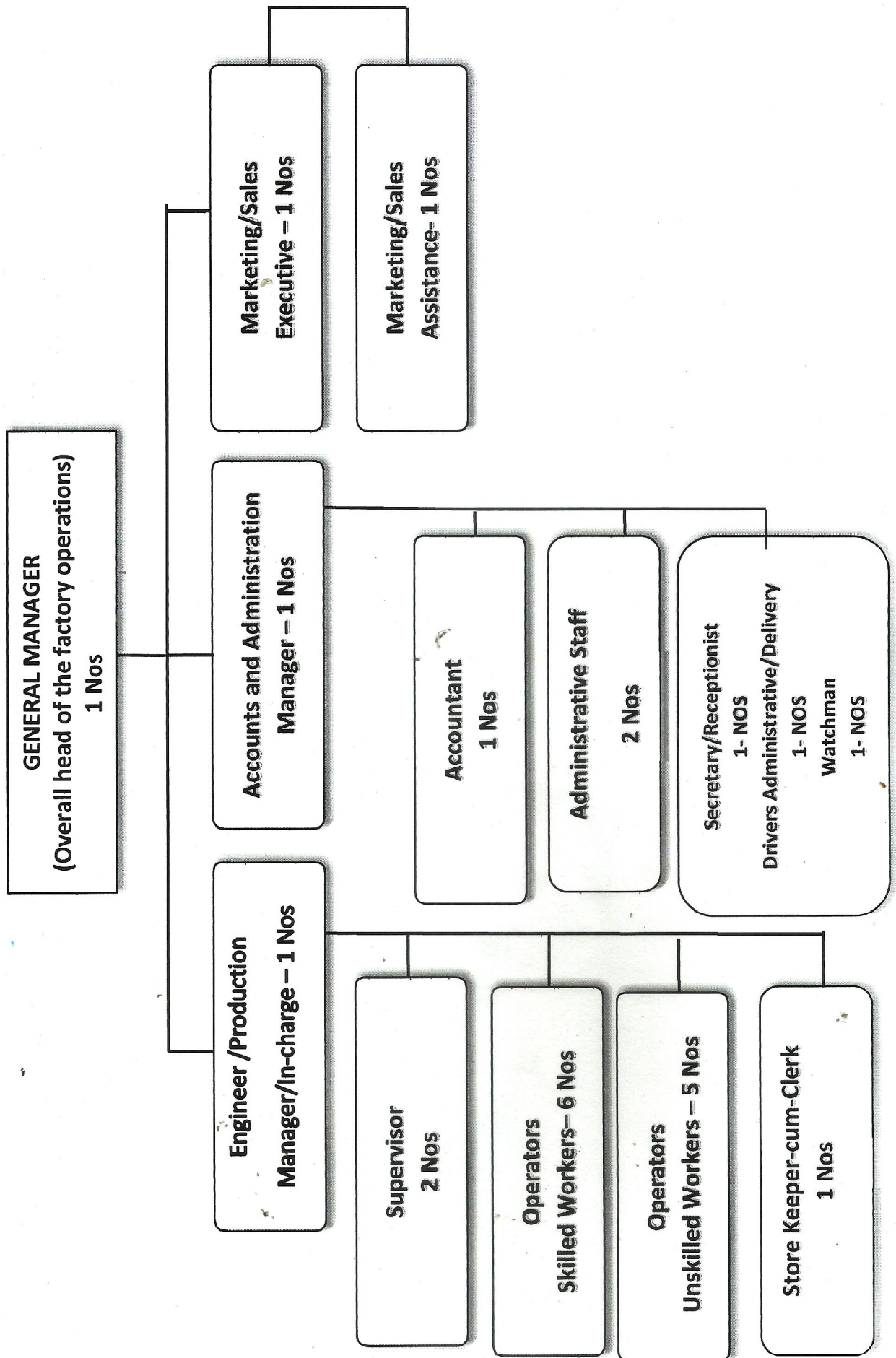
10) MANPOWER REQUIREMENT

The project has a good employment potential for skilled and unskilled workers, which would be employed in the production unit. Beside the project would generate employment potential in marketing & sales of its produce, transport of raw materials and finished products. The project would thus create opportunity both for direct & indirect employment.

Sr. No.	Particulars	Numbers	Monthly USD
1	General Manager	1	427.00
2	Production Engineer /Manager	1	294.00
3	Marketing/Sales Executive	1	294.00
4	Marketing/Sales Assistance	1	187.00
5	Accounts Manage	1	294.00
6	Accountant	1	187.00
7	Store Keeper-cum-Clerk	1	187.00
8	Watchman	1	187.00
9	Supervisor	2	375.00
10	Skilled Worker	4	668.00
11	Unskilled worker	5	535.00
12	Administrative Staff	2	241.00
13	Drivers Administrative/Delivery	2	241.00
14	Secretary/Receptionist	1	107.00
Total		24	4,224.00

DELTA STYRO AFRICA (TZ) LTD

ORGANIZATION CHART



11) INVESTMENT FUNDS EXPENDITURE BREAKDOWN

DELTA STYRO AFRICA (TZ) LIMITED					
Profit & Loss					
Particulars	FY Ended	FY Ended	FY Ended	FY Ended	FY Ended
	Year 1	Year 2	Year 3	Year 4	Year 5
INCOME					
Sales	253,671.96	266,355.56	279,673.34	293,657.00	308,339.85
Total Revenue	253,671.96	266,355.56	279,673.34	293,657.00	308,339.85
EXPENDITURE					
Raw Materials	199,140.90	203,123.72	207,186.19	215,473.64	224,092.59
Utilities	10,000.00	10,200.00	10,404.00	10,612.08	10,824.32
Salaries	9,700.00	10,200.00	7,724.70	8,497.16	9,346.89
Repairs and Maintenance	4,800.00	5,500.00	6,300.00	7,200.00	8,000.00
Selling Expenses	329.34	362.26	398.50	438.35	482.18
Pre-operative Expenses	10,000.00	-	-	-	-
Admin Expenses	280.59	248.92	343.81	368.19	325.00
Total Expenditure	234,250.83	229,634.90	232,357.20	242,589.42	253,070.98
EBITDA	19,421.13	36,720.66	47,316.13	51,067.58	55,268.88
Depreciation	10,693.75	22,089.69	32,726.23	36,567.30	35,582.20
Extraordinary Cost / (Income)	-	-	-	-	-
Total Dep & Amortisation	10,693.75	22,089.69	32,726.23	36,567.30	35,582.20
EBIT	8,727.38	14,630.97	14,589.90	14,500.28	19,686.68
Tax	2,618.21	4,389.29	4,376.97	4,350.08	5,906.00
Income Tax	2,618.21	4,389.29	4,376.97	4,350.08	5,906.00
Net Profit	6,109.17	10,241.68	10,212.93	10,150.20	13,780.67

DELTA STYRO AFRICA (TZ) LIMITED

Balance Sheet

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Sources of Funds					
Shareholders Funds					
Equity Capital	250,000.00	350,000.00	350,000.00	350,000.00	350,000.00
Reserve & Surplus	6,109.17	16,350.85	26,563.78	36,713.98	50,494.65
Total Shareholder's Funds	256,109.17	366,350.85	376,563.78	386,713.98	400,494.65
Long term Loans					
Working Capital Loan	38,713.70	48,392.13	60,490.16	75,612.70	94,515.87
Unsecured loan	2,000.00	2,500.00	3,125.00	3,906.25	4,882.81
Total Loan Funds	40,713.70	50,892.13	63,615.16	79,518.95	99,398.68
Total Sources of Funds	296,822.87	417,242.97	440,178.93	466,232.92	499,893.33
Application of Funds					
Fixed assets					
Gross Block	216,777.00	374,777.00	413,274.00	476,771.16	496,771.16
Less: Depreciation	10,693.75	32,783.44	65,509.67	102,076.97	137,659.17
Net Block	206,083.25	341,993.56	347,764.33	374,694.19	359,111.99
Current Assets, Loans & Advances					
Stock	45,897.03	58,756.00	73,445.00	91,806.25	133,119.06
Debtors	71,150.36	81,156.00	121,070.71	136,204.55	166,850.57
Closing Cash Balance	17,550.63	6,898.72	(14,199.37)	(44,426.36)	(59,915.87)
Short Term Loans & Advance	-	3,354.00	226.57	205.70	155.70
Other Current Assets	-	756.00	756.00	756.00	756.00
Total of Current Assets, Loans & Advances	134,598.02	150,920.72	181,298.90	184,546.14	240,965.46
Trade Payables	7,000.00	29,771.03	53,403.46	55,323.14	59,168.15
Short Term Provisions (Employee Benefits)	3,557.95	13,401.28	1,174.84	847.01	1,019.66
Outstanding Liabilities	8,500.00	7,132.00	7,152.00	7,172.00	7,192.00
Deposit	16,800.09	16,809.00	16,809.00	16,809.00	16,809.00
Bank Overdraft	-	522.00	300.00	300.00	300.00
Advance against order	8,000.36	8,036.00	10,045.00	12,556.25	15,695.31
Sub Total	36,858.40	45,900.28	35,480.84	37,684.26	41,015.97
Total of Current Liabilities & Provisions	43,858.40	75,671.31	88,884.30	93,007.41	100,184.12
Net Current Assets	90,739.62	75,249.41	92,414.60	91,538.73	140,781.34
Total Assets	296,822.87	417,242.97	440,178.93	466,232.92	499,893.33
Diff (rounding Off)	-	-	-	-	-

DELTA STYRO AFRICA (TZ) LIMITED

Cash Flow Statement

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Cash from Operating activity					
A) Cash Flow from operating activity					
Net Profit Before tax	8,727.38	14,630.97	14,589.90	14,500.28	19,686.68
Adjustment:					
Add: Non Cash Expenses	10,693.75	22,089.69	32,726.23	36,567.30	35,582.20
Add: financial Expense	-	-	-	-	-
Operating Profit before working capital changes	19,421.13	36,720.66	47,316.13	51,067.58	55,268.88
Working Capital changes					
(Increase)/Decrease in Inventories	(45,897.03)	(12,858.97)	(14,689.00)	(18,361.25)	(41,312.81)
(Increase)/Decrease in Receivables	(71,150.36)	(10,005.64)	(39,914.71)	(15,133.84)	(30,646.02)
(Increase)/Decrease in Short term Loan and advances	-	(3,354.00)	3,127.43	20.86	50.00
(Increase)/Decrease in Long term Loan and advances	-	-	-	-	-
(Increase)/Decrease in Other Current Asstes	-	(756.00)	-	-	-
Increase/(Decrease) in Trade Payables	7,000.00	22,771.03	23,632.43	1,919.68	3,845.01
Increase/(Decrease) in Short Term Provisions	3,557.95	9,843.33	(12,226.44)	(327.82)	172.65
Increase/(Decrease) in Outstanding Liabilities	8,500.00	(1,368.00)	20.00	20.00	20.00
Increase/(Decrease) in Deposits	16,800.09	8.91	-	-	-
Increase/(Decrease) in Advance against order	8,000.36	35.64	2,009.00	2,511.25	3,139.06
Increase/(Decrease) in Long term provisions	-	-	-	-	-
Cash flow form Operations (CFO)	(53,767.86)	41,036.96	9,274.85	21,716.47	(9,463.24)
Income Taxes Paid	2,618.21	4,389.29	4,376.97	4,350.08	5,906.00
Net Cash used in Operating activity	(56,386.07)	36,647.67	4,897.88	17,366.38	(15,369.25)
B) Cash Flow from Investing activity					
CAPEX	(216,777.00)	(158,000.00)	(38,497.00)	(63,497.16)	(20,000.00)
Net Cash used in Investing activity	(216,777.00)	(158,000.00)	(38,497.00)	(63,497.16)	(20,000.00)
C) Cash flow from Financing Activity					
Interest Paid	-	-	-	-	-
Increase/(Decrease) in Working Capital Loan	38,713.70	10,200.43	11,876.03	15,122.54	18,903.17
Increase/(Decrease) in Unsecured Loans	2,000.00	500.00	625.00	781.25	976.56
Increase/(Decrease) in Equity Capital & Share Premium	250,000.00	100,000.00	-	-	-
Net Cash used in Financing activity	290,713.70	110,700.43	12,501.03	15,903.79	19,879.74
Net increase in Cash and Cas Equivalents	17,550.63	(10,651.91)	(21,098.09)	(30,226.99)	(15,489.51)
Cash & Cash Equivalents (Opening)	-	17,550.63	6,898.72	(14,199.37)	(44,426.36)
Cash & Cash Equivalents (Closing)	17,550.63	6,898.72	(14,199.37)	(44,426.36)	(59,915.87)

12) RAW MATERIAL REQUIREMENTS AND SOURCE OF SUPPLIES

- 1) LDPE- Linear low-density polyethylene
- 2) Mono Glyride
- 3) Talcum Powder / Master Batch
- 4) Master batch black
- 5) Butane Gas / LPG Gas

Rotational Molding is a process for producing hollow seamless containers of all sizes and shapes. The process does not involve high injection pressure or high shear rates. Black polyethylene powder of 35 mesh is weighed and charged in the mold. The mold is heated while it is being rotated about two perpendicular axes. Simultaneously a porous skin is formed on the mold surface which gradually melts as the heating cycle progresses. At the end of heating cycle a layer of homogenous uniform thick wall is formed. The mold then enters a cooling station where forced air/water spray cools the mold. It is then positioned in a work zone where the mold is opened, the tank is removed and the mold is recharged for next cycle.

Above mentioned raw material 1 to 4 will be imported from India and Item 5 LPG INDUSTRIAL GAS will be procured locally.

13) MARKET POTENTIAL AND MARKETING ISSUES, IF ANY

Rotational molding is new to the plastic industry because of its importance as processing method. Though the art is an old one but technological advancement during the last twenty years has caused growth of several sizeable industries and is rapidly gaining interest on a widespread basis. Root-molded Plastic Water storage tanks being lighter in weight are easy in handling and can be easily fitted at any desired place, and are hence preferred and practically replacing the conventional tanks of steel, cement concrete or stone. These tanks are available in market in various sizes and shapes. The demand of plastic water storage tanks is increasing day-by-day. They are not only installed in the individual houses and flats but are also fitted in factories, group housing schemes and multistoried buildings as well. Field investigations have revealed that due to increase in the house building activities and preference given by the Government to provide

agricultural irrigation and farming support to the farmers, the demand for plastic water storage tanks is likely to increase in the years to come. Hence there is also a good scope for expansion and adding few units for the manufacture of water storage tanks by rot Molded process in feature.

MARKETING STRATEGY

The plastic storage tanks are widely used due to their light weight, ease of handling and long term durability. Presently, the entire requirement of these tanks is being met through imports. Keeping in view, the tremendous growth in the construction industry, it is expected that the demand for plastic tanks for various applications in buildings could grow many folds. The unit needs to adopt the following strategy for better access to market: -

- Direct sales to hardware stores in villages as majority of the tanks are purchased from hardware stores in villages,
- Appointing a distributors region wise in major cities.
- Local Media: New Papers, T V and Channels Advertisements
- Long-term contract and direct sales to large construction project in Government and Private sector through.

14) PROJECT IMPLEMENTATION

Project will be executed with the time frame of 4months to 6 Month on receiving Certificate.

Particular	From	To	Total Weeks
Arrangement of Funds through Bank/ Own	-	-	Already Processed
Procurement of In built Premises for Manufacturing Plant	-	-	Procured Rental Premises At Mbagala, Temeke District
Placement of Orders for Machinery	-	-	Processed Waiting for TIC Certificate
Painting And Renovation Factory Premises, Earth Work In Side Factory (Concrete Foundation And Trench For Machines And Equipment Installation	1	4	4
Delivery of Machinery & Equipment's	4	9	5
Procurement of Raw Material and Trial Runs			Same time with Delivery of Machinery & Equipment's
Erection, Commissioning of Plant & Machinery & Utilities	9	14	5
Training for workers	14	18	4
Commercial Production	19		On Wards

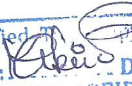
18) PRODUCTION CAPACITY

The project has been designed mainly for the production of containers. These containers are manufactured in a wide range of sizes starting from 500 liters to few thousand liters' capacity. Smaller containers could also be manufactured. In the project, the provision has been made for molds ranging from 500 liters to 3000 liters' capacity. Normally, the production capacity of rotational molding is defined in terms of liters of containers molded in a month. The capacity could vary depending on the number of shift of operations i.e., total working hours per day. In the feasibility analysis, working of single shift of 8 hours, 25 days a month has been taken into consideration and the capacity calculation has been made on this basis. The production capacity has been calculated on the basis of 80% utilization of the capacity of the machine installed. The capacity could be increased by extending the working hours.

Rotational molding machine is the major machine and the capacity of the unit would depend on the size and specifications of the rotor molding machine. In the context of present feasibility analysis, a medium capacity rotor molding has been recommended. This machine has a capacity of molding around 10 lacs liters' volume of containers per month on single shift working. Accordingly, the installed capacity of the unit would be as under:

PRODUCTION CAPACITY

- 120 lacs liters of overhead water, Containers in various sizes
- Other Various items 15 to 24 metric Tons

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Sign:  Date: 12/03/21
KHADIJA ABEID RAMADHAN
Advocate, Notary
Public & Commissioner for Oaths