**Profile No.: 76 NIC Code:29292**

**DRIP IRRIGATION PIPE**

1. **INTRODUCTION**

Drip irrigation is a technique in which the water is filtered, conveyed through PVC or HDPE mainlines, LLDPE lateral lines and then let out in droplets through drip nozzles or micro tubes placed directly at the root zones of the plants. The quantity and rate of water application can be matched to varying crop requirements.

Besides conveying water, linear low density polyethylene drip irrigation pipe leads to uniform distribution of water and fertilizer. Since the system is further bifurcated into sub main line, laterals and emitter/dripper, there is water saving by use of drip irrigation technique.

Micro irrigation helps to economize water use, reduce the irrigation cost per unit land and increase the yield per unit area and unit quantum of water.

1. **PRODUCTS AND ITS APPLICATION**

Water is needed for survival of human beings; clean water needed for drinking can be provided by plastic pipes. Plastic pipes offer excellent corrosion resistance and ensures clean delivery of water. Corrosion resistance of plastic pipes brings in multiple end users in food processing industries. Plastic pipes are needed for survival of plants (crops) and help farmers with better monetary gains. Productivity increases for farmers by use of plastic pipes,

1. **DESIRED QUALIFICATION FOR PROMOTER**

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.

1. **INDUSTRY OUTLOOK/TREND**

In general plastic processing industry using commodity polymers is growing at the rate of 5% per annum. However in this particular case the demand is likely to grow at 10% due to emphasis on agriculture by government. As per the target of the central government production of agriculture and horticulture produces is to be doubled by 2022. This will also lead to doubling of farmers income and will result in to more buying powers by the farmers.

1. **MARKET POTENTIAL AND MARKETING ISSUES, IF ANY**

The high market potential for agricultural plastic products and lower number of manufacturers of these products in the country would bring in more number of entrepreneurs in this business. A higher product mix can increase the average selling price of the final product and lead to higher net profitability.

Market for drip irrigation products depend on agriculture. The pipe required for drip irrigation is normally used by progressive farmers and in modern agriculture. The Government is giving lots of incentives to farmers so that they use drip irrigation to increase the productivity and reduce water consumption. Moreover such pipes are also used in green houses. Overall demand for drip irrigation pipes is likely to grow at 15% per annum.

1. **RAW MATERIAL REQUIREMENTS**
* LLDPE Granules
* Other chemicals
1. **MANUFACTURING PROCESS**

Pipe extrusion is defined as a process of forcing the polymer melt through a die. The extrudate from the die is sized, cooled and the formed pipe is pulled to the winder or a cut off device with the aid of haul off device. Prior to this, polymer is fed into a hopper, conveyed by a rotating screw through a barrel. This is subjected to high temperature and pressure.

1. **MANPOWER REQUIREMENT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No.** | **Particulars** | **Nos** | **Salary(Rs.)** |
| 1 | Production manager  | 1 | 10000 |
| 2 | Production Supervisor  | 1 | 8000 |
| 3 | Accountant  | 1 | 10000 |
| 4 | Office boy cum Store Keeper  | 1 | 8000 |
| 5 | Chemist  | 1 | 8000 |
| 6 | Sales man | 1 | 7000 |
| 7 | Skilled worker | 4 | 32000 |
| 8 | Semi-Skilled Worker  | 4 | 24000 |
| 9 | Watchman  | 1 | 5000 |
|   | Total | 15 | 112000 |

1. **IMPLEMENTATION SCHEDULE**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Particulars** | **Time Period**  |
| 1 | The Time requirement for preparation of Project report | Two months |
| 2 | Time requirement for selection of Site  | One month |
| 3 | Time required for registration as Small Scale Unit | One Week |
| 4 | Time required for acquiring the loan Machinery procurement, erection and commissioning | Three Months  |
| 5 | Recruitment of labourer etc. | One month |
| 6 | Trial runs | One Month  |

1. **COST OF PROJECT**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Particulars**  | **Rs. In lakhs**  |
| 1 | Land and Building | 30.00 |
| 2 | Plant and Machinery | 54.10 |
| 3 | Miscellaneous Assets | 3.20 |
| 4 | P & P Expenses | 1.80 |
| 5 | Contingencies @ 10% on land and building and plant and machinery | 8.41 |
| 6 | Working capital margin | 57.06 |
|   | **Total** | **154.57** |

1. **MEANS OF FINANCE**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Particulars** | **Rs. (lakhs)** |
| 1 | Promoter's contribution | 46.371 |
| 2 | Bank Finance | 108.199 |
|   |   | **154.57** |

1. **WORKING CAPITAL CALCULATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.**  | **Particulars**  | **Rs. lakhs** | **Stock Period days** | **Promoter Margin** | **Margin Amt.** | **Bank Finance** |
| 1 | Salaries and wages | 1.12 | 30 | 1 | 1.12 | - |
| 2 | Raw material and packaging material | 57.63 | 30 | 0.5 | 28.815 | 28.815 |
| 3 | Utilities | 0.3 | 30 | 0.5 | 0.15 | 0.15 |
| 4 | Debtors | 67.43 | 30 | 0.4 | 26.972 | 40.458 |
|   | Total  | 126.48 |   |   | 57.057 |   |

1. **LIST OF MACHINERY REQUIRED AND THEIR MANUFACTURERS**

|  |  |  |
| --- | --- | --- |
| **Sr. No.**  | **Particulars**  | **Rs. lakhs** |
| 1 | High speed Mixer | 1.5 |
| 2 | LLDPE rigid pipe extrusion plant | 25 |
| 3 | Automatic Injection moulding machine | 20.00 |
| 4 | Scraper, grinder | 1.50 |
| 5 | Overhead water tank and recycling Pump units | 0.90 |
| 6 | Pipe storage, racks, maintenance of small hand tools, greasing, oiling equipment, etc. | 0.40 |
| 7 | Testing Equipment & Other Accessories | 2.00 |
| 8 | Small tools such as greasing and common electrical lighting equipment | 0.80 |
| 9 | Water cooling unit | 2.00 |
|   | Total  | 54.10 |

* Kabra Extrusiontechnik (KET)

Fortune Terraces, 10th Floor,
B Wing, Opp. Citi Mall, Link Road,
Andheri-(West) Mumbai-400053
Maharashtra, India.

* Rajoo Engineers Limited

Survey No. 210, Plot No.1,

Industrial Area

Rajkot

Gujarat 360024

* REMICA PLASTIC MACHINERY MANUFACTURERS

2/Ab, Sardar Patel Industrial Estate,

Near Gujarat Petrol Pump,

Shahwadi, Narol,

Ahmedabad,

Gujarat 382405

1. **PROFITABILITY CALCULATIONS**

**(Rs.)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Particulars**  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| **(A)** |  Sales Realization per annum | 56642040 | 64733760 | 72825480 | 72825480 | 72825480 |
| **(B)** | Cost of Production  |  |  |  |  |  |
|  1 | Raw material per annum | 49196000 | 56224000 | 63252000 | 63252000 | 63252000 |
|  2 | Utilities | 609000 | 696000 | 783000 | 783000 | 783000 |
|  3 | Salaries | 1344000 | 1411200 | 1478400 | 1478400 | 1478400 |
|  4 | Repairs and maintenance | 450000 | 470000 | 490000 | 510000 | 530000 |
|  5 | Selling expenses (3% on sales value) | 1699261.2 | 1942012.8 | 2184764.4 | 2184764.4 | 2184764.4 |
|  6 | Administrative Expenses (other expenses) | 520000 | 624000 | 728000 | 832000 | 936000 |
|   | Total | 53818261.2 | 61367212.8 | 68916164.4 | 69040164.4 | 69164164.4 |
|  **(C)** | Profit before interest & depreciation | 2823778.8 | 3366547.2 | 3909315.6 | 3785315.6 | 3661315.6 |
|   | depreciation  | 1261500 | 1261500 | 1261500 | 1261500 | 1261500 |
|   |  Profit Before term loan and tax  | 1562278.8 | 2105047.2 | 2647815.6 | 2523815.6 | 2399815.6 |
|   | Interest on term loan (11%) | 1130679.55 | 952151.2 | 714113.4 | 476075.6 | 238037.8 |
|   |  Profit before tax | 431599.25 | 1152896 | 1933702.2 | 2047740 | 2161777.8 |
|   | Tax (30%) | 129479.775 | 345868.8 | 580110.66 | 614322 | 648533.34 |
|   | Total Profit  | 302119.475 | 807027.2 | 1353591.54 | 1433418 | 1513244.46 |

Underlying assumptions for probability calculation are:-

The installed capacity of the plant is assumed at 8 MT per annum. The capacity utilization is taken at 70% for the first year. The raw material price is assumed at Rs. 88/- per KG. The selling price is taken at Rs.102-104/- per KG. Power cost is taken at Rs.8/- per unit. Interest rate on long term loan is taken at 11%.

1. **BREAKEVEN ANALYSIS**

|  |  |
| --- | --- |
| **Fixed Cost (FC):**  | **Rs. In lakhs** |
| Wages & Salaries  | 13.44 |
| Repairs & Maintenance | 4.5 |
| Depreciation  | 12.61 |
| Admin. & General expenses  | 5.2 |
| Interest on Term Loan  | 3.02 |
| Total  | **38.77** |

Fixed Cost: 38.77

Profit After Tax: 3.02

**BEP = FC x 100/FC+P**

 =38.77/41.79 x 70/100 x 100

 =**64.94%**

1. **STATUTORY/ GOVERNMENT APPROVALS**

There is no specific statutory requirement for plastic processing industry. However MSME & GST registration, IEC Code for Export of end products and local authority clearance may be required for Shops and Establishment, for Fire and Safety requirement and registration for ESI, PF and Labour laws may be required if applicable. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

1. **BACKWARD AND FORWARD INTEGRATION**

As forward integration to the proposed product, the promoter may think of producing water hose pipe for irrigation. There is no possibility for backward linkages as input is a polymer requiring heavy investment.

1. **TRAINING CENTERS/COURSES**

For plastic processing industry training and short term courses may be availed from the Central Institute of Plastic Engineering and Technology (CIPET), Guindy, Tamil Nadu and its regional centers. More over training and guidance are also provided by polymer manufacturers such as Reliance Industries Limited and GAIL. It is also possible to take technical help from machinery manufacturers.

Udyamimitra portal  ( link : [www.udyamimitra.in](http://www.udyamimitra.in/) ) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development,  mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

**Disclaimer:**

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts.  However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein.  Further the same have been given by way of information only and do not carry any recommendation.