**Profile No.: 132 NIC Code:22202**

**UTENSILS OTHER THEN ALUMINUM/ SS**

**1. INTRODUCTION:**

Food preparation in kitchen involves tasks like cutting food items to size, heating food on an open fire or on a stove, baking, grinding, mixing, blending, and measuring, boiling, stirring, frying; etc. and utensils are made for each task. Also different containers are also required for storing the processed and cooked food. Besides the utensils are also required for meal serving and eating.

These utensils are made from variety of materials ranging from clay, ceramics, glass, to metals like gold, silver, copper, brass, bronze, cast iron, steel, stainless steel and aluminum alloys. In addition utensils are also made from new materials like food grade plastics.

Utensils may be classified as cooking utensils that are put on fire i.e. cooking containers, or Kitchen processing utensil and Dining utensils consisting of containers and cutlery items and finally the food item storage containers. Liquids like water and beverages require a separate design class of utensils.

**2. PRODUCT & ITS APPLICATION:**

Several size and shape of utensils and containers like pans, boiling cooker, frying pans, baking pans, etc. are used in cooking. Serving utensils consist of containers, trays, etc. Dining utensils include various sizes of plates, bowls and cutlery items like spoons, fork, spatula, knives etc.

However Stainless Steel, brass, aluminum metals and plastics of food grade are popular for kitchen and dining utensil production. Some of the metals are also coated with copper, etc. or special plastic coatings to enhance use ability and decoration.

Brass and Bronze utensils are traditionally used in our country and utensils made from these find favor. Besides Cast iron or normal carbon steel can be used for utensils of certain type that can be used for large sized Kitchens and they can be coated with ceramic enamel that gives good colors, decoration and finish. Enamel ware is porcelain fused onto heavy-gauge steel, giving it many admirable qualities- durability, smoothness and chemical-resistance. It can assume brilliant, long-lasting colors and cannot burn. Enameling is an old and widely adopted technology, for most of its history mainly used in jewelry and decorative art.

**3. DESIRED QUALIFICATIONS FOR PROMOTER:**

Any person, preferably with manufacturing or marketing experience and ITI, Diploma or graduation in technical field.

 **4.** **INDUSTRY OUTLOOK/TREND**

Till the early eighties, kitchenware in the average Indian home would constitute primarily brass, bronze, copper and aluminum. Introduction of stainless steel utensils led to easy to clean, non-corrosive, safe and brightly polished durable kitchen wares.

However, there is a segment for ceramic cook wares, ceramic coated and enameled cook wares made from carbon steel / cast iron with ceramic/ porcelain coated utensils especially for, replacing pure metals. For proper cooking and frying the use of these are found more suited due to uniform heating of food items. They are also safe, non-corrosive and is a preferred ware for frying/ roasting/ and preserving food taste and texture.

Enamel / ceramic coated wares are manufactured by many small and medium enterprises, specializing it this category. The market is dominated by unorganized sector as only few organized players are present in high end ceramic cook wares. Some of these units are offering branded utensils with good designs and décor.

There are utensils for the preparation as well as serving and dining of every type of meal. Utensils should have good functional design in terms of the shape, size and thickness.

**5. MARKET POTENTIAL AND MARKETING ISSUES. IF ANY:**

Cast iron and carbon steel cooking utensils with ceramic enamel have lower cost, and therefore they are favored in low to medium income segment of population. These materials are also suitable for cooking as well as other uses, they are long lasting and easy to clean.

With growing population, there will always be new demand generation of demand. In Kitchen, utensils are essential and almost each house hold and restaurants /hotels etc. require utensils. Besides there is a specific life cycle for utensils requiring replacement. Therefore there is new and replacement demand in domestic market. Besides there is very good export demand in developed as well as developing markets that can be met by good quality manufacturers.

An entrepreneur needs to decide on the type of kitchen utensils he wants to manufacture.

The project of enameled carbon steel / cast iron utensils is suggested.

**6. RAW MATERIAL REQUIREMENTS:**

Carbon steel sheets of various grades and gauges are procured. Also the unit can procure cast iron wares as per designs followed by ceramic coating/ enamel ware products.

Other items are ceramic enamel frits and design decals suitable for carbon steel. In addition, the unit may also procure hard enamel paints and powder coating paints for coating. All of these are obtained from reputed suppliers to ensure quality.

**7. MANUFACTURING PROCESS:**

The process steps may include:

* The process starts with Blank preparation by Punching from coil or flat sheet.
* Deep drawing to shape and size metal sheet as per required design.
* Large carbon steel hollow wares are produced by roll forming of different sheets to cylindrical shells and edges are then welded together with electro-resistance spot, Seam or MIG welding.
* After welding the weld beads cleaned, rolled, buffed and polished until the seam is no longer visible.
* Other operations like Bulging, Beading and Curling, Necking and Rib Forming may be carried out to create specific shapes and an inward or outward protrusion on surface.
* The utensils then undergo sand blasting to clean the surface and remove the rust if any.
* The sand blasted utensils are then sent to acid pickling and phosphating/ passivation plant. The treated utensils are then fed to conveyor line for shot/ pallet blasting unit to prepare the surface for enamel coating.
* The shot blasted and air pressure jet cleaned utensils are then fed to preheating oven to heat up prior to applying ceramic/ enamel coats. The coating may be done in 2-3 steps to get proper bubble free coating.
* The coated utensils are directly fed to enamel baking oven where it is heated to 500o C to 1100o C depending on ceramic/ enamel formulation. The enameled items may be decorated with design decals or hand painted to apply attractive colors and designs. After painting they are again sent to oven for baking.
* The enameled wares are then ready for inspection and assembly with handles.
* The assembled wares are then cleaned buffed for polish and packed.

**8. MANPOWER REQUIREMENT:**

The unit shall require highly skilled service persons. The unit can start from 19 employees initially and increase to 38 or more depending on business volume.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sr No** | **Type of Employees** |  **Monthly Salary** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| 1 | Skilled Operators | 18000 | 6 | 10 | 12 | 12 | 12 |
| 2 | Semi-Skilled/ Helpers | 7000 | 10 | 10 | 16 | 20 | 20 |
| 1 | Supervisor/ Manager | 30000 | 1 | 1 | 1 | 1 | 1 |
| 2 | Accounts/ Marketing | 16000 | 1 | 2 | 3 | 3 | 3 |
| 3 | Other Staff | 7000 | 1 | 3 | 4 | 5 | 6 |
|  | TOTAL |  | 19 | 23 | 34 | 38 | 38 |

**9. IMPLEMENTATION SCHEDULE:**

The unit can be implemented within 6 months from the serious initiation of project work.

|  |  |  |
| --- | --- | --- |
| **Sr No** | **Activities** | **Time Required in Months** |
| 1 | Acquisition of Premises | 2 |
| 2 | Construction (if Applicable) | 2 |
| 3 | Procurement and Installation of Plant and Machinery | 2 |
| 4 | Arrangement of Finance | 2 |
| 5 | Manpower Recruitment and start up | 2 |
|  | Total Time Required (Some Activities run concurrently) | 6 |

**10. COST OF PROJECT:**

The unit will require total project cost of Rs 139.08 lakhs as shown below:

|  |  |  |
| --- | --- | --- |
| **Sr No** | **Particulars** | **In Lakhs** |
| 1 | Land | 0.00 |
| 2 | Building | 40.00 |
| 3 | Plant and Machinery | 66.55 |
| 4 | Fixtures and Electrical Installation | 3.30 |
| 5 | Other Assets/ Preliminary and Preoperative Expenses | 2.50 |
| 6 | Margin for working Capital | 26.73 |
|  | TOTAL PROJECT COST | 139.08 |

**11. MEANS OF FINANCE:**

The project will require promoter to invest about Rs 54.81 lakhs and seek bank loans of Rs 84.27 lakhs based on 70% loan on fixed assets.

|  |  |  |
| --- | --- | --- |
| **Sr No** | **Particulars** | **In Lakhs** |
| 1 | Promoters Contribution | 54.81 |
| 2 | Loan Finance | 84.27 |
|  | TOTAL : | 139.08 |

**12. WORKING CAPITAL REQUIREMENTS:**

Working capital requirements are calculated as below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr No** | **Particulars** | **Gross Amount** |  **Margin %** | **Margin Amount** | **Bank Finance** |
| 1 | Inventories | 19.67 | 40 | 7.87 | 11.80 |
| 2 | Receivables | 17.75 | 40 | 7.10 | 10.65 |
| 3 | Overheads  | 6.51 | 100 | 6.51 | 0.00 |
| 4 | Creditors | 13.12 | 40 | 5.25 | 7.87 |
|  | TOTAL | 57.05 |  | 26.73 | 30.32 |

**13. LIST OF MACHINERY REQUIRED:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr No** | **Particulars** | **UOM** | **Quantity** | **Rate** | **Total Value** |
|  | Main Machines/ Equipment |  |  |  |  |
| 1 |  Hydraulic Press | Nos | 1 | 500000 | 500000 |
| 2 | Hydraulic Deep Drawing Press | Nos | 1 | 900000 | 900000 |
| 3 | Power Press | Nos | 2 | 60000 | 120000 |
| 4 | Profile cutting Machine | Nos | 1 | 180000 | 180000 |
| 5 | Edge trim/ beading/ curling m/c | Nos | 1 | 180000 | 180000 |
| 6 | Spot welding machines | Nos | 1 | 40000 | 40000 |
| 7 | Shot blasting Line | Nos | 2 | 350000 | 700000 |
| 8 | Pickling and Surface treatment  | Nos | 2 | 350000 | 700000 |
| 9 | Enamel / Powder coating Line | Nos | 2 | 800000 | 1600000 |
| 10 | Enamel Baking Oven | Nos | 2 | 700000 | 1400000 |
| 11 | Decal Design Curing Oven | Nos | 1 | 100000 | 100000 |
| 12 | Inspection and Assembly Line | Nos | 3 | 15000 | 45000 |
|  | subtotal : |  |  |  | 6465000 |
|  | Tools and Ancillaries |  |  |  |  |
| 1 | Misc. equipment Dies tools etc. | LS | 1 | 150000 | 150000 |
| **Sr No** | **Particulars** | **UOM** | **Quantity** | **Rate** | **Total Value** |
| 2 | Hand Tools and gauges | LS | 1 | 40000 | 40000 |
|  | subtotal : |  |  |  | 190000 |
|  | Fixtures and Elect Installation |  |  |  |  |
|  | Storage and transport bins and trolleys  | LS | 1 | 80000 | 80000 |
|  | Office Furniture | LS | 1 | 20000 | 20000 |
|  | Telephones/ Computer | LS | 1 | 30000 | 30000 |
|  | Electrical Installation | LS | 1 | 200000 | 200000 |
|  | subtotal : |  |  |  | 330000 |
|  | Other Assets/ Preliminary and Preoperative Expenses | LS | 1 | 250000 | 250000 |
|  | TOTAL PLANT MACHINERY COST |  |  |  | 7235000 |

All the machines and equipments are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of dies and tooling to have modern and flexible utensil designs. It may be worthwhile to look at reconditioned imported machines, dies and toolings. Some of the machinery and dies and toolings suppliers are listed here below:

1. Sunrise Oven equipments

7-3-10/8, Gaganpahad Industrial Area, Rajendra Nagar
Katedan Hyderabad- 500052 Telangana, India

2. GRM Engineers Pvt. Ltd.

 No. 1301/A-3, GIDC Estate, Panchmahal,
 Halol-389350, Gujarat, India

3. RAJESH MACHINE TOOLS PVT. LTD.

 New Nehrunagar Main Road, 2 - Kailashpati Society, Plot No. 7, Dhebar Road (South), "ATIKA" Industrial Area,, Rajkot, Gujarat, India

4. Pacific Engineering Corporation

 A-297, MIDC-Mahape, Near Mahape Bus Depot,

 Anthony Garage, Thane-Belapur Road, Mahape Midc,
 Navi Mumbai-400710, Maharashtra, India

5. Other well known machine manufacturers who can be searched from internet are Batliboi Ltd., Bharat Fritz Werner , HMT Machine Tools , Toolcraft Systems. etc

**13. PROFITABILITY CALCULATIONS:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr No** | **Particulars** | **UOM** | **Year Wise estimates** |
|  |  |  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| 1 | Capacity Utilization | % | 40 | 50 | 60 | 70 | 80 |
| 2 | Sales | Rs Lakhs | 213.02 | 266.28 | 319.54 | 372.79 | 426.05 |
| 3 | Raw Materials & Other Direct Inputs | Rs Lakhs | 157.38 | 196.73 | 236.07 | 275.42 | 314.76 |
| 4 | Gross Margin | Rs. Lakhs | 55.64 | 69.55 | 83.46 | 97.37 | 111.28 |
| 5 | Overheads Except Interest | Rs. Lakhs | 27.27 | 27.27 | 27.27 | 27.27 | 27.27 |
| 6 | Interest | Rs. Lakhs | 11.80 | 11.80 | 11.80 | 11.80 | 11.80 |
| 7 | Depreciation | Rs. Lakhs | 11.24 | 11.24 | 11.24 | 11.24 | 11.24 |
| 8 | Net Profit Before Tax | Rs. Lakhs | 5.34 | 19.25 | 33.16 | 47.07 | 60.98 |

The basis of profitability calculation:

The Unit will have capacity of 250 MT of ceramic coated and enameled wares with product mix consisting pans, casseroles, cookers and skillets etc with / without Bakelite handles per year. The running sizes /types/ designs will be selected. The bulk /Distributor sales prices of Aluminum utensils range from Rs 100 to Rs 350 per kg, depending on type /design decoration/volume and customer base. The mild steel sheets used for utensils cost range from Rs 45 to Rs 55 per Kg and the ceramic coating and porcelain frit cost ranges from Rs 50 to 110 per Kg. The material requirements are considered with wastage/ scrap of 15 % of finished products and scrap to be sold at @ Rs 90 ~ 110 per Kg. and the income of same is added. Energy Costs are considered at Rs 7 per Kwh. The depreciation of plant is taken at 10 % and Interest costs are taken at 14 -15 % depending on type of industry.

**14. BREAK EVEN ANALYSIS**

The project is can reach break-even capacity at 36.16 % of the installed capacity as depicted here below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr No** | **Particulars** | **UOM** | **Value** |
| 1 | Sales at Full Capacity | Rs. Lakhs | 532.56 |
| 2 | Variable Costs | Rs. Lakhs | 393.45 |
| 3 | Fixed Cost incl. Interest | Rs. Lakhs | 50.30 |
| 4 | Break Even Capacity | % of Inst Capacity | 36.16 |

 **16. STATUTORY/ GOVERNMENT APPROVALS**

The unit shall need industrial unit registration of state. The industry registration and approval for factory plan, safety for Fire requirement, registration as per Labour laws ESI, PF etc shall be required as per rules and applicability. Before starting the unit will also need GST registration for procurement of materials as also for sale of goods. The ceramic firing/ baking ovens require proper chimneys and air handling system to maintain pollution free environment. There are no other pollution control requirements. The unit will have to ensure solid waste/ scrap disposal in proper manner. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

**17. BACKWARD AND FORWARD INTEGRATION**

The machines and equipments offer scope for diversification in to producing other consumer durable and industrial parts/ components by using the spare capacities and machine capabilities which may be attempted. As such there is not much scope for organic backward or forward integration.

**18. TRAINING CENTERS/COURSES**

There are no specific training centers for design or production technology. However, the dies and Tools development courses run by several centers of excellence viz CIPET centers, Indo German Tool Room at Ahmedabad, Rajkot, Chennai, and CTTC Bhubaneshwar etc shall be helpful.

The most important scope of learning is in new product design and development by associating with institutes like NID etc. Entrepreneur may also study the new product designs, product range, features and specifications of leading Brands / competitors across the world by scanning the Internet and downloading data. Viz. North American, Europe, China etc markets.

Udyamimitra portal (link : [www.udyamimitra.in](http://www.udyamimitra.in/) ) can also be accessed for hand-holding 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.