## PROJECT REPORT

## Of

## ALUMINIUM UTENSILS

## PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Aluminium Utensils.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.
[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

## PROJECT PROFILE

## DOMESTIC UTENSILS ALUMINIUM



## INTRODUCTION:

Domestic Utensils, as the term indicates, are used for household purposes like cooking, storing water, preparing hot water etc. and these utensils are made mostly out of non-ferrous metals like aluminum, brass and copper as well as out of stainless steel. Out of all these metals, aluminum utensils are largely and widely used by people from all walks of life especially middle class, lower middle class, weaker sections and laborer's, due to its cheapness and convenience. Stainless steel utensils also find a place in domestic use, but they are used mostly by well to do families and to some extent by middle class families. Aluminum utensils are mostly accepted by all classes of people when compared with utensils of other metals. These utensils are also preferred by catering organizations like hotels, restaurants, canteens, defense, railways etc. Though these establishments do replace a few items of aluminum with stainless steel ones, but for cooking purpose aluminum is still preferred. Aluminium has advantages over other materials due to better strength with lower weight, higher heat conductivity, resistance to heat, and easy pliability to shape.

## INDUSTRY OUTLOOK/TREND

From the traditional to the modern society, across the globe, house wares have always existed as a major product category in the marketplace. Due to high degree of urbanization, proliferation of nuclear families and technological advancement, there have been far-reaching changes in the nature of housewares products. In India, globalization has also brought about significant changes in cooking, serving and dining habits. India is also witness to a major shift in buyer or consumer base for housewares products. It is no more restricted to women.For young working couples in the urban setting, there have been wide ranging changes in lifestyle, in their socializing and food habits. Factors like healthy cooking, convenience, safety, functionality, time-saving devices and cookware are now driving the purchase decision. House wares are a growing category in the Indian domestic retail market with an annual growth of 25-30\%. The future trends are likely to remain focused around products and retail formats. In terms of product range, non-stick cookware, healthy eating, wider range of cutlery and storage containers are some of the areas where we should see interesting developments in the near future.

## MARKET POTENTIAL:

Aluminium domestic utensils are used widely in both urban and rural areas. These utensils fetch some money even after use. They are more durable compared to earthen wares. Due to its durability, cheapness and other factors, these items find market in all places without much difficulty. Aluminium is quick to heat up food and has lower cost, thereby making it affordable to consumers. Besides aluminum is preferred metal in cooking utensils. Lower cost makes it popular for all types of utensils including utensils used for dining and other uses, in low income strata of population. Products from over 100 brands are available from India. Branded products are increasingly finding favor with Indian consumers in all segments of the market. Overall demand is growing between 20$30 \%$ depending on the sub-category. Despite competition, new design products are finding favors due to convenience and utility.

Government of India's "Housing for all by 2022" scheme is likely to see construction of over 30 million new homes over the next 8 years and will certainly provide a major boost to demand for home textiles, furnishing, home décor and housewares products, which even currently is growing at a healthy $25 \%$ annually. With growing population there will always be new demand generation. 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 every 6-7 years. 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. There are over 135 kitchen utensils design varieties available in the market. Success and profitability are ensured mostly on the product mix and design selection.

## BASIS \& PRESUMPTIONS:

The unit is expected to work 8 hours a day and for 300 days in a year and the details a are worked out accordingly.

## IMPLEMENTATION SCHEDULE:

The following steps involves in the implementation of the project:-
I. Preparation of Project Report-
a) Inviting quotation
6 Weeks
b) Project Report Preparation
2 Weeks
II. Provisional Registration of SSI : 1 Weeks
III.Financial arrangement : 12 Weeks
IV. Purchase and Procurement of machinery : 12 Weeks
V. Installation, Electrification of machine : 6 Weeks
VI. Production Trials

2 Weeks
41 Weeks
Say : $\quad 8$ to 9 months

## TECHNICAL ASPECTS:

1. Process of Manufacture:

The process of manufacture comprises of the following operations -

These process steps may include:

- Blanking, Punching and piercing to cut out portion of metal.
- Deep drawing to shape and size metal sheet as per required design.
- Metal forming by spinning along the die surface to get desired profile.
- Bulging process to expand metal is forced to protrude.
- Beading and Curling to roll Metal under a die to create ring of material along the edge
- Coining or embossing to reduce thickness (max. up to 30\%) of base thickness.
- Extruding where a pilot hole is pierced, and punch is pushed through, to expand the metal and grow in length.
- Necking and Rib Forming to create an inward or outward protrusion of metal on Surface.
- Trimming to remove excess metal from the part is cut away to get the finished part.
- The utensils are anodized, polished and inspected.
- The finished utensils of various sizes are bunched in to set of utensils and packed for Dispatch.
- The scrap generated in the unit will be recirculated.


## QUALITY CONTROL \& SPECIFICATION:

Commercial grade aluminium of purity 99 to $99.5 \%$ in the form of sheets / circles of 16 to 20 SWG are most suitable for manufacture of utensils. Unidentified scrap having copper, zinc or lead should not be used as this not only deteriorates the quality of the utensils but harm human health also. If the aluminium scrap selected is not of food quality, wastage of raw materials will be more, due to rejection in the manufacturing stage.

Indian Standards Institution have formulated ISS No. 1660 (Part-I)-1982 for Wrought Aluminium Utensils.

## PRODUCTION CAPACITY (PER ANNUM)

This scheme proposes to have the rolling of aluminum sheets as well as the making of utensils in single factory and envisages an annual production of 300 MT of domestic aluminum utensils. This profile can also be made in to three different independent profiles for exclusively rolling, exclusively pressing, exclusively spinning or a combination of two or all of them. The promoter can choose the profile according to this needs and capacity.

## STATUTORY/ GOVERNMENT APPROVALS

The unit shall have to get local state industrial unit registration, IEC Code for Export and local authority clearance. 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. Entrepreneur may contact State Pollution Control Board where ever it is applicable

## PROJECT AT A GLANCE



COST OF PROJECT

| Particulars | Ams. In Lacs) |
| :--- | ---: |
| Land | Rented/Owned |
| Building \& Civil Work (2000 Sq Ft) | 4.50 |
| Plant \& Machinery | 8.66 |
| Furniture \& Fixtures | 0.46 |
| Pre-operative Expenses | 1.00 |
| Working Capital Requirement | 10.38 |
| Total | $\mathbf{2 5 . 0 0}$ |

MEANS OF FINANCE

| (Rs. In Lacs) |  |  |  |
| :--- | ---: | :---: | :---: |
| Particulars | Amount |  |  |
| Own Contribution @10\% | 2.50 |  |  |
| Term Loan | 13.16 |  |  |
| Workign Capital Finance | 9.34 |  |  |
| Total | $\mathbf{2 5 . 0 0}$ |  |  |
|  |  |  |  |
| Beneficiary's Margin Monery <br> (\% of Project Cost) | General |  |  |

## PLANT \& MACHINERY

| Particulars | Quantity |  | Rate | Total Value |
| :---: | :---: | :---: | :---: | :---: |
| Oil fired pit furnace with burners over head oil tank pipe fittings etc. | 1 |  | 30,000 | 30,000 |
| Blower with 3 HP Motor | 1 |  | 15,000 | 15,000 |
| Oil-line preheater | 1 |  | 25,000 | 25,000 |
| Annealing Furnace $1800 \times 600 \mathrm{~mm}$ for annealing sheets and circles. | 1 |  | 30,000 | 30,000 |
| Aluminium Hot rolling Mill heavy type fitted with forged rolls size 350X 900 mm with fly wheel 40 HPmotor starter \& switch. | 1 |  | 150,000 | 150,000 |
| Aluminium cold rolling mill $350 \times 900$ mm Highcarbon high chromium Steel Rolls Heavy duty with 40 HP electric motor, starter ands switch. | 1 |  | 200,000 | 200,000 |
| Hand operated sheering Machine 900 mm | 1 |  | 20,000 | 20,000 |
| Circle cutting machine with motor | 1 |  | 25,000 | 25,000 |
| Hand fly press No. 4 for light punching | 1 |  | 78,000 | 78,000 |
| Double action deep drawing power press 100 MT with 15 HP motor, starter etc. | 1 |  | 200,000 | 200,000 |
| Spinning Lathe Centre height 350 mm | 1 |  | 25,000 | 25,000 |
| Electronic weighing Machine up to 1000 kg capacity | 1 |  | 25,000 | 25,000 |
| Centre Lathe 2.5 M bed | 1 |  | 40,000 | 40,000 |
| Piller drilling machine 25 mm capacity | 1 |  | 10,000 | 10,000 |
| Arc Welding Transformer 300 Amps | 1 |  | 15,000 | 15,000 |
| Bench Grinder 200 X 25 mm wheel size | 1 |  | 5,000 | 5,000 |
| Total: |  |  | 683,000 | 683,000 |
| Installation \& Electrification @ 15\% |  |  | 68,300 | 68,300 |
| Pre-operative expenses | LS |  | 20,000 | 20,000 |
| Total: | LS |  | 771,300 | 771,300 |
| Tools \& Dies | LS |  |  |  |
| Cast iron moulds for slabs | LS |  | 20,000 | 20,000 |
| Deep drawing dies |  |  | 50,000 | 50,000 |
| Spinning dies |  |  | 10,000 | 10,000 |
| Acid Tank |  |  | 5,000 | 5,000 |
| Spinning tools |  |  | 5,000 | 5,000 |
| Measuring \& Testing equipments |  |  | 5,000 | 5,000 |
| Total: |  |  | 866300 | 866,300 |


| PARTICULARS | IST YEAR | IIND YEAR | IIIRD YEAR | IVTH YEAR | VTH YEAR |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SOURCES OF FUND |  |  |  |  |  |
| Capital Account | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 |
| Retained Profit | 17.18 | 30.18 | 46.18 | 65.93 | 89.24 |
| Term Loan | 13.16 | 9.87 | 6.58 | 3.29 | 0.03 |
| Cash Credit | 9.34 | 9.34 | 9.34 | 9.34 | 9.34 |
| Sundry Creditors | 9.11 | 10.94 | 12.76 | 14.58 | 16.40 |
| Provisions \& Other Liab | 0.36 | 0.40 | 0.44 | 0.48 | 0.53 |
| TOTAL : | 51.65 | 63.22 | 77.79 | 96.11 | 117.97 |
| APPLICATION OF FUND |  |  |  |  |  |
| Fixed Assets ( Gross) | 9.12 | 9.12 | 9.12 | 9.12 | 9.12 |
| Gross Dep. | 1.32 | 2.47 | 3.45 | 4.28 | 4.99 |
| Net Fixed Assets | 7.80 | 6.65 | 5.67 | 4.84 | 4.13 |
| Current Assets |  |  |  |  |  |
| Sundry Debtors | 7.61 | 8.93 | 10.58 | 12.10 | 13.63 |
| Stock in Hand | 11.88 | 21.38 | 24.94 | 28.50 | 32.06 |
| Cash and Bank | 21.86 | 23.51 | 33.58 | 47.34 | 64.49 |
| Deposits \& Advances | 2.50 | 2.75 | 3.03 | 3.33 | 3.66 |
| TOTAL : | 51.65 | 63.22 | 77.79 | 96.11 | 117.97 |


| PROJECTED PROFITABILITY STATEMENT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PARTICULARS | IST YEAR | IIND YEAR | IIIRD YEAR | IVTH YEAR | VTH YEAR |
| A) SALES |  |  |  |  |  |
| Gross Sale | 217.50 | 255.20 | 302.33 | 345.83 | 389.33 |
| Scrap Sales 5\% | 10.88 | 12.76 | 15.12 | 17.29 | 19.47 |
| Total (A) | 228.38 | 267.96 | 317.44 | 363.12 | 408.79 |
| B) COST OF SALES |  |  |  |  |  |
| Raw Mateiral Consumed | 182.25 | 218.70 | 255.15 | 291.60 | 328.05 |
| Elecricity Expenses | 2.51 | 3.01 | 3.51 | 4.02 | 4.52 |
| Repair \& Maintenance | - | 2.55 | 3.02 | 3.46 | 3.89 |
| Labour \& Wages | 11.88 | 13.07 | 14.37 | 15.81 | 17.39 |
| Depriciation | 1.32 | 1.15 | 0.98 | 0.83 | 0.71 |
| Consumables and Other Expense | 4.57 | 5.36 | 6.35 | 7.26 | 8.18 |
| Cost of Production | 202.53 | 243.84 | 283.39 | 322.98 | 362.74 |
| Add: Opening Stock/WIP | - | 5.80 | 10.44 | 12.18 | 13.92 |
| Less: Closing Stock /WIP | 5.80 | 10.44 | 12.18 | 13.92 | 15.66 |
| Cost of Sales (B) | 196.73 | 239.20 | 281.65 | 321.24 | 361.00 |
| C) GROSS PROFIT (A-B) | 31.64 | 28.76 | 35.79 | 41.87 | 47.79 |
|  | 15\% | 11\% | 12\% | 12\% | 12\% |
| D) Bank Interest (Term Loan ) | 1.14 | 1.37 | 0.99 | 0.61 | 0.24 |
| Bank Interest ( C.C. Limit) | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| E) Salary to Staff | 3.96 | 4.36 | 4.79 | 5.27 | 5.80 |
| F) Selling \& Adm Expenses Exp. | 6.53 | 7.66 | 9.07 | 10.37 | 11.68 |
| TOTAL (D+E) | 12.55 | 14.32 | 15.79 | 17.19 | 18.65 |
| H) NET PROFIT | 19.09 | 14.44 | 20.00 | 24.68 | 29.14 |
| I) Taxation | 1.91 | 1.44 | 4.00 | 4.94 | 5.83 |
| J) PROFIT (After Tax) | 17.18 | 13.00 | 16.00 | 19.74 | 23.31 |

## SOURCES OF FUIND

Share Capital

| 2.50 | - |  |  |  |
| ---: | :---: | :---: | :---: | :---: |
| 19.09 | 14.44 | 20.00 | 24.68 | 29.14 |
| 1.32 | 1.15 | 0.98 | 0.83 | 0.71 |
| 9.34 | - | - | - | - |
| 13.16 | - | - | - | - |
| 9.11 | 1.82 | 1.82 | 1.82 | 1.82 |
| 0.36 | 0.04 | 0.04 | 0.04 | 0.05 |
|  |  |  |  |  |
| $\mathbf{5 4 . 8 8}$ | $\mathbf{1 7 . 4 5}$ | $\mathbf{2 2 . 8 4}$ | $\mathbf{2 7 . 3 8}$ | $\mathbf{3 1 . 7 2}$ |

## APPLICATION OF FUND

| Increase in Fixed Assets | 9.12 | - | - | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Increase in Stock | 11.88 | 9.50 | 3.56 | 3.56 | 3.56 |
| Increase in Debtors | 7.61 | 1.32 | 1.65 | 1.52 | 1.52 |
| Increase in Deposits \& Adv | 2.50 | 0.25 | 0.28 | 0.30 | 0.33 |
| Repayment of Term Loan | - | 3.29 | 3.29 | 3.29 | 3.33 |
| Taxation | 1.91 | 1.44 | 4.00 | 4.94 | 5.83 |
| TOTAL : | 33.02 | 15.80 | 12.78 | 13.61 | 14.57 |
| Opening Cash \& Bank Balance | - | 21.86 | 23.51 | 33.58 | 47.34 |
| Add : Surplus | 21.86 | 1.65 | 10.07 | 13.77 | 17.15 |
| Closing Cash \& Bank Balance | 21.86 | 23.51 | 33.58 | 47.34 | 64.49 |




BREAK UP OF LABOUR

| Particulars |  | Wages | No of | Total |
| :--- | ---: | ---: | ---: | ---: |
|  |  | Per Month | Employees | Salary |
| Engineer |  | $15,000.00$ | 1 | $15,000.00$ |
| Skilled Worker |  | $10,000.00$ | 6 | $60,000.00$ |
| Unskilled Worker |  | $7,500.00$ | 4 | $30,000.00$ |
|  |  |  |  |  |
|  |  |  |  | $90,000.00$ |
|  |  |  |  | $9,000.00$ |
| Add: $10 \%$ Fringe Benefit |  |  |  | $9,000.00$ |
| Total Labour Cost Per Month |  |  |  | 11.88 |
| Total Labour Cost for the year (In Rs. Lakhs) |  |  |  |  |
| Total |  |  | 11.00 |  |

BREAK UP OF SALARY

| Particulars |  | Salary | No of | Total |  |
| :--- | :--- | ---: | ---: | ---: | :---: |
|  |  | Per Month | Employees | Salary |  |
| Manager |  | $12,000.00$ | 1 | $12,000.00$ |  |
| Accountant |  | $8,000.00$ | 1 | $8,000.00$ |  |
| Sales |  | $10,000.00$ | 1 | $10,000.00$ |  |
| Total Salary Per Month |  |  |  | $30,000.00$ |  |
|  |  |  |  |  |  |
| Add: 10\% Fringe Benefit |  |  |  | $3,000.00$ |  |
| Total Salary for the month |  |  | $3,000.00$ |  |  |
|  |  |  |  |  |  |
| Total Salary for the year ( In Rs. Lakhs) |  |  |  |  |  |
| Total |  |  | 3.00 |  |  |

## COMPUTATION OF DEPRECIATION

| Description | Land | Building/shed | Plant \& | Furniture | TOTAL |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Machinery |  |  |
|  |  |  |  |  |  |
| Rate of Depreciation |  |  | $\mathbf{1 0 . 0 0} \%$ | $\mathbf{1 5 . 0 0} \%$ | $\mathbf{1 0 . 0 0} \%$ |
| Opening Balance | Leased | - | - | - | - |
| Addition | - | - | 8.66 | 0.46 | 9.12 |
|  | - | - | 8.66 | 0.46 | 9.12 |
| Less : Depreciation | - | - | 1.30 | 0.02 | 1.32 |
| WDV at end of Ist year | - | - | 7.36 | 0.44 | 7.80 |
| Additions During The Year | - | - | - | - | - |
|  | - | - | 7.36 | 0.44 | 7.80 |
| Less : Depreciation | - | - | 1.10 | 0.04 | 1.15 |
| WDV at end of IInd Year | - | - | 6.26 | 0.39 | 6.65 |
| Additions During The Year | - | - | - | - | - |
|  | - | - | 6.26 | 0.39 | 6.65 |
| Less : Depreciation | - | - | 0.94 | 0.04 | 0.98 |
| WDV at end of IIIrd year | - | - | 5.32 | 0.35 | 5.67 |
| Additions During The Year | - | - | - | - | - |
|  | - | - | 5.32 | 0.35 | 5.67 |
| Less : Depreciation | - | - | 0.80 | 0.04 | 0.83 |
| WDV at end of IV year | - | - | 4.52 | 0.32 | 4.84 |
| Additions During The Year | - | - | - | - |  |
|  | - | - | 4.52 | 0.32 | 4.84 |
| Less : Depreciation | - | - | 0.68 | 0.03 | 0.71 |
| WDV at end of Vth year | - | - | 3.84 | 0.29 | 4.13 |






## BREAK EVEN POINT ANALYSIS

| Year | I | II | III | IV | V |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Net Sales \& Other Income | 228.38 | 267.96 | 317.44 | 363.12 | 408.79 |
| Less : Op. WIP Goods | - | 5.80 | 10.44 | 12.18 | 13.92 |
| Add : Cl. WIP Goods | 5.80 | 10.44 | 12.18 | 13.92 | 15.66 |
| Total Sales | 234.18 | 272.60 | 319.18 | 364.86 | 410.53 |
| Variable \& Semi Variable Exp. |  |  |  |  |  |
| Raw Material \& Tax | 182.25 | 218.70 | 255.15 | 291.60 | 328.05 |
| Electricity Exp/Coal Consumption at 85\% | 2.13 | 2.56 | 2.99 | 3.41 | 3.84 |
| Manufacturing Expenses 80\% | 3.65 | 6.33 | 7.50 | 8.58 | 9.66 |
| Wages \& Salary at 60\% | 9.50 | 10.45 | 11.50 | 12.65 | 13.91 |
| Selling \& adminstrative Expenses 80\% | 5.22 | 6.12 | 7.26 | 8.30 | 9.34 |
| Intt. On Working Capital Loan | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Total Variable \& Semi Variable Exp | 203.70 | 245.10 | 285.32 | 325.47 | 365.74 |
| Contribution | 30.48 | 27.50 | 33.86 | 39.38 | 44.79 |
| Fixed \& Semi Fixed Expenses |  |  |  |  |  |
| Manufacturing Expenses 20\% | 0.91 | 1.58 | 1.87 | 2.14 | 2.41 |
| Electricity Exp/Coal Consumption at 15\% | 0.38 | 0.45 | 0.53 | 0.60 | 0.68 |
| Wages \& Salary at 40\% | 6.34 | 6.97 | 7.67 | 8.43 | 9.28 |
| Interest on Term Loan | 1.14 | 1.37 | 0.99 | 0.61 | 0.24 |
| Depreciation | 1.32 | 1.15 | 0.98 | 0.83 | 0.71 |
| Selling \& adminstrative Expenses 20\% | 1.31 | 1.53 | 1.81 | 2.07 | 2.34 |
| Total Fixed Expenses | 11.39 | 13.05 | 13.85 | 14.70 | 15.65 |
| Capacity Utilization | 50\% | 60\% | 70\% | 80\% | 90\% |
| OPERATING PROFIT | 19.09 | 14.44 | 20.00 | 24.68 | 29.14 |
| BREAK EVEN POINT | 19\% | 28\% | 29\% | 30\% | 31\% |
| BREAK EVEN SALES | 87.50 | 129.42 | 130.60 | 136.21 | 143.44 |

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