PROJECT PROFILE ON SUBMERSIBLE PUMPS

PRODUCT	:	**SUBMERSIBLE PUMPS**
PRODUCT CODE	:	NIC-29121 AISCC- 75113
QUALITY & STANDARDS	:	IS-8034-1989
PRODUCTION CAPACITY	:	1500 NOS.
VALUE	:	Rs. 2,10,00,000/-
MONTH & YEAR OF PREPARATION	:	SEPTEMBER, 2010

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1) INTRODUCTION OF PRODUCT :

Submersible pump is centrifugal type of pump which pumps out water from the bored hole or well. The pump is coupled with an electric motor. The shape of the pump and motor is cylindrical which makes it easy to be fitted in drilled bore in the earth. The pump remains dipped in water due to which there will not be any suction trouble.
Submersible pump is used for continuous discharge of water in quantity as well as for high heads.

2) PRODUCTION CAPACITY (Per Annum)

Quantity : 1500 nos.
Value : Rs. 2,10,00,000/-

3) MARKET & DEMAND ASPECTS :

The submersible pump is used by P.H. and Irrigation departments and also for domestic purpose to get sufficient water. Therefore it has good market in Govt. sector as well as in public. The need of water is being increased day by day for various uses. To get water from its resources submersible pumps are utilized in most of the fields, and their demand in the market is also rising. India being rich in agricultural resources there will always be demand for the product in areas of irrigation.

4) Raw materials: Local markets

5) Manufacturing process & source of technology

There are two main portions of Submersible Pump which are coupled together, one is electric motor and the other is pump which is manufactured single stage or multi stages. Motor body i.e. Stator is made by boring seamless pipe and fitting stamping in it. The rotar is made by turning shaft and fitting bushes, stamping on it. PVC wiring is done in stamping of both rotor as well stator, terminals are brought out from the motor and jointed with the cable. Pump has number of parts which are made out of various metals such as CI, GM, SS, EN Steels etc. The raw material is cut to size on power hacksaw, turned on laths, key-way cut on milling and slotting machine. Some of the parts are ground and some are balanced on balancing machines. All components parts are inspected at every stage before taking for assembly. Then the parts are assembled to complete the pump. Motor and pump are coupled together to get Submersible Pump. Then it is tested for water discharge.

QUALITY CONTROL AND STANDARD:

Raw material as well as purchased components should be of standard quality. The machined parts should be checked at every stage for its size by measuring instruments. The rotating parts are checked on balancing machine. Inspection & testing of the submersible pump should be carried out as per IS: 8034

POLLUTION CONTROL

Making is not a pollution creating industry. As such no special type of pollution control equipments need to be installed.

ENERGY CONSERVATION

Suitable energy efficient motor is to be used on proposed machines with provision of recommended shunt capacitor.

6 &7) BASIS OF PROJECT SELECTION & PRESUMPTION :

1. The project profile has been prepared on the basis of single shift of 8 hours each day and at 75% efficiently.

2. It is presumed that in the 1st year, the capacity utilization will be 70% followed by 85% in the next year and 100% in the subsequent years.

3. Labour wages has been considered as per prevailing market rates, which may vary from place to place and the minimum wages fixed by concerned authorities.

4. Interest on fixed capital and working capital has been calculated at an average rate of 14% per annum.

5. A provision of 30% project cost/investment has to be made by the entrepreneur for margin money.

6. The cost lf land and other constructed/built up shed and office has been taken as per prevailing market rates. However, this may vary from place to place. In this profile, land & building is considered on rented.

7. The rates quoted in respect of machinery, equipments and raw material are those prevailing market rates at the time of preparation of this project profile and are likely to vary from supplier to supplier, place to place and time to time.

IMPLEMENTATION SCHEDULE

01.	Preparation of the project report	6 weeks
02.	Provisional registration as SSI	1 month
03.	Financial arrangements	8 months
04.	Purchase and procurement of machinery	8-10 months
05.	Installation of machine 2-3 months	
06.	Electrification	2-3 months
07.	Recruitment of stall and workers	2-3 months
08.	Total run	2-14 months.

(8) PRODUCTION CAPACITY (Per Annum)

Quantity : 1500 nos.
Value : Rs. 2,10,00,000/-

(9) UTILILTES

(a) MOTIVE POWER REQUIREMENT:
Approximate power requirement - 20 K.W. x 25 x 8 x 6 – Rs. 24,000/-
(b) Water

FINANCIAL ASPECTS :

1. Fixed Capital:
Land and Building - Building / covered area (rented)
600 sqmt. @ 25/- sqmt. - Rs. 15,000/-

2. Machinery and equipment

S. No.	Description	No.	Value in Rs.
01.	Centre lathe 3500MM bed length with 5 HP motor and accessories	1	2,00,000
02.	Centre Lathe 3000MM bed length with 5 HP motor and accessories	1	1,00,000

03.	Centre Lathe 2400MM bed length with 3 HP motor and accessories	1	1,75,000
04.	Centre Lathe 1800MM bed length with 2 HP motor and accessories	1	1,25,000
05.	Centre Lathe 1350MM bed length with 1 HP motor and accessories	1	1,00,000
06.	Slotting machine 100MM stroke length with 2 HP motor	1	75,000
07.	Horizontal Milling Machine 850x 200MM bed with 2 HP motor and accessories	1	80,000
08.	Power Hacksaw to cut 200MM, rounds with 1 HP motor	1	25,000
09.	Pillar drilling machine 25MM capacity and 1 HP motor	1	25,000
10.	Portable drill 12MM capacity with 0.5 HP motor	1	20,000
11.	Welding transformer 300 Amp. With accessories	1	15,000
12.	Gas Welding set with accessories	1	10,000
13.	Hydraulic press 25 Ton cap. With 3 HP motor	1	50,000
14.	Arbor Press 2” dia abor size	1	10,000
15.	Flexible Shaft Grinder	1	6,000
16.	Double ended bench grinder 250MM wheel size with 0.75HP motor	1	5,000
17.	Air Compressor ½ HP motor	1	15,000
18.	Dynamic Balancing Machine	1	40,000
19.	Testing Tanks (MS) Fabricated with fittings	3	50,000
20.	Equipments like Coil winding, Fixtures, Stator winding stands etc. and measuring instruments, tools, gauges, electrical measuring instruments etc.	-	80,000
21.	Installation & Electrification	-	1,12,600
22.	Office furniture & equipments	-	50,000
23.	Pre-operative expenses	-	25,000
		Total	**13,93,600**

WORKING CAPITAL (Per month)

i. Personnel :

S.No	Designation	No.	Salary	Total (Rs.)
01.	Manager	01	15000	15,000
02.	Foreman	01	10000	10,000
03.	Accountant/Clerk	01	7000	7,000
04.	Skilled worker	04	6000	24,000
05.	Semi Skilled Worker	04	5000	20,000
06.	Helper	02	4000	8,000
07.	Painter	01	4000	4,000
08.	Peon/Chowkidar	02	3500	7,000
	Total			**95,000**
	Add : Perquisites @ 15% of salary			14,250
	Total			**1,09,250**

ii. Raw Material (Per month) :

S.No	Particulars	Qty.	Value (Rs.)
01.	Cast Iron Castings	7.0 Tons	1,00,000
02.	Gun Metal Castings	2.2 Tons	2,50,000
03.	Stainless Steel Shafts	0.8 Tons	50,000
04.	EN-8 Steel	1.3 Tons	2,25,000
05.	MS Rods of various sizes	100 Kgs	2,500
06.	Copper Rods & Castings	1 Ton	1,50,000
07.	Stamping/Laminations for Stators & Rotors	3.2 Ton	2,00,000
08.	Seamless pipe 150mm dia	120 mtr.	80,000
09.	PVC wire of different gauges	45000 Mtrs	1,50,000
10.	Cable wire, Rubber components, Hardware items, paints etc.	L.S.	1,25,000
	Total		**13,32,500**

iii) Utilities

(a)Power 20 KwH@ Rs. 6/- Kwh 24,000/-

(b)Water L.S. 1,000/-

25,000/-

iv. Other contingent Expenses (Per month)

01.	Rent	15,000/-
02.	Transport	2,000/-
03.	Repair & Maintenance	1,000/-
04.	Office Expenses	3,000/-
05.	Consumable Stores	4,000/-
06.	Sales and other expenses	4,000/-
07.	Insurance @ 0.5%	500/-
08.	Telephone & postage	2,000/-

		Total Rs.31,500/-

TOTAL RECURRING EXPENDITURE (Per month)

01.	Personnel	1,09,250/-
02.	Raw material	13,32,500/-
03.	Utilities	25,000/-
04.	Other contingencies expenses	31,500/-

	Total	**Rs. 14,98,250/-**

Working Capital for 3 months - **Rs. 44,94,750/-**

TOTAL CAPITAL INVESTMENT :

Fixed Capital	13,93,600/-
Working Capital for 3 months	44,94,750/-
Total Capital investment	**58,88,350/-**

FINANCIAL ANALYSIS

1. Cost of Production (per year)

i.	Total recurring cost	1,79,79,000/-
ii.	Depreciation on machinery & equipments @ 10%	1,12,600/-
iii.	Depreciation on Office equipments	10,000/-
iv.	Depreciation on tools & die @ 25%	20,000/-
v.	Interest on total investment @ 14% per annum	8,24,369/-

		Total Rs. 1,89,45,969/-

2. Turn Over (Per year)

Item	Qty.	Rate	Value (Rs.)
By Selling of Power presses	**1500 nos.**	**14000/-**	**2,10,00,000/-**

3. Net Profit (Per year)

Total turn over – cost of production =

2,10,00,000/- - 1,89,45,969/- = Rs. 20,54,031/-

Net Profit Ratio :

$$\frac{\text{Net profit}}{\text{Turn over}} \times 100 = \frac{20,54,031/-}{2,10,00,000/-} \times 100 = 9.78\%$$

4. Rate of Return:

$$\frac{\text{Net profit}}{\text{Total Investment}} \times 100 = \frac{20,54,031}{58,88,350} \times 100 = 34.88\%$$

Break Even Point :

Fixed Cost :		**(Rs.)**
01.	Rent	1,80,000/-
02.	Depreciation on Machinery & equipments	1,12,600/-
03.	Depreciation on Office equipments	10,000/-
04.	Depreciation on Tools & dies	20,000/-
05.	Interest on total investment @ 14 % per annum	8,24,369/-
06.	40% of salary and wages	5,24,400/-
07.	40% of utilities and other contingent expenses (Excluding rent)	1,99,200/-
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	Total Fixed	**Rs.18,70,569/-**

Break Even Point :

$$\text{B.E.P.} = \frac{\text{Fixed cost x 100}}{\text{Fixed cost + Profit}}$$

$$= \frac{18,70,569}{18,70,569 + 20,54,031} \times 100 = 47.66\%$$

Machinery Suppliers :

1. M/s. Golden Star Machinery Works, GT Road, Ludhiana
2. M/s. New United Engineering Works, GT Road, Ludhiana
3. M/s. James Engineering Co., 130-132, Appollo Street, Great Western Building, Mumbai
4. M/s. Batliboi & Company, Maharani Road, Indore.

Raw Material Suppliers : Local Market.

Resource center of Technology: MSME-DI, Gangtok
List of units set up bu using this project profile: NIL

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