PROJECT PROFILE

ON

Computerised Wheel Balancing and Wheel Alignment Workshop

****

PART-I

NAME OF THE PRODUCT : **Computerised Wheel Balancing and Wheel Alignment Workshop.**

QUALITY & STANDARD : Company's own specification.

PRODUCTION CAPACITY : The production capacity of the unit at 75% capacity utilisation.

Quantity - 1. Wheel Alignment – 1800 Vehicles (p.a.)
2. Wheel Balancing – 9000 Wheels (p.a.)
Value - Rs.12,00,000/-

MONTH & YEAR OF PREPARATION : May, 2011.

PREPARED BY : **Mechanical Division**

MSME - Development Institute,
Ministry of Micro, Small & Medium Enterprises,
Government of India
107, Industrial Estate, Kalpi Road,
Kanpur-208012.

Tele. 2295070, 2295071 & 2295073 (EPBAX)
Tele. No. 2295072 (SENET & TRC)
Tele/Fax No.: 0512- 2240143
email: dcdi-kanpur@dcmsme.gov.in
Website: msmedikanpur.gov.in

PROJECT PROFILE

ON

Computerised Wheel Balancing and Wheel Alignment Workshop

****

PART-II

A) INTRODUCTION

It is very essential that all the Wheels of a Vehicle are completely balanced otherwise there will be bubbling of wheel and this will affect the steering control. Similarly, if the wheel alignment of vehicle is out of order, the rubbing of tyres will be more and free movement of wheels also get affected. This results into rapid wear of tyre treads. To overcome these problems, computerised Wheel Balancing and Wheel Alignment machines are used. These machines are fully automatic, very accurate, quick and precise in their work.

B) MARKET POTENTIAL

There is a very good market potential for the computerised wheel balancing and wheel alignment workshop. Now a days, these workshops are very common in urban areas, and suitable for all passenger cars, light trucks and motorcycles (with special flange in case of wheel balancing. With the decline in passenger car prices and availability of easy finance for passenger and commercial vehicles, the demand for such computerised workshops is rapidly increasing coinciding with increase in number of vehicles.

C) BASIS & PRESUMPTIONS

1. The project is based on single shift working of 8 hours a day and 75% efficiency.
2. The rental value of the workshop has been taken at prevailing rates.
3. The cost of machinery and equipment indicated in the profile refers to a particular make and prices are approximate to those prevailing at the time of preparation of the project profile.
4. The provision made in respect of consumables, personnel and overhead etc. has been made at the prevailing rates and are approximate only.
5. The rate of interest has been made @ 15% per annum.
6. The labour charges are based upon those prevailing in local market.

D) IMPLEMENTATION SCHEDULE:

The main activities in the implementation of the project have been listed and the average time for implementation of the project is estimated at 6 – 6½ months as many activities can be taken up simultaneously.

Sl. No.	Activity	Period
i.	Preparation of project report after calling quotations	2 months
ii.	Registration and other formalities	1 month
iii.	Sanction of loan	2 months
iv.	Purchase of machinery and equipment etc.	1 month
v.	Installation and Electrification	2 weeks
vi.	Recruitment of Personnel	2 weeks

E) TECHNICAL ASPECTS:

(i) Process of Manufacture:

It is very essential that all the wheels of a vehicle completely balanced and aligned with each other as far as possible. If these are not properly balanced, the dynamic forces are set in motion. These forces increase the load on bearings, stress on various members of vehicles, unpleasant and dangerous vibrations in members of vehicle. Besides, when the wheels of a vehicle are not properly aligned, the free movement of wheels gets obstructed and tyres start bubbling, which results into lesser life for tyres. These machines display fault on screen automatically and are equipped with automatic self check, users friendly calibration and protection in wheel clamping.

Working Process:

(i) For Wheel Balancing: the machine is fully automatic. The wheel is to be loaded on turn table for balancing and sensor holders are attached to it. All front and rear wheel values for the measured value printout are calculated in a single wheel alignment run. Cordless remote control is provided with machine to enable the operator to operate the machine from the steering wheel. In these machines, normally there is a castor like adjustment and simultaneous display of castor, camber and toe readings on computer screen. The alignment data are displayed in figures and also in graphic form on screen.

(ii) For Wheel Alignment: The measuring process in these machines is normally automatic. After the wheel data is entered by potential meters and the machine started, the measuring run is made automatically until the wheel comes to a stand-still at the point to be balanced. The degree of precision for measurements is determined fine, medium or average. The data of rim width, rim diameter, distance can be stored in the machine alongwith the method of compensation (weight). The computer automatically runs the standard programme for the two wide balancing using hammer on weights. Special programmes for other type of balancing is also possible in the machine. The size of the weight required and the attachment point are calculated exactly and stored by the computer.

(ii) Quality Control and Standards

Company's own specification.

(iii) Production Capacity:

Wheel Balancing – 1800 Vehicles

Wheel Alignment – 9000 Wheels.

Other misc. repairs of Vehicles. L.S.

(iv) Motive Power:

2.0 K.W.

(v) Pollution Control:

No Pollution Control device is required as this activity is non – polluting.

F) FINANCIAL ASPECTS:

A) Fixed Capital:

(i) Land & Building:

A built up area of 200 Sq. Mtrs. on rental basis as: **Rs. 16,000/-**
1) For office, store etc. 50 Sq. Mtrs. and
2) For Workshed, Pit and Open Space for vehicles parking etc. 150 Sq. Mtrs. (per month)

(ii) Machinery & Equipment:

Sl. No	Item	Qty. (Nos.)	Amount (Rs. Lakh)
1.	Computerised wheel balancing machine for all type of wheels up to 65 Kg Weight and maximum 850 mm of external wheel diameter with all standard accessories.	2	2,50,000/-
2.	Computerised PC based Wheel Aligner with option of CDD Sensors (Equipped with 20" colour monitor, key board, PD disk drive, 4 Sensors, printer and other standard accessories.	1	5,00,000/-
3.	Tool Kit	2 Sets	20,000/-
4.	Vehicle Lifting Jacks	2 Nos.	10,000/-
5.	Furniture and misc. office equipment.	LS	50,000/-
6.	Construction of 5 feet deep Pit for vehicle inspection and precision wheel alignment jobs.	1	20,000/-
		Total:	**8,50,000/-**

(iii) Pre-operative Expenses:

Electrical and mechanical installation @ 10% of Plant and Machinery equipments		80,000/-
Pre-operative Expenses		20,000/-
Total Fixed Capital (i + ii + iii):		**9,50,000/-**

B) Working Capital (Per Month):

(i) Staff & Labour:

Sl. No.	Designation	No.	Rate	Total (Rs.)
1.	Supervisor	1	8000/-	8,000/-
2.	Skilled Worker	1	6000/-	6,000/-
3.	Semi-Skilled Workers	1	4000/-	4,000/-
			Total:	**18,000/-**
	Add Perquisites @ 15%			3,000/-
			Total:	**21,000/-**

(ii) Utilities:

1. Power & Water 3,000/-

Total: 3,000/-

(iii) Other Contingent Expenses (P.M.):

1	Rent	16,000/-
2	Stationery, Postage and Telephone etc.	500/-
3	Advertisement, Publicity and Insurance	500/-
4	Consumable stores (Dead weight, Bolts, Maintenance etc.)	3,000/-
	Total:	**20,000/-**

(iv) Working Capital / Total Recurring Expenditure (P.M.):

1.	Staff & Labour	21,000/-
2.	Utilities	3,000/-
3.	Other Contingent Expenses	20,000/-
	Total:	**44,000/-**

(v) Total working capital for 3 months 44,000 X 3 = Rs.1,32,000/-

C) TOTAL CAPITAL INVESTMENT:

I.	Fixed Capital	9,50,000/-
II.	Working Capital for 3 months	1,32,000/-
	Total:	**10,82,000/-**

G) FINANCIAL ANALYSIS:

i) Cost of Production (Per annum)

Sl. No.	Particulars	Value(Rs.)
1.	Total Recurring Expenditure /Cost	5,28,000/-
2.	Depreciation on Computerised machinery and equipment @ 25%	1,87,500/-
3.	Depreciation on furniture, tools and Pit @ 20%	20,000/-
4.	Interest on Total Capital Investment @ 13%	1,62,500/-
	Total: -	**8,98,000/-**

ii) Turnover (Per Annum)

Sl. No.	Item	Quantity	Rate (Rs.)	Value (Rs.)
1.	Wheel Alignment	6 Vehicles/day X 300 working days per year (1800 vehicles)	Alignment rate of per vehicle 350/-	**6,30,000/-**
2.	Wheel Balancing	6 vehicles per day (considering 5 wheels per vehicle) X 300 days per year (9000 Wheels)	60/- wheels	**5,40,000/-**
3.	Charges for other Misc. Vehicle Repairs	L.S.		**30,000/-**
			Total:	**12,00,000/-**

iii) NET PROFIT (Per annum) Before Taxation:

Turn Over	(-)	Cost of Production	=	**3,02,000/-**
12,00,000/-	(-)	8,98,000/-		

iv) PROFIT RATIO ON SALES (Per Annum):

Profit/annum X 100	3,02,000/- X 100	=	**25.16%**
Turnover/Annum	12,00,000/-		

v) RATE OF RETURN (Per Annum):

Net Profit/annum X 100	3,02,000/- X 100	=	**27.91%**
Total Capital Investment	10,82,000/-		

BREAK EVEN POINT

Fixed Cost:

1.	Depreciation	Rs.	2,07,500/-
2.	Interest	Rs.	1,62,500/-
3.	Rent	Rs.	1,92,000/-
4.	40% of Salary & Wages	Rs.	1,08,000/-
5.	40% of other contingent expenses	Rs.	34,000/-
	Total:-	**Rs.**	**7,04,000/-**

B.E.P.

Fixed Cost X 100	7,04,000/- X 100	=	**69.98%**
Fixed Cost + Profit	7,04,000/- + 3,02,000/-		

Names & Address of Machinery & Equipment Suppliers:

1. M/s Avery India Ltd., 105, Milerganj, G. T. Road, Ludhiana- 141 003.
   Phone: 0161 – 531321.
2. M/s Countech Engineers, A-1/2, Guru Nanak Street, Moujpur, Delhi- 110053.
   Phone: 011 – 2264403.
3. M/s Rinki Engineering Works, WZ – 88, Ramgarh Colony, Opp. Kirti Nagar, New Delhi – 110013.
   Phone: 011 – 25410970.
4. M/s Nepture Equqiqpment Pvt. Ltd.,
   2, Zoroastrain Building, 16, Hornimiman circle, Fort, Mumbai.
   Telex: 022 – 2664098
   Email: nepturl@usnl.com.

Technology Available at – M/s Avery India Ltd.

*****