PROJECT REPORT

Of

METAL RECYCLING UNIT

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Metal Recycling Unit.

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.]

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PROJECT AT A GLANCE

1	Name of the Entreprenuer		xxxxxxxxxx	
2	Constitution (legal Status)	:	xxxxxxxxxx	
3	Father / Spouse Name		xxxxxxxxxxxx	
4	Unit Address	:	xxxxxxxxxxxxxxxxxxxxxxx	
			District : xxxxxxx	
			Pin: xxxxxxx	State: xxxxx
			Mobile xxxxxxx	
5	Product and By Product	:	**METAL BARS**	
6	Name of the project / business activity proposed :		**METAL RECYCLING UNIT**	
7	Cost of Project	:	Rs.23.43 Lakhs	
8	Means of Finance			
	Term Loan		Rs.16.92 Lakhs	
	Own Capital		Rs.2.34 Lakhs	
	Working Capital		Rs.4.17 Lakhs	
9	Debt Service Coverage Ratio	:	2.26	
10	Pay Back Period	:	5	Years
11	Project Implementation Period	:	5-6	Months
12	Break Even Point	:	44%	
13	Employment	:	14	Persons
14	Power Requirement	:	20.00	KW
15	Major Raw materials	:	Scrap metals like aluminum, copper, steel, brass, and iron	
16	Estimated Annual Sales Turnover (Max Capacity)	:	78.31	Lakhs
17	Detailed Cost of Project & Means of Finance			

COST OF PROJECT

(Rs. In Lakhs)

Particulars	**Amount**
Land	Own/Rented
Plant & Machinery	17.30
Furniture & Fixtures	1.50
Working Capital	4.63
Total	**23.43**

MEANS OF FINANCE

Particulars	**Amount**
Own Contribution	2.34
Working Capital(Finance)	4.17
Term Loan	16.92
Total	**23.43**

METAL RECYCLING UNIT

Introduction:

Scrap metal recycling is a process as well as being the basis for a powerful industry. Scrap metal recycling involves the recovery and processing of scrap metal from end-of-life products or structures, as well as from manufacturing scrap, so that it can be introduced as a raw material in the production of new goods. It can be recycled repeatedly with no degradation of its properties. It provides the raw material for new products, while offering a much lower carbon footprint and more efficient utilization of resources than new material. Aside from environmental benefits, metal recycling is an extremely powerful economic activity. Metal recycling has a long tradition, since people realized that it is more resource- and cost-efficient than throwing the resources away with the waste and starting all over again with mining and primary metals production. Until recently, recycling concentrated on few specific metals, mainly base metals like steel, copper or aluminum, as most products were relatively simple. Due to increasingly complex, multi-material products metal recycling in the 21st century is becoming a more challenging business. Scrap metal recycling is the process of recovering metals from products which have reached the end of the product life cycle. Scrap metal which is recovered is then introduced as raw material in the production of new goods. Scrap metals are bifurcated into ferrous and nonferrous categories. Nonferrous metals are better valued as compared to ferrous metals. Ferrous scrap has some degree of iron while nonferrous scrap does not contain iron. Nonferrous scrap contains aluminum, lead, zinc, copper etc. The recycled scrap metal finds application in residential, commercial, and industrial sectors. Recycling reduces rare earth metal mining activities, besides reducing waste and saving energy. Considering these factors, the scrap metal recycling market is expected to grow during the forecast period.

Uses & Market Potential:

Scrap metals can be recycled repeatedly without any characteristic loss. The reuse of metals reduces the carbon footprint and helps in betterment of the environment. Scrap metal recycling and reusing helps to create a sustainable future. Scrap metal recycling reduces greenhouse gas emissions. As per Institute of Scrap Recycling Industries (ISRI), scrap metal recycling may cut 300 to 500 million tons of greenhouse gas emission.

Based on end-user industry, the market is segmented into building & construction, packaging, automotive, shipbuilding, electronics & electrical equipment and others. Building & construction was the highest revenue generating end-user industry as the sector generates high metal waste owing to increased demolition rate. However, electronics contain heavy and high valued metals, such as lead, copper, gold, and aluminum and its recycling ensures natural resources conversation. Therefore, electronics & electrical equipment industry is the fastest growing sector during the forecast period.

The market has been analyzed based on four regions, namely, North America, Europe, Asia-Pacific, and LAMEA. Asia-Pacific contributed the highest revenue to the global market in 2014, and is expected to maintain it's dominated during the forecast period.

Product:

METAL BARS

Raw Material:

Scrap Metals like aluminum, copper, steel, brass, and iron.

Manufacturing Process:

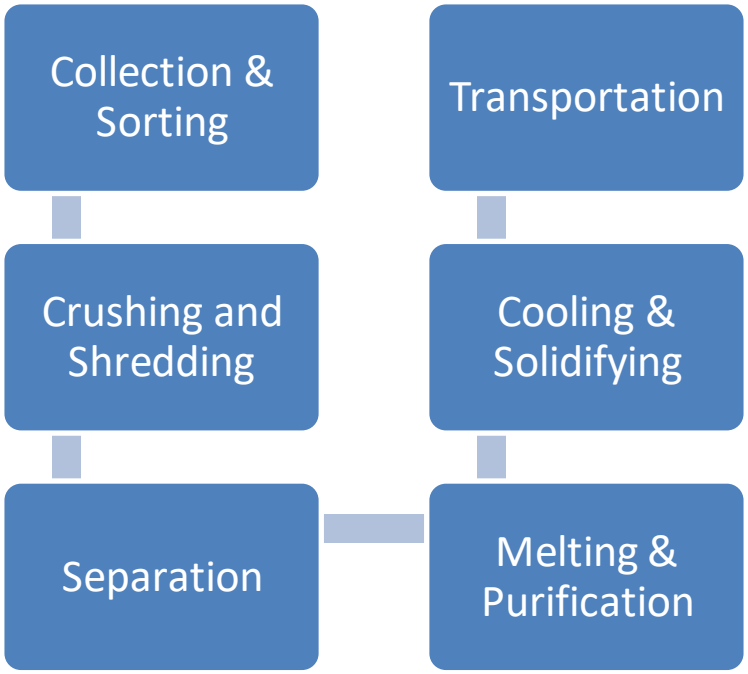

Fig. 1 – Process Flowchart

Area:

A closed place where your machines will operate. Place where you will put your recycled goods, place where you will segregate metals, and clean them and so on. You also need a ventilated space that matches the standard of a normal factory. Construct the infrastructure to the standards of a factory for safety issues. Thus, the approximate total area required for complete small scale factory setup is 2000-2500Sq. ft. approximately.

Cost of Machines:

S No.	Machine	Unit	Price (INR)
1.	Metal segregation Machine	1	3,55,000/-
2.	Metal Cleaner Machine	1	2,65,000/-
3.	Metal Melting Machine	1	3,80,000/-
4.	Refining Machine	1	5,30,000/-
5.	Shaping Machine	1	2,00,000/-
	Total		**17,30,000/-**

Power Requirement- - The estimated Power requirement is taken at 20 KWH.

Manpower Requirement– Following manpower is required:

- Skilled/unskilled worker-6
- Helper- 4
- Machine Operator- 2
- Sales Personal and Accountant- 2

FINANCIALS

PROJECTED BALANCE SHEET

PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	2.59	4.36	6.77	9.54
Add: Additions	2.34	-	-	-	-
Add: Net Profit	3.24	5.58	7.01	9.17	9.84
Less: Drawings	3.00	3.80	4.60	6.40	6.80
Closing Balance	2.59	4.36	6.77	9.54	12.59
CC Limit	4.17	4.17	4.17	4.17	4.17
Term Loan	15.04	11.28	7.52	3.76	-
Sundry Creditors	0.67	0.76	0.86	0.96	1.09
TOTAL :	**22.47**	**20.58**	**19.32**	**18.44**	**17.85**
APPLICATION OF FUND					
Fixed Assets (Gross)	18.80	18.80	18.80	18.80	18.80
Gross Dep.	2.75	5.09	7.08	8.79	10.24
Net Fixed Assets	16.06	13.71	11.72	10.01	8.56
Current Assets					
Sundry Debtors	2.26	2.71	3.08	3.48	3.92
Stock in Hand	3.04	3.48	3.95	4.46	5.02
Cash and Bank	1.11	0.67	0.58	0.48	0.35
TOTAL :	**22.47**	**20.58**	**19.32**	**18.44**	**17.85**
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	45.14	54.21	61.54	69.68	78.31
Total (A)	**45.14**	**54.21**	**61.54**	**69.68**	**78.31**
B) COST OF SALES					
Raw Material Consumed	13.37	15.23	17.20	19.28	21.87
Elecricity Expenses	2.46	2.69	2.91	3.13	3.36
Repair & Maintenance	1.44	1.68	1.85	2.09	2.35
Labour & Wages	15.37	17.68	20.86	23.99	27.11
Depreciation	2.75	2.34	2.00	1.70	1.45
Cost of Production	35.39	39.61	44.81	50.19	56.14
Add: Opening Stock /WIP	-	2.38	2.72	3.09	3.50
Less: Closing Stock /WIP	2.38	2.72	3.09	3.50	3.93
Cost of Sales (B)	33.01	39.27	44.44	49.79	55.70
C) GROSS PROFIT (A-B)	12.13	14.94	17.09	19.89	22.60
	26.87%	**27.56%**	**27.78%**	**28.55%**	**28.86%**
D) Bank Interest i) (Term Loan)	1.84	1.50	1.09	0.67	0.26
ii) Interest On Working Capital	0.46	0.46	0.46	0.46	0.46
E) Salary to Staff	4.79	5.51	6.39	7.15	7.87
F) Selling & Adm Expenses Exp.	1.81	1.90	2.15	2.44	2.74
TOTAL (D+E+F)	**8.89**	**9.36**	**10.09**	**10.72**	**11.33**
H) NET PROFIT	3.24	5.58	7.01	9.17	11.28
	7.2%	**10.3%**	**11.4%**	**13.2%**	**14.4%**
I) Taxation	-	-	-	-	1.44
J) PROFIT (After Tax)	3.24	5.58	7.01	9.17	9.84

PROJECTED CASH FLOW STATEMENT

PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Own Contribution	2.34	-			
Reserve & Surplus	3.24	5.58	7.01	9.17	11.28
Depriciation & Exp. W/off	2.75	2.34	2.00	1.70	1.45
Increase In Cash Credit	4.17				
Increase In Term Loan	16.92	-	-	-	-
Increase in Creditors	0.67	0.09	0.10	0.10	0.13
TOTAL :	**30.09**	**8.01**	**9.10**	**10.98**	**12.86**
APPLICATION OF FUND					
Increase in Fixed Assets	18.80	-	-	-	-
Increase in Stock	3.04	0.44	0.47	0.51	0.56
Increase in Debtors	2.26	0.45	0.37	0.41	0.43
Repayment of Term Loan	1.88	3.76	3.76	3.76	3.76
Taxation	-	-	-	-	1.44
Drawings	3.00	3.80	4.60	6.40	6.80
TOTAL :	**28.98**	**8.45**	**9.19**	**11.08**	**12.99**
Opening Cash & Bank Balance	-	1.11	0.67	0.58	0.48
Add : Surplus	1.11	- 0.44	- 0.09	- 0.10	- 0.13
Closing Cash & Bank Balance	**1.11**	**0.67**	**0.58**	**0.48**	**0.35**

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	I	II	III	IV	V
Finished Goods					
(15 Days requirement)	2.38	2.72	3.09	3.50	3.93
Raw Material					
(15 Days requirement)	0.67	0.76	0.86	0.96	1.09
Closing Stock	**3.04**	**3.48**	**3.95**	**4.46**	**5.02**

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	3.04		
Less:			
Sundry Creditors	0.67		
Paid Stock	**2.38**	**0.24**	**2.14**
Sundry Debtors	2.26	0.23	2.03
Working Capital Requirement			**4.17**
Margin			0.46
MPBF			**4.17**
Working Capital Demand			**4.17**

REPAYMENT SCHEDULE OF TERM LOAN 11.0%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	Cl Balance
I	Opening Balance						
	Ist Quarter	-	16.92	16.92	0.47	-	16.92
	Iind Quarter	16.92	-	16.92	0.47	-	16.92
	IIIrd Quarter	16.92	-	16.92	0.47	0.94	15.98
	Ivth Quarter	15.98	-	15.98	0.44	0.94	15.04
					1.84	1.88	
II	Opening Balance						
	Ist Quarter	15.04	-	15.04	0.41	0.94	14.10
	Iind Quarter	14.10	-	14.10	0.39	0.94	13.16
	IIIrd Quarter	13.16	-	13.16	0.36	0.94	12.22
	Ivth Quarter	12.22		12.22	0.34	0.94	11.28
					1.50	3.76	
III	Opening Balance						
	Ist Quarter	11.28	-	11.28	0.31	0.94	10.34
	Iind Quarter	10.34	-	10.34	0.28	0.94	9.40
	IIIrd Quarter	9.40	-	9.40	0.26	0.94	8.46
	Ivth Quarter	8.46		8.46	0.23	0.94	7.52
					1.09	3.76	
IV	Opening Balance						
	Ist Quarter	7.52	-	7.52	0.21	0.94	6.58
	Iind Quarter	6.58	-	6.58	0.18	0.94	5.64
	IIIrd Quarter	5.64	-	5.64	0.16	0.94	4.70
	Ivth Quarter	4.70		4.70	0.13	0.94	3.76
					0.67	3.76	
V	Opening Balance						
	Ist Quarter	3.76	-	3.76	0.10	0.94	2.82
	Iind Quarter	2.82	-	2.82	0.08	0.94	1.88
	IIIrd Quarter	1.88	-	1.88	0.05	0.94	0.94
	Ivth Quarter	0.94		0.94	0.03	0.94	0.00
					0.26	3.76	

Door to Door Period	60	Months
Moratorium Period	6	Months
Repayment Period	54	Months

CALCULATION OF D.S.C.R

PARTICULARS	I	II	III	IV	V
CASH ACCRUALS	5.99	7.92	9.01	10.87	11.29
Interest on Term Loan	1.84	1.50	1.09	0.67	0.26
Total	7.82	9.42	10.09	11.55	11.55
REPAYMENT					
Repayment of Term Loan	1.88	3.76	3.76	3.76	3.76
Interest on Term Loan	1.84	1.50	1.09	0.67	0.26
Total	3.72	5.26	4.85	4.43	4.02
DEBT SERVICE COVERAGE R	**2.11**	**1.79**	**2.08**	**2.61**	**2.87**
AVERAGE D.S.C.R.			**2.26**		

Assumptions:

1. Production Capacity of Metal Recycling (Metal Bars) is 180 KG per day. First year, Capacity has been taken @ 55%.
2. Working shift of 10 hours per day has been considered.
3. Raw Material stock and Finished goods closing stock has been taken for 15 days.
4. Credit period to Sundry Debtors has been given for 15 days.
5. Credit period by the Sundry Creditors has been provided for 15 days.
6. Depreciation and Income tax has been taken as per the Income tax Act, 1961.
7. Interest on working Capital Loan and Term loan has been taken at 11%.
8. Salary and wages rates are taken as per the Current Market Scenario.
9. Power Consumption has been taken at 20 KW.
10. Selling Prices & Raw material costing has been increased by 5% & 5% respectively in the subsequent years.

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