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P.O. BOX: 698, PC: 133, MUSCAT

SULTANATE OF OMAN

TEL: +968- 24792173 / 24792174 FAX: +968- 24792175

Submitted to

JINDAL SHADEED IRON & STEEL LLC
SULTANATE OF OMAN

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PROJECT PROFILE
FOR SETTING UP
REBAR EPOXY COATING PLANT

CONTENTS

1. PROJECT BRIEF

This report relates to a study on the feasibility of setting up a Rebar Epoxy Coating unit in the Sultanate of Oman. The following is the Brief illustration of the project:

Name of Product/Service		**Rebar Epoxy Coating**
Domestic Market Potential (as of 2022)		122,885 Tons per Annum
Capacity of the Project		25,590 Tons per Annum
Total Investment		RO 918,000
Equity Investment		RO 367,200
Key Appraisal Criteria:		
IRR on total investment		14.41%
IRR on Equity		22.63%
Payback period of Total Investment		6 years 7 months
Payback period on equity		5 years 9 months
Break Even Point (as % of Capacity)		74
Cash Break Even Point (as % of Capacity)		67.5
Debt Equity Ratio		1.5 : 1
DSCR		2.247
Manpower	Total	75
	Nationals	26

2. MARKET ANALYSIS

2.1. REBAR EPOXY COATING- OVERVIEW

Rebar coatings are protective coatings applied to rebars to protect them against corrosion and avoid their rapid deterioration due to extremes of temperature. Rebar coatings are available in the form of a dry powder at the normal atmospheric temperature, which is then applied to the rebar using electrostatic charge.

Fusion-bonded epoxy coatings for rebar, commonly known as FBE coatings, are primarily employed for protection against corrosion. These coatings are in the form of dry powder at normal atmospheric temperature. The powder is applied electrostatically to the surface of cleaned hot steel bars and cured to form a protective film after undergoing various chemical processes. The epoxy-coated rebars last longer due to the protective film and thereby contribute to the quality of construction. A good quality Epoxy Coated TMT Bar must have a uniform coating, chemically stable and adhere to a high pH environment.

Epoxy Coated Rebar acts as a barrier system intended to prevent moisture and chlorides from eroding the surface of the reinforcing bar. Epoxy Coated Rebar is used to provide additional protection in environments where reinforcements are subjected to accelerated corrosion. The use of these bars is significantly increasing as the concrete use is becoming more diverse in corrosion-prone areas. Epoxy coatings provide optimum protection against abrasion, turbulence, corrosive fluids and extreme temperatures. Epoxy coated rebar is not only durable but also resistant to many corrosive substances. It offers corrosion resistance especially for marine structures.

A typical polymer coated rebar is as shown below:

2.1.1. Advantages of Epoxy Coated Rebar

Plain steel is subject to corrosive forces over time. As rust forms on the outside of the embedded rebar, it exerts an increasing amount of pressure on the surrounding concrete. This can cause the concrete slab to spontaneously crack, while also making the concrete more vulnerable to damage caused by blows and compressive forces. The surface of the concrete may develop patches of spalling, creating rough and unattractive areas.

Epoxy-coated rebar prevents corrosion and the problems that it causes and offers a multitude of advantages.

- The coating layer is firm and stable which offers good tenacity and high insulation
- The coating layer is corrosion-resistant
- Lower maintenance cost
- Lower lifecycle costs over time
- Uniform thickness of coating which adds to the quality of production
- Acts as an insulator for electrochemical cells and offers barrier protection to steel which prevents the entry of chloride ions

- Excellent adhesion and it forms a lasting bond with the surface of the steel rebars
- High mechanical impact strength.

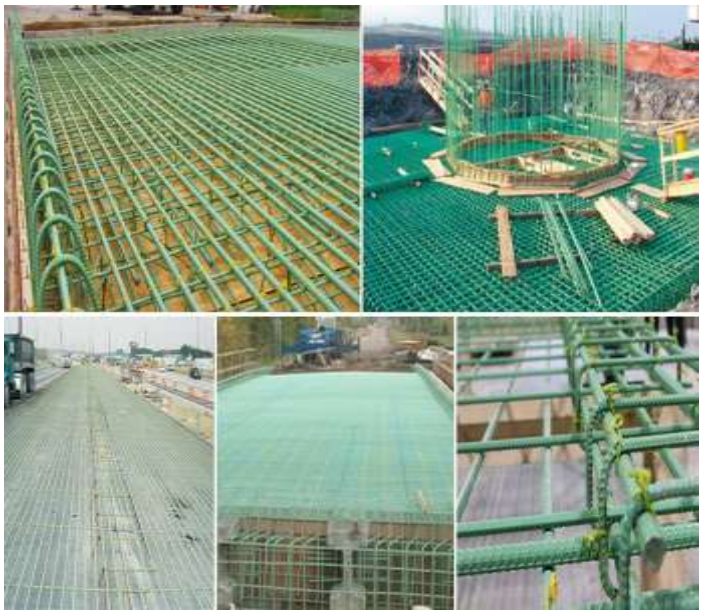
2.1.2. Epoxy Rebar Coating – Applications

Epoxy Coated TMT Rebars are used in concrete subjected to corrosive conditions. These may include exposure to deicing salts or marine environments. Protective rebar coatings help protect the rebar against corrosion in severe marine and corrosive environments. The coatings provide resistance against cathodic disbondment and corrosive agents such as sea water, harsh chemicals, acid rain, deicing salts, contaminated aggregate, airborne salt, spray, carbonation, and concrete additives. One of the major applications of coated rebars is in the construction industry.

In terms of end-user industry, the rebar coating market can be segmented into building & construction, oil & gas, and manufacturing. The rebar coating market is currently dominated by the building & construction industry.

Epoxy Coating Rebar finds applications in the following structures

- Underground buildings
- Bridges
- Pavements
- Offshore structures.
- Parking structures.
- Marine structures



2.2. ESTIMATE OF DOMESTIC DEMAND

The demand for epoxy coated rebar is mainly from the construction industry. The demand estimates are based on the following:

- Local production
- Out of the overall output of Rebars produced in the country, 5% can be considered as the service that seeks for epoxy coating.
- While the general practice is to have own powder coating facility, typically the service is outsourced, as it is a non-core and specialized activity for rebar producers.

2.2.1. Local Producers

No.	Company	Category	Capacity in Tons
1	Shadeed Iron and Steel	Rebar	1,400,000
2	Moon Steel (MISCO)	Rebar	1,200,000
3	Sharq Sohar Steel	Rebar	300,000
4	Hadid Majan LLC	Rebar	210,000
5	Muscat Steel Industries Co LLC	Rebar	400,000
6	Dawood Rebar	Rebar	1000
TOTAL			**3,511,000**

2.2.2. Estimated Demand / Consumption

Year	2022
Capacity of Rebar Plants in Oman	3,511,000 Tons
Estimated Production (70% Capacity Utilization)	2,457,700 Tons
Estimated Demand for epoxy coating of rebar (around 5% of overall rebar production)	**122,885 Tons**

Based on the above, the demand for epoxy coating of rebar (around 5% of overall rebar production) shall be around 122,885 tons.

2.3. DEMAND PROJECTION

The future demand for the epoxy coating services is projected as below:

Year	2022	2023	2024	2025	2026	2027	2028
Demand (Tons)	122,885						
Projected Growth rate (%)		3%	3%	3%	3%	3%	3%
Projected Demand (Tons)		126,572	130,369	134,280	138,308	142,457	146,731

2.4. COMPETITION ANALYSIS

There are no major standalone service providers for polymer coating of rebar in Oman. Middle East Conversion Industry LLC, which is part of Sohar Steel Group has a plant that provides Fusion Bonded Epoxy Coating for Rebars. The details of the other service providers are as detailed below.

2.4.1. Local Players

Middle East Conversion Industry LLC is located in Sohar Industrial Estate, Sultanate of Oman and belongs to Sohar Steel Group. The Plant provides (i) provision Fusion Bonded Epoxy Coating to Rebars as per ASTM Standard and (ii) manufactures Steel Weld Mesh as per British Standard.

Epoxy Coating plant uses high speed shot blasting machine to achieve surface cleanliness & surface texture and Italian equipments for corrosion resistant epoxy coating. The Bundles are wrapped in poly ethylene cover for better shielding.

2.5. MARKETING MIX STRATEGY OF COMPETITORS

2.5.1. Services

The polymer coated bars are typically coated with Polymers including polyester, polyurethane, polyester-epoxy and acrylics and are bought as per the end-user requirements.

2.5.2. Pricing

Based on the brief primary survey and on secondary research, the service cost are in the range of RO 65 – 70 per ton.

2.5.3. Promotion

The polymer coated rebar are sold mainly through contacts with construction companies, distributors / dealers.

2.5.4. Trade Credit

The industry practice is to offer a reasonable credit period depending on the credit worthiness of the client. Often discounts of 5 – 10 percent are also given to the clients.

2.5.5. Distribution

The distribution process is through direct sales to contractors in the construction industry and to larger organizations seeking the product.

2.6. PROPOSED MARKETING MIX STRATEGY FOR THE COMPANY

2.6.1. Product Mix

The project shall provide epoxy coating of rebar services. The services shall be based on the end user requirements and the specifications.

2.6.2. Target Market

The project shall initially cater to the local demand and the target market groups should be mainly Building Contractors and Wholesalers.

2.6.3. Pricing

Based on the industry standards, the service charges for polymer coating of the rebar considered for the financial projections is around RO 63 per ton.

2.6.4. Promotion

The company shall concentrate on building healthy personal contacts with various segments mainly in construction industry. The General Manager shall be responsible for sales as well. The manager shall build and retain long term relationships with customer segments. In addition, the unit would also promote and create awareness about its capabilities in handling various jobs to ensure customer confidence and improving market reaches / market penetration.

The social media platforms shall be effectively used and a specific website detailing the credentials and the capabilities of the project shall be developed.

The company will also consider the following promotional activities:

- Participation in Building Materials Fairs
- Advertisement in Electronic & print media
- Sales promotion programs

The company could also offer its customers a credit period of 60 days in-line with the industry norms.

2.6.5. Distribution

The company would concentrate on direct marketing to the contractors.

2.7. PROJECTED MARKET SHARE

The unit with a servicing capacity of 25,590 MT per annum can effectively leverage its capability to service the target market.

DETAILS	2024	2025	2026	2027	2028
Projected Demand	130,369	134,280	138,308	142,457	146,731
Projected Production	12,283	15,354	19,193	20,472	21,752
Estimated Market Share in % (Local)	9.42%	11.43%	13.88%	14.37%	14.82%

3. TECHNICAL ANALYSIS

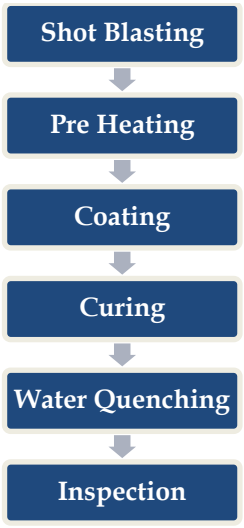
3.1. LOCATION

The proposed project can be located either at Sohar Industrial City or at the proposed Shinas Industrial City. The referred locations are taking proximity to raw material and the target market into consideration.

3.2. MANUFACTURING PROCESS

Applying a rebar with a fusion-bonded epoxy protective coating is a four step process that involves the blasting, heating, coatings, and cooling of bars. Prior to applying the coating on the rebar, the rebar surface needs to be cleaned, which is done using the blasting of bars. The rebar is blast cleaned to obtain a near white metal finish. The process is carried out in a shot blaster, which utilizes shots and grits, an abrasive material to clean the rebar surface. The blasted rebar is then subjected to heat and is heated to around 230°C in an electric induction heater. The heated rebar is then passed through a coating booth and coated with the protective coating with the help of electrostatic charge. Coating particles are attracted toward the rebar surface due to the electrostatic charge, providing a uniform coating over it. Coating particles melt due to the hot rebar surface, thereby forming a film of coating over it. The rebar is then cooled in a cooling tunnel, where water is sprayed onto it.

The FBE powder Coating application has five essential stages:



Stage 1: Surface preparation — Airless (Wheel Blast) Shot Blasting Process

Shot Blast cleaning is the most commonly used method for preparation of steel surfaces. This effectively removes rust, scale, slats, and makes surface rough (rough surface is called profile). Profile increases the effective surface area of the steel. The cleanliness achieved is assessed to by Swedish standard, the common terminology of white-metal, near white-metal, etc. Typically, SA 2½. It is important to remove grease or oil contamination prior to blast cleaning. Solvent cleaning, burn-off, etc., are commonly used for this purpose. In the blast cleaning process, a blasting wheel uses centrifugal force to propel the abrasive against rebar in controlled direction, speed and quantity. The equipment is equipped with 4 blast wheels. 2 blast wheels are mounted on the top of the cabinet and positioned above the pass line of the work and the other 2 Blast wheels are mounted in the bottom of the cabinet positioned below the pass line of the rebar

Stage 2: Pre-heating – Induction heating

Heating can be achieved by using several methods, but the most commonly used ones are ''induction heating''. Induction heating is the process of heating an electrically conducting object (usually a metal) by electromagnetic induction, where eddy currents are generated within the metal and resistance leads to Joule heating of the metal. An induction heater (for any process) consists of an electromagnet, through which a high-frequency alternating

current (AC) is passed. Heat may also be generated by magnetic hysteresis losses in materials that have significant relative permeability. The frequency of AC used depends on the object size, material type, coupling (between the work coil and the object to be heated) and the penetration depth. The steel part is passed through a high frequency alternating current magnetic field, which heats the metal part to the required FBE coating application temperature. Typical application temperature for a standalone FBE is 225° to 245°C. When used as a primer in a multi-layer polyolifine system, application temperature may be dropped based on FBE manufacturer's recommendations, in order to meet the "inter-coat adhesion" parameters.

Stage 3: Fusion bonded epoxy coating

The FBE powder is placed on a "fluidisation bed". In a fluidization bed, the powder particles are suspended in a stream of air, in which the powder will "behave" like a fluid. Once the air supply is turned off, the powder will remain in its original form. The fluidised powder is sprayed onto the hot substrate using suitable spray guns. An electrostatic spray gun incorporates an ioniser electrode on it, which gives the powder particles a positive electric charge. The steel to be coated is passed through the powder stream on conveyor. The charged powder particles uniformly wrap around the substrate, and melts into a liquid form. The molten powder 'flows' into the profile and bonds with the steel. The molten powder will become a solid coating, when the 'gel time' is over, which usually occurs within few seconds after coating application. The resin part of coating will undergo cross-linking, which is known as "curing" under the hot condition. Complete curing is achieved depending on the FBE coating system, full cure can be achieved in less than one minute.

Stage 4: Curing

The molten powder becomes a solid coating, when the 'gel time' is over, which usually occurs within few seconds after coating application. The resin part of coating undergoes cross linking, which is known as 'curing' under the

hot condition. Complete curing is achieved either by the residual heat on the steel, or by the help of additional heating sources. Depending on the FBE coating system, full cure can be achieved in less than one minute to a few minutes in case of long cure FBE's. During curing time, the coating gets hardens to a solid.

Stage 5: Water quenching

The coated bars after curing are passed through a water tunnel. Water is sprayed on to the bars to cool them.

Stage 6: Holiday testing

Once the rebar has passed through the cooling tank, it is tested with a holiday detection device that electrically examines the rebar for pinholes in the coating.

3.3. LAND & BUILDING

A total building area required for the project is 6,100 Sq. m. The proposal is to take the building on lease @ RO 2.5 per square meter per month.

3.4. MACHINERY

The major machinery required for the project is Powder Spraying Booth and the Curing Oven. Major suppliers are available in Europe, India and China.

The details of the main and auxiliary machineries required for the project is as detailed in Annexure 1.3.

3.4.1. Machinery Suppliers

The following table illustrates the details of rebar epoxy coating machinery supplier from where quotations were received.

No.	Detail

1	Patel Furnace & Forging Pvt Ltd A/2-510, GIDC. Makarpura Vadodara – 390010, Gujarat, India Email - sales@pshotblast.com Website: www.pshotblast.com

3.5. PLANT CAPACITY

The capacity of the unit for rebar coating is around 25,590 tons at 16 hours production per day. The estimated coating capacity Utilization is as detailed in the following table:

Year	Year 1	Year 2	Year 3	Year 4
Installed Capacity (Tons)	25,590	25,590	25,590	25,590
Capacity utilization (%)	48%	60%	75%	80%
Estimated Production (Tons)	12,283	15,354	19,193	20,472

3.6. VEHICLES

The vehicles are required for movement of raw materials and internal material movement. Details of Vehicles are provided in Annexure 1.4.

3.7. RAW MATERIALS AND CONSUMABLES

Epoxy Powders are the main raw materials required for the project. The quantity and cost of raw materials including consumables are detailed in Annexure 2.1.

3.8. UTILITIES

3.8.1. Water

Water is required for Curing and Quenching and also for the Induction Heater in addition to water required for human consumption. It is estimated that 12,928 cubic metres of water is required per annum.

3.8.2. Electricity

Electricity is used for machine operations and for general purpose lighting. The connected load is around 2,444 kW. The annual consumption of electricity for the plant and other purposes works up to around 11,779,200 KWH at full capacity.

3.9. MANPOWER

It is estimated that 75 resources are required for the project considering 2 shift operation. The details are as follows:

S. No	Department	No of persons	
		National	Expat
1	Production	17	48
2	Administration & Accounts	7	1
3	Sales	2	0
Total		**26**	**49**
		75	

3.10. PROJECT IMPLEMENTATION

Being an SME project, the total expected time duration for implementation shall be around 12 months.

4. FINANCIAL ANALYSIS

4.1. PROJECT COST

The total cost of the project is estimated at RO 918,000. Details are given in Annexure – 1. The break-up is given below:

Details	Amount (RO)
Building	5,000
Plant & Machinery	598,000
Vehicles and Internal Transport	22,000
Furniture & Office Equipment	11,000
Pre- Operative Expenses	67,000
Contingency & Escalation	35,000
Sub Total	*738,000*
Working Capital	180,000
TOTAL CAPITAL	**918,000**

4.1.1. Land & Building

The total building area is around 6,100 Sq. An Industrial Shed will be taken on lease rental. Details are provided in Annexure 1.1 and 1.2.

4.1.2. Plant & Machinery

The total cost of plant and machinery is estimated at RO 598,000. Details are given in Annexure- 1.3.

4.1.3. Vehicles & Internal Transport

The total cost of vehicles and internal transport is estimated at RO 22,000. Details are given in Annexure- 1.4.

4.1.4. Furniture & Office Equipment

The total cost of furniture and office equipment is estimated at RO 11,000. Details are given in Annexure- 1.5.

4.1.5. Pre-Operative Expenses

The pre-operative expenses include expenses for feasibility study, interest during project implementation, salaries and wages of project staff, travel and communication, legal fees, audit fees and other miscellaneous expenses. The total pre-operative expenses are estimated at R.O 67,000. Details are given in Annexure- 1.6.

4.1.6. Contingency & Escalation

A provision of 5 % of the estimated cost of items including building, plant & machinery, vehicles etc., is provided in the Project cost towards price escalation and any unforeseen expenses. This works out to RO 35,000. Details are given in Annexure- 1.7

4.1.7. Working Capital

Following assumptions are made for computation of working capital.

Details	Period
Accounts Receivable	2 Months
Raw Materials	1 Month
Consumables & packing	1 Month
Utilities	1 Month
Factory Wages	1 Month
Administration Expenses	1 Month
Sales Expenses	1 Month
Work in Progress	3 Days
Finished Goods	5 Days
Finance Cost	1 Month
PAYABLES	
Raw Materials	1 Month

The working capital requirements for the first 4 years of operation are given below. The working capital requirement in the first year comes to RO 180,000. Details are given in Annexure 1.8.

Particulars	Year 1	2	3	4
Working Capital Requirement (RO '000)	**180**	**201**	**263**	**274**

4.2. MEANS OF FINANCE

It is proposed to finance the Project as indicated in the following table.

Means of Finance	Amount (RO)
Equity Capital (40% of Project Cost)	367,200
Term Loan at 3% interest rate (ODB)	442,800
Commercial Loan for Working Capital	108,000
TOTAL	**918,000**

It is proposed that the total project cost of RO 918,000 will be financed by owner's fund [equity] to the tune of RO 367,200 term loan from ODB with an interest of 3% for RO 442,800 and commercial borrowings for working capital at RO 108,000. The working capital loan is expected to carry interest @ 6% per annum.

4.3. COST OF SALES

The cost of sale has been projected for the first ten years of operation (Annexure-2) and those of first five years are summarized as below:

Figures are in RO '000)

Details	Year 1	Year 2	Year 3	Year 4	Year 5
Raw Materials	75	94	117	125	133
Utilities	174	218	272	291	309
Factory Wages	152	156	303	312	322
PRIME COST	401	468	693	728	763
Rent for Land	183	183	183	183	183
Factory Overheads	14	23	23	23	23
Misc. Factory Exp.	12	13	18	19	19
FACTORY COST	**610**	**687**	**917**	**953**	**989**
Admin. Salaries	85	89	93	98	103
Admin. Expenses	9	9	9	10	10
TOTAL ADMIN EXPENSES	93	98	102	107	112
Sales Salaries	17	17	18	18	19
Sales Expenses	1	1	1	1	1
Advert.& Business Promotion	15	19	24	26	27
Total sales & distribution costs	33	38	43	45	48
OPERATING COST	**736**	**823**	**1063**	**1105**	**1149**
Finance cost					
Int. on Institutional finance	13	13	11	9	7
Int. on working capital	6	6	6	6	6
Total finance cost	20	19	17	15	14
Non-cash expenses					
Depreciation	71	71	71	71	71
Prelim Expenses written off	67	0	0	0	0
Total Cost	**894**	**913**	**1151**	**1192**	**1234**

4.3.1. Raw Materials

The cost of raw materials & consumables works out to RO 156,255 at full capacity and the details are in Annexure 2.1.

4.3.2. Utilities

The total cost of utilities for working in full capacity is RO 363,330. The basis of estimate is given in Annexure 2.2.

4.3.3. Salaries & Wages

The cost of salaries and wages in the third year of operation is RO 404,460 which will be escalated in the following years. However in year 1 and year 2 reduced manpower has been considered owing to reduced capacity utilization. Details are given in Annexure 2.3.

4.3.4. Factory Overheads

The annual expenses include repairs and maintenance, civil repairs, cost of spares, spare parts, insurance and vehicle expense and the same is estimated at RO 13,860 for the first year, RO 22,970 for the second and RO 23,115 for the third year. Details are given in Annexure- 2.4.

4.3.5. Administrative Expenses

The basis of estimates of administrative expenses inclusive of salaries & wages is given in Annexure 2.5 and it works out to RO 93,359. Administrative expense includes salaries and benefits, vehicle expenses, communication related expenses, stationery, etc.

4.3.6. Depreciation

Depreciation works out to RO 71,250. Depreciation calculation is given in annexure- 2.7. The following are the rates considered for the calculation of depreciation.

Assets	Life (years)	% of depreciation
Plant & Machinery	10	10
Vehicles and Internal Transport	4	25
Furniture & Office Equipment	5	20

4.3.7. Loan & Interest Calculation

Interest rate for term loan and loan for working capital is taken at 3% and 6% respectively. Details of interest calculations are given in Annexure- 2.8.

4.4. INCOME TAX

No income tax is provided as the new units are exempted from tax for the first five years and 15% tax is considered from 6th year onwards.

4.5. SALES REALIZATION

The annual sales realization at installed capacity is given as annexure 3.1. The annual sales realization is provided below:

Detail	Year 1	Year 2	Year 3	Year 4	Year 5
Sales – RO '000	774	967	1209	1290	1370

4.6. COST RATIOS

The major cost indicators as a percentage of sales realization are given in Annexure- 3.

Details	Year 1	Year 2	Year 3	Year 4	Year 5
Raw Material / Total Sales	9.7%	9.7%	9.7%	9.7%	9.7%
Utilities / Total Sales	22.5%	22.5%	22.5%	22.5%	22.5%
Factory wages / Total Sales	19.6%	16.1%	25.1%	24.2%	23.5%
Prime Cost / Total Sales	51.8%	48.4%	57.3%	56.4%	55.7%
Rentals / Total Sales	23.6%	18.9%	15.1%	14.2%	13.4%
Factory exp. / Total Sales	3.3%	3.8%	3.4%	3.2%	3.1%
Factory Cost / Total Sales	78.8%	71.1%	75.8%	73.9%	72.2%
Administrative exp. / Total Sales	12.1%	10.1%	8.5%	8.3%	8.2%
Selling exp. / Total Sales	4.3%	3.9%	3.6%	3.5%	3.5%
Finance Cost / Total Sales	2.6%	2.0%	1.4%	1.2%	1.0%
Non-Cash exp. /Total Sales	17.9%	7.4%	5.9%	5.5%	5.2%
Total Cost / Sales	115.6%	94.4%	95.2%	92.4%	90.0%

Being an engineering unit with skilled operators employed, the factory wages other than Raw Material costs would be a major cost element.

4.7. NET PROFIT AND PROFITABILITY ANALYSIS

As per the financial projection in Annexure – 3, the venture is financially viable. The summary of the analysis is given under:

(Figures are in RO '000)

Details	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	774	967	1209	1290	1370
PBDIT	**37**	**144**	**147**	**184**	**222**
Depreciation	71	71	71	71	71
Finance Cost	20	19	17	15	14
Prelim. Exp. Written Off	67	-	-	-	-
Profit after tax	**-121**	**54**	**58**	**98**	**137**

4.8. KEY APPRAISAL CRITERIA

The viability of the project based on major appraisal criteria is given below.

Detail	Value
IRR on total investment	14.41%
IRR on Equity	22.63%
Payback period of Total Investment	6 years 7 months
Payback period on equity	5 years 9 months
DSCR	2.247

4.9. SENSITIVITY ANALYSIS

A sensitivity analysis has been carried out to determine the susceptibility of the project to changes in main variables.

Particulars	Original	Sales Volume down by 5%	RM Cost up by 5%	Sales Value down by 5%
IRR on Investment	14.4	10.4	13.8	8.4
IRR on equity	22.6	15.6	21.6	12.4

5. FACTORS TO CONSIDER BEFORE PROJECT IMPLEMENTATION

The following key factors have to be considered before implementing the project:

- The cost estimates of Plant and Machinery is based on budgetary offer received. The actual cost during implementation stage could change based on various factors like currency exchange rates, raw material price increase etc. It is advisable that the investor for the project should receive revised quotations from potential machinery suppliers before implementing the project.

- Capacity utilization is one of the major factors that shall determine the actual viability of the project.

- Quality is another major parameter to consider based on which customer build up shall happen over the period of years. Failure in delivering quality service to clients shall lead to the failure of the unit. It is recommended that required qualified technical resources are deployed for the successful operation of the project.

6. CONCLUSION

The IRR on Total Investment for the project is 14.4% and the IRR on Equity Investment is 22.6%.

The project has a healthy DSCR of 2.247.

Based on the various analysis carried out and as detailed above, the project is found to be technically feasible and financially viable.

Annexures – Financial Projections

ANNEXURE- 1					
POLYMER POWDER COATING OF REBAR PROJECT					
ESTIMATED PROJECT COST					
S.No.	**Item**	**Refer**		**Amount**	**Remarks**
		App.		**(R.O.)**	
A1	**PROJECT COST**				
1	Land for Plant Site	1.1	0		On Lease Rental
2	Building etc.	1.2	5,000		On Lease Rental
3	Plant & Machinery	1.3	598,000		Estimates
4	Vehicles and Int. Transport	1.4	22,000		Estimates
5	Furniture & Office Equip.	1.5	11,000		Estimates
6	Pre- Operative Expenses	1.6	67,000		Estimates
7	Contingency & Escalation	1.7	35,000		Estimates
	Sub Total		738,000	**738,000**	
A2	**WORKING CAPITAL**			**180,000**	
A3	**TOTAL**			**918,000**	
B	**MODE OF FINANCE**				
1	Equity			367,200	40% of Total Project Cost
2	Term loan			442,800	
3	Total			**810,000**	
4	Working Capital Loan			108,000	
	TOTAL			**918,000**	

ANNEXURE- 1.2				
POLYMER POWDER COATING OF REBAR PROJECT				
ESTIMATED COST OF BUILDING & CIVIL WORKS				
S.No.	**Item**	**Area**	**Amount**	**Remarks**
		(SqM)	**(R.O.)**	
A	**MAIN PLANT BUILDINGS**			
1	Plant Area	2,000	-	On Lease Rental at RO 2.500 per Sq. M
2	Factory Shed Storage	3,000	-	
3	Utility Area	1,000		
			-	
	Sub Total	**6,000**	**-**	
B	**ADMIN BUILDING**			
1	Office Area	100	-	
	Sub Total	**100**	**-**	
C	**CIVIL WORKS**			
1	Under Water Storage Tank		**5,000**	
	TOTAL	**6,100**	5,000	

ANNEXURE- 1.3					
POLYMER POWDER COATING OF REBAR PROJECT					
ESTIMATED COST OF PLANT & MACHINERY					
S.No.	**Item**	**Q'ty**	**Rate**	**Amount**	**Remarks**
A	**MAIN PLANT AND MACHINERY**		**USD**	RO	
				0.385	
1	Shot Blasting Machine	1	176,000		2 shifts
2	Induction Heater	1	138,000		
3	Epoxy coating Booth	1	330,000		
4	Fire Fighting System for Epoxy coating Booth	1	20,000		
5	Laboratory Instrument/Equipment	1	40,000		
6	Production Line		300,000		
	Sub Total Price Ex Works		1,004,000	386,540	
	Additional : P & F Charges		38,000	14,630	
8	**Sub Total**		1,042,000	**401,170**	
B	**ELECTRIFICATION**			**100,293**	25% of the Above
C	**Crane for Loading & Unloading of rebars (Local)**	2		**4,000**	
D	**AT SITE COST**				
1	Total Plant			505,463	Sum A+B+C
2	Spares			2,000	Lumpsum
3	Packing, Insurance Forwarding			25,273	5% of C1
4	C I F Cost			532,736	Sum C1 to C3
5	Clearing & Transport to Site			25,273	5% of C1
6	**At Site Cost**			**558,009**	**Sum of C4 to C5**
E	**ERECTED COST**				
1	At Site Cost			558,009	C6
2	Cost of erection - Local			40,117	10% of A8
	TOTAL ERECTED COST			**598,126**	
	Say			**598,000**	

ANNEXURE- 1.4					
POLYMER POWDER COATING OF REBAR PROJECT					
ESTIMATED COST OF VEHICLES & INTERNAL TRANSPORT					
S.No.	**Item**	**Q'ty**	**Rate**	**Amount**	
		(Nos.)		**(R.O.)**	
A	**VEHICLES**				
1	Pick up	1	10,000	10,000	
	Sub Total	**1**		**10,000**	
B	**TRANSP. EQUIPMENT**				
1	Forklift	1	10,000	10,000	
2	Registration, Painting, Spares etc			2,000	10% of the Above
	Sub Total	**1**		**12,000**	
C	**TOTAL**	**2**		22,000	
	Say			**22,000**	

ANNEXURE- 1.5					
POLYMER POWDER COATING OF REBAR PROJECT					
ESTIMATED COST OF FURNITURE & OFFICE EQUIPMENT					
S. No.	**Item**	**Q'ty**		**Amount**	**Remarks**
				(R.O.)	
A	**OFFICE**				
1	P.C with Printer	4	500	2,000	Lumpsum
2	Photocopier	1		1,000	Lumpsum
3	Fax, Telephone	Set		500	Lumpsum
4	Other Office Equipment	Set		200	Lumpsum
5	Air Conditioners	4	250	1,000	Lumpsum
6	Office Furnitures			1,000	Lumpsum
	Sub Total			**5,700**	
B	**FACTORY FURNITURE**				
1	Work bench/Rack/Furniture etc			500	
	Sub Total			**500**	
C	**ACCOMODATION FURNITURE**				
1	Furniture / Fittings	Set		4,900	Lumpsum
	Sub Total			**4,900**	
D	**TOTAL**			11,100	
				11,000	

ANNEXURE- 1.6				
POLYMER POWDER COATING OF REBAR PROJECT				
ESTIMATED COST OF PRE-OPERATIVE EXPENSES				
S. No	**Item**		**Amount**	**Remarks**
		(R.O.)	**(R.O.)**	
1	Preliminary Expenses		2,000	Upto formation of Co.
a	Salary & benefits -Supervisor	1,400		1 Month
b	Salary & benefits - Production Staff	23,863		1 Month
c	Salary & benefits - Admin. Staff	7,042		1 Month
e	Visa, Passage etc.	10,400		For Expatriates at R.O. 400 / Person
	Sub Total		42,705	
4	Financing Cost			
a	Institutional Loan Interest	6,642		At 3% for 6 months
b	Mortgage Expenses	2,214		At 0.5 % on Institu: Loan
c	Other Bank Charges	100		Lumpsum
	Sub Total		8,956	
5	Communication		300	lumpsum
6	Travel		500	Lumpsum
7	Recruitment & Training Charges		500	Lumpsum
8	Audit Fees, Legal Fees		500	Lumpsum
9	Insurance		2,412	At 0.4 % of Plant & Bldg.
10	Miscellaneous		200	Provision
11	Supervision of Installation & Commissioning		8,085	USD 21,000
12	Total		67,158	
	Say..		**67,000**	

ANNEXURE- 1.7					
POLYMER POWDER COATING OF REBAR PROJECT					
ESTIMATES OF CONTINGENCY AND ESCALATION					
S. No.	**Item**	**Cost**	**Rate**	**Provision**	**Remarks**
		(R.O.)	**(%)**	**(R.O.)**	
A	**FIXED ASSETS**				
1	Land for Plant Site	-	0.0	-	
2	Building etc.	5,000	5.0	250	
3	Plant & Machinery	598,000	5.0	29,900	
4	Vehicles and Int. Transport	22,000	5.0	1,100	
5	Furniture & Office Equip.	11,000	5.0	550	
6	Pre- Operative Expenses	67,000	5.0	3,350	
	TOTAL			35,150	
				35,000	say

ANNEXURE- 1.8								
POLYMER POWDER COATING OF REBAR PROJECT								
ESTIMATES OF WORKING CAPITAL REQUIREMENTS								
S.No.	**Item**	**Req.**		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Remarks**
				In R.O. '000				
1	Acct. Receivable	2	Months	126	140	180	187	Cost of sales - Non C Ex.
2	Raw Materials	1	Month	6.3	7.8	9.8	10.4	
3	Utilities	1	Month	14.5	18.2	22.7	24.2	
4	Factory Wages	1	Month	13	13	25	26	
5	Admn. Expenses	1	Month	8	8	9	9	
6	Sales Expenses	1	Month	2.8	3.1	3.6	3.8	
7	Work in Progress	3	Day	5.0	5.6	7.5	7.8	At Factory Cost
8	Finished Goods	5	Days	9.9	11.0	14.2	14.7	At total Cost-Non cash-Selling and Distrbn
9	Finance Cost	1	Month	1.6	1.6	1.4	1.3	At Finance Cost
10	**Total**			**187**	**209**	**273**	**284**	
11	Payables							
	Raw Materials	1	Months	6	8	10	10	
	Sub Total			6	8	10	10	
	Total			**180**	**201**	**263**	**274**	

ANNEXURE- 2												
POLYMER POWDER COATING OF REBAR PROJECT												
COST OF SALE												
	Year of Operation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
	Production	48%	60%	75%	80%	85%	85%	85%	85%	85%	85%	
No	**Item**	**In R.O.'000**										**Remarks**
1	Raw Material & Consumables	75	94	117	125	133	133	133	133	133	133	Ref. Annexure 2.1
2	Utilities	174	218	272	291	309	309	309	309	309	309	Ref. Annexure 2.2
3	Factory Wages	152	156	303	312	322	331	341	351	362	373	Ref Annexure 2.3
4	**PRIME COST**	401	468	693	728	763	773	783	793	804	814	Sub total of 1 to 3
5	Lease Rentals	183	183	183	183	183	183	183	183	183	183	RO 2.5 / sq. m ./ month
6	Factory Overheads	14	23	23	23	23	23	23	23	23	23	Ref Annexure 2.4
7	Misc. Factory Exp.	12	13	18	19	19	20	20	20	20	20	At 2 % of (6) & (7)
8	**FACTORY COST**	**610**	**687**	**917**	**953**	**989**	**999**	**1009**	**1019**	**1030**	**1041**	Sub total of 5 to 7
9	Admin. Salaries	85	89	93	98	103	108	113	119	125	131	Ref Annexure2.3&2.5
10	Admin. Expenses	9	9	9	10	10	10	10	11	11	11	Ref Annexure 2.5
11	Total Admin expenses	93	98	102	107	112	118	124	129	136	142	Sum (9) to (10)
12	Sales Salaries	17	17	18	18	19	19	20	21	21	22	Ref Annexure2.3&2.6
13	Sales Expenses	1	1	1	1	1	1	1	1	1	2	Ref Annexure 2.6
14	Advert.& Business Promotion	15	19	24	26	27	27	27	27	27	27	2% on sales
15	Total sales & dist: costs	33	38	43	45	48	48	49	49	50	51	Sum of (12 to 14)
16	**OPERATING COST**	**736**	**823**	**1063**	**1105**	**1149**	**1165**	**1181**	**1198**	**1216**	**1234**	Sum(8)+(11)+(15)
	Finance cost											
17	Int on Institutional finance	13	13	11	9	7	5	3	1	0	0	Ref Annexure 2.8
18	Int on working capital	6	6	6	6	6	6	6	6	6	6	Ref Annexure 2.8
19	Total finance cost	20	19	17	15	14	12	10	8	6	6	Sum (17)+(18)
	Non cash expenses											
20	Depreciation	71	71	71	71	71	71	71	71	71	71	Ref Annexure 2.7
21	Prelim Expenses written off	67	0	0	0	0	0	0	0	0	0	Ref Annexure 2.7
22	**COST OF SALE**	**894**	**913**	**1151**	**1192**	**1234**	**1248**	**1262**	**1277**	**1293**	**1312**	Sum 16+19+20+21

ANNEXURE- 2.1						
POLYMER POWDER COATING OF REBAR PROJECT						
ESTIMATED COST OF RAW MATERIALS						
S. No.	**Item**	**Unit**	**Qty**	**Rate**	**Amount**	**Remarks**
A	**RAW MATERIALS**				**(R.O.)**	
1	Epoxy Powder of Different Types for Coating	Tons	512	193	98,522	USD 500 per Ton
2	Shot Usage		512	58	29,556	USD150 per ton
	SubTotal				**128,078**	
B	**CONSUMABLES**					
	Chemicals for Cleaning and Phosphating				25,616	20% of A1
	SubTotal				**25,616**	
	TOTAL				**153,694**	
C	**Packaging Materials**				**2,562**	2% of RM
	Grand Total				**156,255**	

ANNEXURE- 2.2						
POLYMER POWDER COATING OF REBAR PROJECT						
ESTIMATED COST OF UTILITIES						
S.No.	**Item**	**Unit**	**Qty**	**Rate**	**Amount**	**Remarks**
					(R.O.)	
						At installed capacity
1	Water	Cu M	12,928	0.770	9,954	
2	Electricity	KWH	11,779,200	0.030	353,376	
	TOTAL				**363,330**	

ANNEXURE- 2.3							
POLYMER POWDER COATING OF REBAR PROJECT							
ESTIMATES OF ANNUAL SALARIES AND WAGES							
S.No.	**Item**	**No of personnel**		**Salary**		**Annual**	**Remarks**
				(RO/month)		**RO**	
		Expat	**Omani**	**Expat**	**Omani**		
A	**PRODUCTION**						
1	Plant Manager	1	0	1,000	-	12,000	
2	Production Supervisor	2		500		12,000	
3	QC Manager	1		600		7,200	
4	Lab Assistant		2	250	400	9,600	
5	Maintenace Engineer (Electrical & Mechar	4		450		21,600	
6	System Operators	10		250		30,000	
7	Coating Line Unskilled Workers	29	15	180	325	121,140	
8	Forklift Operator	1		250		3,000	
	Sub Total	48				216,540	
	Total Manpower Cost						
	Total Salary					216,540	
	Other Benefits					86,616	At 40 % of Salary
	Total Production Salary	**48**	**17**			**303,156**	
B	**ADMINISTRATION & ACCOUNTS**						
1	General Manager	0	1	-	1,200	14,400	
2	Finance Manager	1	0	1,000	-	12,000	
3	Accountant		1		450	5,400	
4	HR Manager/PRO		1		800	9,600	
5	HR Assistants		2		400	9,600	
6	Driver		1		400	4,800	
7	Security Guard		1		380	4,560	
	Sub Total					**60,360**	
	Other Benefits					24,144	At 40 % of Salary
	Total Cost	**1**	**7**			**84,504**	
C	**SALES**						
a	**Sales**						
1	Sales Executives		2	500	600	12,000	
	Sub Total					12,000	
	Other Benefits					4,800	At 40 % of Salary
	Total Cost	**0**	**2**			**16,800**	
D	**GRAND TOTAL**	**49**	**26**			**404,460**	
	Omanisation		**35%**				

ANNEXURE- 2.4					
POLYMER POWDER COATING OF REBAR PROJECT					
ESTIMATES OF ANNUAL FACTORY EXPENSES					
S. No.	**Item**	**Year**	**Year**	**Year**	**Remarks**
		1	**2**	**3**	
1	Repairs & Maintenance	2,990	2,990	2,990	At 0.5 % of erected cost of Plant and Machinery
2	Civil Repairs	50	100	150	At 1 % , 2%,3%of cost of Building and Civil Works
3	Spare Parts	2,990	11,960	11,960	At 0.5%, 2.0% and 2.0% of 'at-site' cost of P & M
4	Insurance	6,030	6,030	6,030	At 1 % of cost Building, Plant and Machinery
5	Vehicle Expenses	1,800	1,890	1,985	At RO 150 per forklift per month increased by 5% annually
	TOTAL	**13,860**	**22,970**	**23,115**	

ANNEXURE- 2.5				
POLYMER POWDER COATING OF REBAR PROJECT				
ESTIMATES OF ANNUAL ADMINISTRATIVE EXPENSES				
S. No.	**Item**		**Amount**	**Remarks**
		(R.O.)	**(R.O.)**	
1	Salaries & Benefits		84,504	
2	Vehicle Expenses & Petrol			
a	Pick up	1800		At R.O. 150/Month each
		0		
	Sub Total		1,800	
3	Telephone, Fax etc.		1,200	At R.O. 100/Month
4	Stationery		1,200	At R.O. 100/Month
5	Legal, Audit Fees		500	Lumpsum
6	Registratioin & Renewals		500	Lumpsum
7	Insurance		3,355	Lumpsum
8	Other Expenses		300	
	Total		**93,359**	

ANNEXURE- 2.6			
POLYMER POWDER COATING OF REBAR PROJECT			
ESTIMATES OF ANNUAL SALES EXPENSES			
S. No.	**Item**	**Amount**	**Remarks**
		(R.O.)	
1	Salaries	16,800	See Annexure 2.3
2	Travel	500	Lumpsum
3	Miscellaneous Expenses	500	Lumpsum
	Total	**17,800**	

ANNEXURE- 2.7						
POLYMER POWDER COATING OF REBAR PROJECT						
DEPRECIATION CALCULATIONS						
	Item	**Cost**	**Rate**	**S.V.**	**Amount**	**Renewals**
			(%)	**(R.O.)**	**(R.O.)**	
A	**FIXED ASSETS**					
1	Land for Plant Site	0	0	0	-	Nil
2	Building etc.	5000	5	2500	250	Nil
3	Plant & Machinery	598000	10	0	59,800	Year 11
4	Technical Know-How	0	10	0	-	Nil
5	Vehicles and Int. Transp.	22000	25	11000	5,500	Years 5, 9
6	Furniture & Office Equip.	11000	20	0	2,200	Years 6, 11
7	Contingency & Escalation	35000	10	0	3,500	Nil
8	Sub Total	671000		13500	**71,250**	
B	**PRELIM &PRE OPE: EXP**	67000	100	0	**67,000**	Nil
C	**WORKING CAPITAL**					
1	Working Capital	273634	0	273634	-	
D	**TOTAL**			**287,134**	**138,250**	
	Less Balance Loan			**108,000**		
E	**SALVAGE VALUE**			**179,134**		
	Note: S.V. = Salvage Value at the end of 10th year.					

ANNEXURE- 2.8								
POLYMER POWDER COATING OF REBAR PROJECT								
LOAN & INTEREST CALCULATIONS								
		Term Loan			WC Loan		Annual	
No	**Year**	**Prn**	**Int**	**Rep**	**Prn**	**Int**	**Int**	**Rep**
	7		3%			6%		
1		443	6.6	0	108	3.2		
2	1	443	6.6	0	108	3.2	**19.8**	**0**
3		443	6.6	32	108	3.2		
4	2	411	6.2	32	108	3.2	**19.3**	**63**
5		380	5.7	32	108	3.2		
6	3	348	5.2	32	108	3.2	**17.4**	**63**
7		316	4.7	32	108	3.2		
8	4	285	4.3	32	108	3.2	**15.5**	**63**
9		253	3.8	32	108	3.2		
10	5	221	3.3	32	108	3.2	**13.6**	**63**
11		190	2.8	32	108	3.2		
12	6	158	2.4	32	108	3.2	**11.7**	**63**
13		127	1.9	32	108	3.2		
14	7	95	1.4	32	108	3.2	**9.8**	**63**
15		63	0.9	32	108	3.2		
16	8	32	0.5	32	108	3.2	**7.9**	**63**
17		0	0.0	0	108	3.2		
18	9	0	0.0	0	108	3.2	**6.5**	**0**
19		0	0.0	0	108	3.2		
20	10	0	0.0	0	108	3.2	**6.5**	**0**

ANNEXURE- 3												
POLYMER POWDER COATING OF REBAR PROJECT												
ESTIMATED WORKING RESULTS												
	Year of Operation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
	Production	48%	60%	75%	80%	85%	85%	85%	85%	85%	85%	
No	**Item**	**In R.O.'000**										**Remarks**
1	**Operating Cost**	736	823	1063	1105	1149	1165	1181	1198	1216	1234	Ref Annexure 2
2	Expected Sales	774	967	1209	1290	1370	1370	1370	1370	1370	1370	
3	**Profit before Int & dep**	**37**	**144**	**147**	**184**	**222**	**206**	**189**	**172**	**155**	**136**	Sum of (2-1)
4	Depreciation	71	71	71	71	71	71	71	71	71	71	Ref Annexure 2.7
5	Finance Cost	20	19	17	15	14	12	10	8	6	6	Ref Annexure 2.8
6	**Operating profit**	**-54**	**54**	**58**	**98**	**137**	**123**	**108**	**93**	**77**	**59**	Sum of (3 - 4 - 5)
7	Other income if any											
8	Prelim Expenses written off	67	-	-	-	-	-	-	-	-	-	Ref Annexure 2.7
9	Profit/Loss before tax	-121	54	58	98	137	123	108	93	77	59	Sum of (6 - 7 - 8)
10	Income Tax	0	0	0	0	0	18	16	14	12	9	15% on profit from Year 6
11	**Profit after tax**	**-121**	**54**	**58**	**98**	**137**	**104**	**92**	**79**	**65**	**50**	
12	Statutory reserve		5	6	10	14	10	9	8	7	5	
13	Profit for appropriation	-121	49	52	88	123	94	83	71	59	45	
14	Dividend	0	0	0	0	0	0	0	0	0	0	
15	General reserve	-121	49	52	88	123	94	83	71	59	45	Difference (13) - (14)
16	**Net cash accruals**	**18**	**125**	**129**	**169**	**208**	**176**	**163**	**150**	**137**	**121**	

ANNEXURE- 3.1					
POLYMER POWDER COATING OF REBAR PROJECT					
ESTIMATES OF SALES REALISATION					
S.No.	**Item**	**Quantity of Material Coated in Tons**	**Rate**	**Amount**	**Remarks**
		Per Annum	RO	**(R.O.)**	
A	**Income**				
a	From Powder Coating	25,590	63	1,612,170	
	TOTAL			**1,612,170**	

ANNEXURE- 4													
POLYMER POWDER COATING OF REBAR PROJECT													
INTERNAL RATE OF RETURN ON TOTAL CAPITAL													
	Year of Operation		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
	Production		48%	60%	75%	80%	85%	85%	85%	85%	85%	85%	
No	**Item**	**In R.O.'000**											**Remarks**
A	**CASH INFLOW**												
1	Net Profit bef. Tax		-121	54	58	98	137	123	108	93	77	59	Refer Annexure - 3
2	Depreciation	0	71	71	71	71	71	71	71	71	71	71	Ref Annexure 2.7
3	Prelim Exp written off		67	0	0	0	0	0	0	0	0	0	Ref Annexure 2.7
4	Finance Cost	0	20	19	17	15	14	12	10	8	6	6	Ref Annexure 2.8
5	Salvage Value	0	0	0	0	0	0	0	0	0	0	983	Ref Annexure 2.7
6	Sub Total	0	37	144	147	184	222	206	189	172	155	1120	Sum of A1 to A5
B	**CASH OUTFLOW**												
1	Capital Project expenditure	671	0	0	0	0	22	11	0	0	22	0	Refer Annexure - 1
2	Other normal cap exp	67	0	0	0	0	0	0	0	0	0	0	Refer Annexure - 1
3	Working Capital	180	0	21	62	0	0	0	0	0	0	0	Refer Annexure - 1
4	Income Tax		0	0	0	0	0	18	16	14	12	9	Refer Annexure - 3.2
5	Sub Total	918	0	21	62	0	22	29	16	14	34	9	Sum of B1 to B4
C	**NET CASHFLOW (AT)**	**-918**	**37**	**123**	**84**	**184**	**200**	**176**	**173**	**158**	**121**	**1111**	
D	**NETCASH FLOW(PT)**	**-918**	**37**	**123**	**84**	**184**	**200**	**195**	**189**	**172**	**133**	**1120**	
E	**INTERNAL RATE OF RETURN ON TOTAL INVESTMENT**										**14.41**	%	

ANNEXURE- 5													
POLYMER POWDER COATING OF REBAR PROJECT													
INTERNAL RATE OF RETURN ON EQUITY CAPITAL (AFTER TAX)													
	Year of Operation	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
	Production		48%	60%	75%	80%	85%	85%	85%	85%	85%	85%	
No	**Item**	**In R.O.'000**											**Remarks**
A	**CASH INFLOW**												
1	Net Profit before Tax	0	-121	54	58	98	137	123	108	93	77	59	Refer Annexure- 3
2	Depreciation	0	71	71	71	71	71	71	71	71	71	71	Refer Annexure - 2.7
3	Prelim Exp written off	0	67	0	0	0	0	0	0	0	0	0	Refer Annexure - 2.7
4	Salvage Value	0	0	0	0	0	0	0	0	0	0	983	Refer Annexure - 2.7
5	Sub Total	0	18	125	129	169	208	194	179	164	148	1113	Sum of A1 to A4
B	**CASH OUTFLOW**												
1	Equity	367	0	0	0	0	0	0	0	0	0	0	Refer Annexure - 1
2	Fixed Assets	0	0	0	0	0	22	11	0	0	22	0	Refer Annexure - 1
3	Working Capital	0	0	21	62	0	0	0	0	0	0	0	Refer Annexure - 1
4	Loan Instalment	0	0	63	63	63	63	63	63	63	0	0	Refer Annexure - 2.8
5	Income Tax	0	0	0	0	0	0	18	16	14	12	9	Refer Annexure - 3.1
6	Sub Total	367	0	84	125	63	85	93	79	77	34	9	Sum of A1 to A5
C	**NET CASHFLOW**	**-367**	**18**	**41**	**4**	**106**	**123**	**101**	**100**	**87**	**115**	**1104**	
D	**INTERNAL RATE OF RETURN ON EQUITY INVESTMENT**								**22.63**	%			

ANNEXURE- 6

POLYMER POWDER COATING OF REBAR PROJECT

PROJECTED CASH FLOW STATEMENT

	Year of Operation		1	2	3	4	5	6	7	8	9	10	
	Production		48%	60%	75%	80%	85%	85%	85%	85%	85%	85%	
	Nos	000											
No	**Item**	**In R.O.'000**											**Remarks**
A	**CASH INFLOW**												
1	Equity	367	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
2	Profit bef tax & int		-101	73	75	113	150	134	118	101	83	65	Ref Annexure 3
3	Depreciation	0	71	71	71	71	71	71	71	71	71	71	Ref Annexure 2.7
4	Prel exp written off		67	-	-	-	-	-	-	-	-	-	Ref Annexure 2.7
5	Increase in Other term loan	0	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
6	Increase in Bank Term Loan	443	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
7	Increase in W C loan	108	0	0	0	0	0	0	0	0	0	0	Ref Annexure 1
8	Other income	0											Ref Annexure 3
9	Sub Total	918	37	144	147	184	222	206	189	172	155	136	Sum of A1 to A8
B	**CASH OUTFLOW**												
1	Capital Project expenditure	671	0	0	0	0	22	11	0	0	22	0	Ref Annexure 1& 2.7
2	Other normal cap exp	67											Ref Annexure 1& 2.7
3	Increse in Working Cap:	180	0	21	62	0	0	0	0	0	0	0	Ref Annexure 1.7
4	Decrease in Institu:Loan	0	0	63	63	63	63	63	63	63	0	0	Ref Annexure 2.8
5	Decrease in Other term loan		0	0	0	0	0	0	0	0	0	0	
5	Interest on term loans		13	13	11	9	7	5	3	1	0	0	Ref Annexure 2.8
6	Interest on work cap loan		6	6	6	6	6	6	6	6	6	6	Ref Annexure 2.8
7	Income Tax	0	0	0	0	0	0	18	16	14	12	9	Ref Annexure 3.2
8	Dividend	0	0	0	0	0	0	0	0	0	0	0	Provision
9	Sub Total	918	20	104	143	79	99	104	89	85	40	15	Sum of B1 to B10
10	**OPENING BALANCE**	0	0	18	58	62	168	291	392	492	579	694	
C	**SURPLUS**	**0**	**18**	**41**	**4**	**106**	**123**	**101**	**100**	**87**	**115**	**121**	Difference(A9)-(B11)
D	**CLOSING BALANCE**	**0**	**18**	**58**	**62**	**168**	**291**	**392**	**492**	**579**	**694**	**815**	

ANNEXURE- 7													
POLYMER POWDER COATING OF REBAR PROJECT													
PROJECTED BALANCE SHEET													
	Year of Operation		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
	Production		48%	60%	75%	80%	85%	85%	85%	85%	85%	85%	
No	**Item**	**In R.O.'000**											**Remarks**
A	**ASSETS EMPLOYED**												
1	Fixed Assets												
a	Gross Fixed Assets	671	671	671	671	671	693	704	704	704	726	726	Refer Annexure - 2.7
b	Preliminary expenses	67	0	0	0	0	0	0	0	0	0	0	Refer Annexure- 2.7
c	Acc. Depreciation	0	71	143	214	285	356	428	499	570	641	713	Refer Annexure - 2.7
d	Net Fixed Assets	738	600	529	457	386	337	277	205	134	85	14	
2	Current Assets												
a	Cash	0	18	58	62	168	291	392	492	579	694	815	Refer Annexure - 4
b	Other Cur. Assets	180	180	201	263	263	263	263	263	263	263	263	Refer Annexure - 1.7
c	Total Cur. Assets	180	198	260	326	431	554	655	755	842	957	1078	
3	Less: Cur. Liabilities	0	0	0	0	0	0	0	0	0	0	0	
		918	**797**	**788**	**783**	**817**	**891**	**932**	**960**	**976**	**1042**	**1091**	
B	**FINANCED BY**												
1	Equity	367	367	367	367	367	367	367	367	367	367	367	Refer Annexure - 1
2	Statutory reserve		0	5	11	21	35	45	54	62	69	74	
3	General reserves	0	-121	-72	-20	68	191	285	368	439	498	543	Cu.NP-Cu.Divident
4	Other term loan	0	0	0	0	0	0	0	0	0	0	0	Refer Annexure - 2.8
5	Institutional Finance	443	443	380	316	253	190	127	63	0	0	0	Refer Annexure - 2.8
6	Bank Borrowings	108	108	108	108	108	108	108	108	108	108	108	Refer Annexure - 2.8
		918	**797**	**788**	**783**	**817**	**891**	**932**	**960**	**976**	**1042**	**1091**	

ANNEXURE- 8											
POLYMER POWDER COATING OF REBAR PROJECT											
RATIO ANALYSIS											
	Years of Operation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A	**COST RATIOS**										
1	Raw Material / Total Sales	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%
2	Utilities / Total Sales	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
3	Factory wages / Total Sales	19.6%	16.1%	25.1%	24.2%	23.5%	24.2%	24.9%	25.6%	26.4%	27.2%
4	Prime Cost / Total Sales	51.8%	48.4%	57.3%	56.4%	55.7%	56.4%	57.1%	57.9%	58.6%	59.4%
5	Rentals / Total Sales	23.6%	18.9%	15.1%	14.2%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%
6	Factory exp. / Total Sales	3.3%	3.8%	3.4%	3.2%	3.1%	3.1%	3.1%	3.1%	3.2%	3.2%
7	Factory Cost / Total Sales	78.8%	71.1%	75.8%	73.9%	72.2%	72.9%	73.6%	74.4%	75.2%	76.0%
8	Administrative exp. / Total Sales	12.1%	10.1%	8.5%	8.3%	8.2%	8.6%	9.0%	9.4%	9.9%	10.4%
9	Selling exp. / Total Sales	4.3%	3.9%	3.6%	3.5%	3.5%	3.5%	3.6%	3.6%	3.7%	3.7%
10	Finanace Cost / Total Sales	2.6%	2.0%	1.4%	1.2%	1.0%	0.9%	0.7%	0.6%	0.5%	0.5%
11	Non-Cash exp. /Total Sales	17.9%	7.4%	5.9%	5.5%	5.2%	5.2%	5.2%	5.2%	5.2%	5.2%
12	Total Cost / Sales	115.6%	94.4%	95.2%	92.4%	90.0%	91.0%	92.1%	93.2%	94.4%	95.7%
B	**PROFITABILITY RATIOS**										
1	PBDIT / Sales	4.8%	14.9%	12.1%	14.3%	16.2%	15.0%	13.8%	12.6%	11.3%	9.9%
2	Operating profit / Sales	-6.9%	5.6%	4.8%	7.6%	10.0%	9.0%	7.9%	6.8%	5.6%	4.3%
3	PAT / Sales	-15.6%	5.6%	4.8%	7.6%	10.0%	7.6%	6.7%	5.8%	4.8%	3.6%
4	PAT / Investment	-14.9%	6.7%	7.2%	12.1%	16.9%	12.9%	11.4%	9.8%	8.1%	6.1%

ANNEXURE- 9				
POLYMER POWDER COATING OF REBAR PROJECT				
BREAK EVEN ANALYSIS				
S. No.	**Item**	**Year 1**	**Year 6**	**Remarks**
		In R.O. '000		
A	**FIXED COST**			
1	Production Wages	152	331	Refer Annexure - 2
2	Factory Overheads	197	206	Refer Annexure - 2
3	Misc. Factory Exp.	12	20	Refer Annexure - 2
4	Admin. Expenses	93	102	Refer Annexure - 2
5	Sales Expenses	33	48	Refer Annexure - 2
6	Depreciation	71	71	Refer Annexure - 2
7	Prelim. Expenses written off	67	0	Refer Annexure - 2
8	Financing Cost	20	12	Refer Annexure - 2
9	Income Tax	0	18	Refer Annexure - 2
10	Sub Total	645	809	
B	**VARIABLE COST**			
1	Raw materials	75	133	Refer Annexure - 2
2	Utilities	174	309	Refer Annexure - 2
3	Misc. Expenses	0	0	
4	Sub Total	249	442	
C	**SALES**	774	1370	Refer Annexure - 3
D	**CONTRIBUTION**	524	929	Difference C - B
E	**BREAK EVEN POINT**	59.0	74.0	As % of Plant Capacity
F	**CASH BEP**	46.4	67.5	As % of Plant Capacity

ANNEXURE- 10					
POLYMER POWDER COATING OF REBAR PROJECT					
SENSITIVITY ANALYSIS (IRR FOR 10 YEARS)					
		Projection	Change in One		
S. No.	Item	No Change	Variable at a Time		
A	VARIABLE		Volume	R. M	Sales
			Nos	Cost	Value
	Value- Original				
B	PESSIMISTIC				
	Change		-5%	5%	-5%
C	OPTIMISTIC				
	Change		5%	-5%	5%
D	I R R - PESSIMISTIC PROJECTION				
1	I R R on Investment	14.4	10.4	13.8	8.4
2	I R R on Equity	22.6	15.6	21.6	12.4
E	I R R - OPTIMISTIC PROJECTION				
1	I R R on Investment	14.4	18.3	15.0	20.1
2	I R R on Equity	22.6	29.8	23.6	33.3

ANNEXURE- 11											
POLYMER POWDER COATING OF REBAR PROJECT											
DEBT SERVICE COVERAGE RATIO											
	Years of Operation	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
	Production in (%)		48%	60%	75%	80%	85%	85%	85%	85%	85%
	Nos	000									
No	**Item**	**In R.O.'000**									
1	Profit after tax		-121	54	58	98	137	104	92	79	65
2	Depreciation		71	71	71	71	71	71	71	71	71
3	Prelimnery exp. Written off		67	0	0	0	0	0	0	0	0
4	Interest		20	19	17	15	14	12	10	8	6
5	Total		37	144	147	184	222	187	173	158	143
1	Annual repayment		0	63	63	63	63	63	63	63	0
2	Interest		20	19	17	15	14	12	10	8	6
3	Total		20	83	81	79	77	75	73	71	6
	D.S.C.R		1.89	1.75	1.82	2.34	2.88	2.50	2.37	2.22	22
	WT. AVERAGE D.S.C.R	**2.247**									