

BHUSHAN LIMITED



BHUSHAN

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25.10.2002

M/s SBI Caps,
Mumbai

**Sub: SUBMISSION OF PROJECT COST AND MEANS OF FINANCE FOR
OUR PROPOSED PROJECT AT ORISSA.**

Sir,

As discussed we are submitting herewith detailed cost of project alongwith means of finance for our proposed project at Orissa. You are requested to review the same and appraise our project at the earliest. We shall be pleased to furnish any other information which may be desired in this regard. The financial projection have been already submitted to you.

Thanking you,

Yours faithfully,
For **BHUSHAN LIMITED**,

(ARUN AGRAWAL)
GENERAL MANANGER (CORP. FINANCE)

Received
Sarkar
25/10/02



Bhushan Limited			
Steel & Power Plant in Orissa			
Estimates of Costs on Land & Site Development			
			(Rs. In Million)
1	Cost of Land		
	Main Plant site	Acres 1266	250.00
	Registration Charges	5%	12.50
	Total Cost of Land		262.50
2	Preconstruction Infrastructure		5.00
3	Site Development		
-	Land Blasting, Filling & Compaction	1266 App.Acres	0.50 Rs lac/Acre
-	Cost of Internal Roads of bitumin with boulder soling	50,000 App Area/Sqmtr	300.00 Rs /Sqr Mtr
-	Storm water drainage system- both sides of roads (1/2 mtrs wide and 1/2 mtr deep with concrete sole)	5,000 Length in mtrs	600 Rs /mtr
-	Boundry Wall around the factory 2 Mtrs height, with pillers at 6 mts distance and 5 ft foudations with barbed wires and iron angles on top	11,000 Length in mtrs	3500 Rs /mtr
-	Land Scaping & Horticulture	Lumpsum	15.00
		Sub Total	134.85
		Grand Total	402.35



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Bhushan Limited
Steel & Power Plant in Orissa

**Cost of Project
&
Means of Finance**

Cost of Project

S. No.	Description	Amount (Rs. in Million)
1	Land & site Development	402.35
2	Building, Civil Works & Equipment Foundations	739.10
3	Cost of Plant & Machinery	3496.15
4	Cost of Misc. Fixed Assets	597.50
5	Contingencies & Escalations	Estd 5% 261.76
6	Preliminary & Pre-operative Expenses	655.00
7	Working Capital Margin	250.00

Total Cost of the Project 6401.86
say 6400.00

Means of Finance

-Term Loans	4270.00
-Internal Accruals	2130.00

6400.00

Debt : Equity Ratio 2.00



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Bhushan Limited			
Steel & Power Plant in Orissa			
Cost of Building & Civil Work- Factory Buildings-1			(Rs. In Million)
> Civil costs of Raw Material Yard (800x400 Mtrs)			8.00
{ With sand laying, Boulder soling, morrum filling, compacting and surface finishig.			
	Area/SMtrs	32000	250.00
			@Rs/Mtr
> Over Ground Civil Work for RMPP			10.00
consisting of civil work columns for steel structures for conveyors, RCC floors and plat forms for various crushers, screens, vibro feeders, weigh feeders. Civil structures for Junction house for conveyors \, transfer towers, separate building for Coke, Sinter and calcined)			
> Coal Drying Shed (total 50X100 Mtrs approx.)			12.50
	@Sq/Mtrs	5,000	
		2,500	
> Over Ground Kiln Feed and Product Seperation System			
Civil Work for RMD Bin Building			35.00
Civil Work for Kiln inlet Building			
Civil Work for Kiln Cooler Transfer Building			
Civil Work for Cooler Outlet Building			
Civil Work for Product Seperation Building			
{ Heavy Foundations for Large Bins and Other Equipments}			
> Building/Civil Work for Power Plant			67.50
Consisting of Turbo Generator set with auxilliaries Building approx 7000 Cu Mtrs, structures etc for 2 CPPs			
> Civil Work for Coal Washery			
Built up Area approx 5000 sqr mtr, multifloor structure			30.00
Civil Work for Washing Tank			5.00
			35.00



Bhushan Limited			
Steel & Power Plant in Orissa			
Cost of Building & Civil Work- Factory Buildings- 2			
Utility & Other Buildings			
- Civil work for intake well and pump house at river and pipe line carrying, pipe bridges with foundations		20.00	
- Raw Water Reservoir Civil Work (Excavation, Earthen Work, Polyethylene insulation for preventing water leakage, PCC floor, brick work side walls etc)		15.00	
- Civil Work for electrical sub-station piping, cable trays & other electricals, emergency DG Set & accessories		15.00	
- Civil Work for water treatment plants, DM/RO both		4.00	
- Civil Work for Cooling Towers of 2 CPPs		15.00	
- Civil Work for Dust Extration (ESP) System		7.50	
- Civil Work for WHR Boiler		17.60	
- Civil work for Compressor House		2.00	
- Civil Work for Oxygen Plants/Air separation plant for EAF		2.50	
- Factory Stores Main Control Rooms, refractory stores,		5.00	
- Civil Work for Laboratory / work shops for Building, furniture/fixtures and furnishings		5.00	
- Civil Work for OHT Cranes, Weigh bridges, additional gantry strcuture etc		5.00	
		113.60	113.60
-Cost of Machine Foundations			
> For Raw Material Processing Plant (Consisting of conveyors, wagon tippler hopper with excavation, PCC and RCC work for de-dusting chimneys)	Lump sum	10.00	
> For Kilns, Cooler & waste gas systems		15.00	
> For WHRB boilers		53.00	
> For AFBC boilers		53.00	
> Turbines		170.00	
> For Coal Washery		5.00	
>			
> For Induction and Arc Furnaces (2 each), hot rolling mill		10.00	
> For Oxygen Plant			
> For Lime Plant			
> For Cooling Towers etc		7.50	
> For Various Utilities - e.g electrical tranformer etc, water treatment plants, boilers etc, water treatment Plants		20.00	
> For other various equipments in Workshop, Lab etc		10.00	
> Machine Foundations for Power plant		72.50	
Sub-total of Foundations		426.00	426.00
Total Costs			707.60



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Bhushan Limited					
Steel & Power Plant in Orissa					
Cost of Building & Civil Work- Non Factory Buildings					(Rs. in Million)
Non-Factory Buildings					
1 Cost of Residential Accomodations for rehabiliitation of displaced families. (Complete RCC Roofing Units with basic facilities)					
No of Families			50		
Cost/ per Unit			2.00	Rs/Lacs	10.00
2 Administrative Block					
Approx Coverd Area 10,000 sq ft with land scaping, furnishing etc - Rs 2500 sft					10.00
3 Security office, Security Gate, boundry wall, watch towers etc					6.00
4 Despatch Area and in-coming vehicle parking area with sheds etc					1.50
5 Workers Canteen block , rest rooms, shift rooms with basic amenities.					4.00
					31.50
Total Civil Costs					739.10

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Bhushan Limited Steel & Power Plant in Orissa									
Cost of Plant & Machinery									
(Rs. in Million)									
Indigenous Equipments									
S. No.	Equipments Description	QTY.	Basic Cost	Excise Duty	Sales Tax	Freight	Total Cost		
				16.00%	4.00%	5.00%			
Sponge Iron Kiln									
1	Raw Material Preparation Plant (RMPP)								
	- Wagon Tippler and stacker cum re-claimer		57.50	10.80	3.13	3.38	84.81		
	- Mechanical Equipments for Conveyors and accessories.		50.50	8.08	2.34	2.53	63.45		
	- Structural Steel for RMPP Plant structures		75.00	12.00	3.48	3.75	94.23		
	- Fabrication, erection and painting etc.		29.30				29.30		
	- Design engineering, erection and commissioning of above		18.00				18.00		
	- Other mechanical equipments for support		13.50	2.16	0.63	0.68	16.98		
	- Main steel Structure for Housing the RMPP								
	- Total Steel Consumption Approx MTs	6000	108.00	17.28	5.01	5.40	135.69		
	- Cost of design engineering erection and Commissioning		39.00				39.00		
			400.80	50.32	14.59	15.73	481.44		
2	Kiln Feed & Product Separation System								
	- Mechanical Equipments (Conveyors with accessories)		13.00	2.08	0.60	0.65	16.33		
	- Kiln Equipments erection		25.00				25.00		
	- Other mechanical equipments		21.50	3.44	1.00	1.08	27.01		
	- Structural Steel - for conveyor galleries, Trestles, Stringers, Short-supports, Chutes	App MTs	650	11.70	1.97	0.54	14.70		
	- Design Engineering Fabrication erection etc.		4.45				4.45		
	- Main Steel Structure for entire system	4200	75.60	12.10	3.51	3.76	94.98		
	- Design Engineering Fabrication erection etc.		28.77				28.77		
			180.02	19.49	5.65	6.09	211.25		
3	Kiln Cooler and waste gas system								
	- Cost of various equipments for kiln cooler		192.00	30.72	8.91	9.60	241.23		
	- WHRB boilers - 4 nos		337.00	53.92	15.84	16.85	423.61		
4	Power Plant								
	- Cost of Power Plant, Turbine 2 Nos of 48 +68 MW		1,200.69	192.11	55.71	60.03	1,508.54		
	- AFBC Boilers 75 TPH and 150 TPH		340.00						
	- 60 MW turbine with EC, DCS Panel etc.		394.69						
	- Ash Handling system for power plant		25.00						
	- 40 MW turbine with other accessories		176.00						
	- Transformers		240.00						
	- Cooling tower		25.00						
5	Steel Making Shop								
	- Induction Furnace - 1 No. 15 MT Capacity with Laddle Refining & Continuous caster for Induction Furnace		65.00	10.40	3.02	3.25	81.67		
	- Cost of New 35 MT Arc Furnace	LS	120.00	19.20	5.57	6.00	150.77		
	- Cost of Modification/Upgradation and capacity augmentation of Arc Furnace		70.00				70.00		
	- Cost estimated include one LRF Continuous caster for EAF Shop)								
6	Steel Rolling Facilities								
	- Heavy duty Re-rolling facility for Rounds and TOR Steel	Extd LS	240.00				240.00		
	Total Equipment Cost for Steel Making Shop		495.00	29.60	8.58	9.25	542.43		
7	Coal Washery								
	- Cost of Imported Coal Washery consisting of Balac etc.		15.98	Imported Under EPOC		0.40	19.38		
	- Components like Elec/Pneumatic control, Sensors and switches		54.50	8.72	2.53	2.73	68.47		
	- Cost of indigenous equipments								
	Sub Total		2,878.99	384.88	111.61	120.67	3,496.15		



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Bhushan Limited							
Steel & Power Plant in Orissa							
Cost of Misc. Fixed Assets page # 1							
I <u>Indigenous Equipments</u> (Rs. in Million)							
S. No	Name of Equipment	NO.	Basic Cost	Excise Duty 16.00%	Sales Tax 4.00%	Freight 5.00%	Total Cost
1)	<u>Railway Sidings</u>						
	App 7 Kms total running length		90.00	-	-	-	90.00
	(Total cost including bridge on a on the way culvert, signal posting, rail laying, complete in movement conditions. Work with RITES -proposed rail as per current specification						
2)	<u>Power Distribution System</u>						
	MRSS and Switch Yard Equipments		35.00	-	-	-	35.00
	220 KV EHT Overhead Lines from & Infrastructure/ bay equipments at Bhudipara substation (42.50	-	-	-	42.50
	Power and distribution transformer, 33 and 66.6 switch gear HT/LT Control Cable		50.00				50.00
	LC Electrical MCCS, PCCs, DCSS, PLCs Automation equipments and instrumentation		70.00	-	-	-	70.00
	Emergency DG with Accessories Imported Estd each at US\$ 135K)		15.00	-	-	-	15.00
	Plant Lighting and accessories		10.00				10.00
	Cable trays & Supporters		1.50	-	-	-	1.50
	Misc. Accessories		3.50	-	-	-	3.50
			317.50	-	-	-	317.50
3)	<u>Water Procurement & Treatment Systems</u>						
	Raw Water Intake systems, Pumping stations and Water Distribution Pipeline		70.00	-	-	-	70.00
	Cost of water treatment plants, RO & DM		30.00				30.00
	Cost of Cooling Towers		20.00				20.00
			120.00	-	-	-	120.00

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Bhushan Limited									
Steel & Power Plant in Orissa									
Cost of Misc. Fixed Assets page # 2									
4)	Air Compressors & Air Receivers								
	Cost of Air Compressors and plant air system			5.00					5.00
				5.00	-	-	-	-	5.00
5)	Air Conditioning Systems & Cooling System								
	Cost of Chillers, Air Handling Units, Cost of Ducting for Acs, Plant air system etc		LS	10.00	-	-	-	-	10.00
				10.00	-	-	-	-	10.00
6)	Effluent Treatment.		LS	20.00	-	-	-	-	20.00
	- Ash Handling systems			30.00					30.00
				50.00	-	-	-	-	50.00
7)	Laboratory Equipments			20.00	-	-	-	-	20.00
	- Shatmagan- metalization meter (Imported)								
	- Lico Operator Carbon and Sulphur Analyser Imp								
	- Spectrometer- Steel composition analyser Imported								
	- Labsize Ore and Coal Crushers								
	- Others			20.00	-	-	-	-	20.00
8)	Material Handling/Storage Equipments								
	- Cost of Weigh Bridges , EOT Cranes for Power plant etc.			40.00	-	-	-	-	40.00
	- LSD/HSD Storage System storage tanks			10.00	-	-	-	-	10.00
				50.00	-	-	-	-	50.00



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