

第10章 設備計画(イクイップメントリスト)

機材の詳細設計は当プロジェクトの承認後出来るだけ速やかに行なう必要があるが、当フィージビリティ調査に必要な機械設備、電気設備、土木施設、採掘用資材、その他起業費の一部を坑内採掘、露天採掘、坑外施設、選炭設備および鉄道設備別にP M D Cが分類した項目に従って記載した。

期間としては1983年～85年の3年間に購入または使用される資機材がリストアップされている。

記載例としてはFは資機材の外貨分の金額でC & F価格、L₁にはこれに対する関税額としてC & F価格の40%と海上保険料としてF O B価格の1%、陸上輸送料としてF O B価格の2%が内貨分として計上されている。L₂には現地で調達できる分の金額が計上されているほか、機材のエレクション費、および据付費が計上されている。

EQUIPMENT LIST

(INCLUSIVE OF A PART OF CAPITAL COST)

NOTE 1: The equipment shown in this list and within this study is defined in type and manufacturer for this study ONLY. The equipment purchased, should this project be approved, will be determined with respect to both type and manufacturer at the time of purchase.

NOTE 2: F : Foreign currency
L1 : Tax, Insurance & Inland transportation charge
L2 : Local charge

UNDERGROUND MINE

A – (iii) MACHINERY & EQUIPMENT

a) Coal Mining Machinery

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Face Conveyor Double Chain Type 40 kw x 100 t/hour x 120 m	F	3	1,253	3,759	Included in Development Labour Cost	3,759
	L1			1,613		1,613
	L2			—		—
	T.			5,372		5,372
Stage Loader Double Chain Type 22.5 kw x 100 t/hour x 60 m	F	3	828	2,484	ditto	2,484
	L1			1,068		1,068
	L2			—		—
	T.			3,522		3,522
V Type Chain Conveyor 15 kw x 50 t/hour x 100 m	F	2	553	1,106	ditto	1,106
	L1			476		476
	L2			—		—
	T.			1,582		1,582
Hydraulic Prop 2.0 m x 200 kg/cm ²	F	1,500	6.35	9,525	ditto	9,525
	L1			4,096		4,096
	L2			—		—
	T.			13,621		13,621
Link Bar 1.2 m	F	1,500	2.06	3,093	ditto	3,093
	L1			1,330		1,330
	L2			—		—
	T.			4,423		4,423
Plunger Pump with Piping 40 kw x 60 l/min. x 200 kg/cm ²	F	3	738	2,214	ditto	2,214
	L1			952		952
	L2			—		—
	T.			3,166		3,166
Air Auger 2 kw x 2.2 m ³ /min. x 1500 r/m	F	15	5.07	76	ditto	76
	L1			33		33
	L2			—		—
	T.			109		109
Coal Pick 0.4 kw x 0.9 m ³ /min. x 1.6 kg/m	F	20	2.15	43	ditto	43
	L1			18		18
	L2			—		—
	T.			61		61
Slurry Pump 11 kw x 0.2 m ³ /min.	F	2	137.5	275	ditto	275
	L1			118		118
	L2			—		—
	T.			393		393
Slurry Mixer 5.5 kw x 0.5 m ³ x 2 cistern x 2	F	2	92	184	ditto	184
	L1			79		79
	L2			—		—
	T.			263		263
Spare Parts for Face Conveyor and Stage Loader (20% of C & F Price)	F	6	208.5	1,251	—	1,251
	L1			534		534
	L2			—		—
	T.			1,785		1,785

UNDERGROUND MINE

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Spare Parts for V-Type Chain Conveyor (20% of C & F Price)	F	2	111	222	—	222
	L1			95	—	95
	L2			—	—	—
	T.			317	—	317
Spare Parts for Others (10% of C & F Price)	F			1,542	—	1,542
	L1			663	—	663
	L2			—	—	—
	T.			2,205	—	2,205
Sub-Total	F			25,774	—	25,774
	L1			11,075	—	11,075
	L2			—	—	—
	T.			36,849	—	36,849

b) Road Heading Machine

Description	C.	No.	Unit Price	Materials	Installation	Total
Side Tipping Loader 0.6 m ³ x 21 m ³ /min x 30 kw	F	2	650	1,300	Included in Development Labour Cost	1,300
	L1			558		558
	L2			—		—
	T.			1,858		1,858
Gate End Loader (Home Made) 20 m/min. x 6 m ³ /min x 7.5 kw	F	4	109	436	ditto	436
	L1			188		188
	L2			—		—
	T.			624		624
Coal Pick 0.4 kw x 0.9 m ³ /min x 1.6 kg/m	F	13	2.2	28	ditto	28
	L1			12		12
	L2			—		—
	T.			40		40
Air Jack Hammer 5 kg/m x 3.9 m ³ /min x 5.5 kw	F	12	19.7	236	ditto	236
	L1			102		102
	L2			—		—
	T.			338		338
Rod & Bit Rod 22φ x 1.5 m ~ 2.7 m Bit dia. 32 ~ 40 mm	F	100	1.02	102	ditto	102
	L1			44		444
	L2			—		—
	T.			146		146
Spare Parts for Above (10% of C & F)	F			210	—	210
	L1			90	—	90
	L2			—	—	—
	T.			300	—	300
Sub-Total	F			2,312	—	2,312
	L1			994	—	994
	L2			—	—	—
	T.			3,306	—	3,306

UNDERGROUND MINE

c) Transportation Machinery

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Single Drum Winder 28 m/m x 150 m/min x 200 kw Drum 1750 m/m x 1500 m/m	F	1	4,329	4,329	—	4,329
	L1			1,848	—	1,848
	L2			—	50	50
	T.			6,177	50	6,227
Single Drum Winder 16 m/m x 70 m/min. x 20 kw	F	1	299	299	Included in Development Labour Cost	299
	L1			188		128
	L2			—		—
	T.			427		427
Single Drum Winder 14 m/m x 60 m/min x 15 kw	F	2	223	446	ditto	446
	L1			191		191
	L2			—		—
	T.			637		637
Material Cars 2,800(L) x 1,000(W) x 500(H) m/m	F.	10	34	340	ditto	340
	L1			145		145
	L2			—		—
	T.			485		485
Mine Cars 2.0 m ³ 3,050(L) x 1,280(W) x 1,050(H) m/m	F	200	39	7,800	ditto	7,800
	L1			7,331		3,331
	L2			—		—
	T.			11,131		11,131
Wire Rope 28 m/m x 1,500 m	F	1	69	69	ditto	69
	L1			29		29
	L2			—		—
	T.			98		98
Wire Rope 16 m/m x 1,000 m	F	1	16	16	ditto	16
	L1			7		7
	L2			—		—
	T.			23		23
Wire Rope 14 m/m x 1,200 m	F	1	14	14	ditto	14
	L1			6		6
	L2			—		—
	T.			20		20
Tippler 75 kw x 3.3 r.p.m	F	2	1,418	2,836	—	2,836
	L1			1,211		1,211
	L2			—		30
	T.			4,047		30
Belt Conveyor 20 kw x 750 m/m x 150 m	F	1	1,890	1,890	—	1,890
	L1			807		807
	L2			—		40
	T.			2,697		40
Vibrating Feeder F22-DT 100 t/h x 1.5 kw	F	2	56	112	Included in Development Labour Cost	112
	L1			48		48
	L2			—		—
	T.			160		160

UNDERGROUND MINE

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Conveyor Scale NW-590 150 t/h	F L1 L2 T.	1	132	132 57 — 189	Included in Development Labour Cost	132 57 — 189
Battery Locomotive 10 t BL10-HX-610 10 km/h x 1,750 kg x 25 kw/2	F L1 L2 T.	2	2,140	4,280 1,828 — 6,108	ditto	4,280 1,828 — 6,108
Battery Locomotive 8t BL8-HX-610 8 km/h x 1,400 kg x 16 kw/2	F L1 L2 T.	5	1,635	8,175 3,490 — 11,665	ditto	8,175 3,490 — 11,665
Diesel Locomotive 6 t DM100 16 km/h x 1500 kg x 50 kw	F L1 L2 T.	2	367	734 315 — 1,049	ditto	734 315 — 1,049
Spare Parts for Battery Locomotive (20% of C & F)	E L1 L2 T.			2,470 1,055 — 3,525	— — — —	2,470 1,055 — 3,525
Spare Parts for Others (10% of C & F)	F L1 L2 T.			1,975 843 — 2,818	— — — —	1,975 843 — 2,818
Sub-Total	F L1 L2 T.			35,917 15,339 — 51,256	— — 120 120	35,917 15,339 120 51,376

d) Drainage Machinery

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Turbine Pump 1.4 m ³ /min. x 180 m x 55 kw	F L1 L2 T.	2	125	250 107 — 357	Included in Development Labour Cost	250 107 — 357
Turbine Pump 0.5 m ³ /min. x 280 m x 45 kw	F L1 L2 T.	1		107 46 — 153	ditto	107 46 — 153
Submersible Pump 0.4 m ³ /min. x 100 m x 15 kw	F L1 L2 T.	1	40	40 17 — 57	ditto	40 17 — 57

UNDERGROUND MINE

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Submersible Pump 0.2 m ³ /min. x 9 m x 1 kw	F	2	4.5	9	Included in Development Labour Cost	9
	L1			4		4
	L2			—		—
	T.			13		13
Spare Parts (10% of C & F)	F			41	—	41
	L1			17	—	17
	L2			—	—	—
	T.			58	—	58
Sub-Total	F			447	—	447
	L1			191	—	191
	L2			—	—	—
	T.			638	—	638

(e) Ventilation Machinery

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Main Fan 500 m ³ /min. x 200 m/m Aq x 300 kw	F	1	2,016	2,016	—	2,016
	L1			861	—	861
	L2			—	30	30
	T.			2,877	30	2,907
Local Fan 290 m ³ /min. x 100 m/m Aq x 7.5 kw	F	2	112	224	Included in Development Labour Cost	224
	L1			96		96
	L2			—		—
	T.			320		320
Local Fan 500 m ³ /min. x 100 m/m Aq x 15 kw	F	3	133	399	ditto	399
	L1			170		170
	L2			—		—
	T.			569		569
Ventilation Tube 600 m/m ϕ	F	2,500	0.22	550	ditto	550
	L1			235		235
	L2			—		—
	T.			785		785
Ventilation Tube 760 m/m ϕ	F	750	0.25	188	ditto	188
	L1			80		80
	L2			—		—
	T.			268		268
Spare Parts (5% of C & F)	F			169	ditto	169
	L1			73		73
	L2			—		—
	T.			242		242
Sub-Total	F			3,546	—	3,546
	L1			1,515	—	1,515
	L2			—	30	30
	T.			5,061	30	5,091

UNDERGROUND MINE

(f) Air & Water Machinery

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Air Compressor TW75E 7 kg/cm ² x 12 m ³ /min. x 75 kw	F L1 L2 T.	1	298	298 128 — 426	— — 5 5	298 128 5 431
Air Compressor BTD-ICC 8.5 kg/cm ² x 51.2 m ³ /min. x 240 kw	F L1 L2 T.	2	977	1,954 834 30 2,788	— — 30 30	1,954 834 30 2,818
Turbine Pump 0.4 m ³ /min. x 100 m x 15 kw	F L1 L2 T.	2	76	152 64 — 216	Included in Development Labour Cost	152 64 — 216
Spare Parts (10% of C & F)	F L1 L2 T.			240 103 — 343	— — — —	240 103 — 343
Sub-Total	F L1 L2 T.			2,644 1,129 — 3,773	— — 35 35	2,644 1,129 35 3,808

(g) Other Machinery

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Portable Methanometer 0 ~ 10%	F L1 L2 T.	60	7.4	444 191 — 635	Included in Development Labour Cost	444 191 — 635
Portable Methanometer 0 ~ 100%	F L1 L2 T.	10	7.4	74 32 — 106	ditto	74 32 — 106
CO Mask 2 hours	F L1 L2 T.	700	0.37	259 111 — 370	ditto	259 111 — 370
Portable Gas Alarm	F L1 L2 T.	8	20	160 68 — 228	ditto	160 68 — 228
Safety Lamp with Helmet & Belt	F L1 L2 T.	700	2.3	1,610 691 — 2,301	ditto	1,610 691 — 2,301

(g) Other Machinery

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Safety Shoess	F L1 L2 T.	700	0.15	105 45 — 150	Included in Development Labour Cost	105 45 — 150
CO Detector	F L1 L2 T.	10	2.5	25 11 — 36	ditto	25 11 — 36
O ₂ Self Rescue	F L1 L2 T.	30	2.5	75 32 — 107	ditto	75 32 — 107
Survey Instrument	F L1 L2 T.	1	92	92 39 — 131	ditto	92 39 — 131
Spare Parts (5% of C & F)	F L1 L2 T.			142 61 — 203	ditto	142 61 — 203
Sub-Total	F L1 L2 T.			2,986 1,281 — 4,267	— — — —	2,986 1,281 — 4,267
Total	F L1 L2 T.			73,626 31,525 — 105,150	— — 185 185	73,626 31,524 185 105,335

UNDERGROUND MINE

(V) PRELIMINARY EXPENSES

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Travel Expense	F	4 men	27.5	110	—	110
	L1			—	—	—
	L2			—	—	—
	T.			110	—	110
Fee	F	360 days	4.5	1,620	—	1,620
	L1			—	—	—
	L2			—	—	—
	T.			1,620	—	1,620
Total	F			1,730	—	1,730
	L1			—	—	—
	L2			—	—	—
	T.			1,730	—	1,730

UNDERGROUND MINE

(VI) CONSTRUCTION & DEVELOPMENT

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Arched Support 22.7 kg/m 3 pieces 2.947 m x 2, 3.200 m x 1 (with tie lod, bolt & nut)	F L1 L2 T.	2,996 set	1,536	4,602 1,967 — 6,569	Included in Development Labour Cost	4,602 1,967 — 6,569
I — Beam 3.0 m 22.7 kg/m (with tie lod)	F L1 L2 T.	1,334 set	0.458	611 261 — 872	ditto	611 261 — 872
I — Beam 3.6 m 22.7 kg/m (with tie lod)	F L1 L2 T.	306 set	0.55	168 72 — 240	ditto	168 72 — 240
Rail 22 kg/m (with fish plate, spike and sleeper)	F L1 L2 T.	10,449 m	0.2117	2,212 945 — 3,157	ditto	2,212 945 — 3,157
Rail 15 kg/m (with fish plate, spike and sleeper)	F L1 L2 T.	2,493 m	0.1388	346 147 — 493	ditto	346 147 — 493
Pipe 8" (with joint)	F L1 L2 T.	950 m	0.196	186 79 — 265	ditto	186 79 — 265
Pipe 6" (with joint)	F L1 L2 T.	1,810 m	0.1292	234 100 — 334	ditto	234 100 — 334
Pipe 4" (with joint)	F L1 L2 T.	3,530 m	0.0945	334 143 — 477	ditto	334 143 — 477
Pipe 3" (with joint)	F L1 L2 T.	1,525 m	0.0668	102 44 — 146	ditto	102 44 — 146
Pipe 2" (with joint)	F L1 L2 T.	2,000 m	0.0334	67 26 — 93	ditto	67 26 — 93
Pipe 1" (with joint)	F L1 L2 T.	1,375 m	0.016	22 9 — 31	ditto	22 9 — 31

UNDERGROUND MINE

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Millisecond Detonator 1.5 m	F	156,600 No.	0.0061	955	Included in Development Labour Cost	955
	L1			408		408
	L2			—		—
	T.			1,363		1,363
Ventilation Tube 660 m/m ϕ	F	380 m	0.22	84	ditto	84
	L1			34		34
	L2			—		—
	T.			118		118
Timber	F	1,180 m ³	0.1	—	ditto	—
	L1			—		—
	L2			118		118
	T.			118		118
Explosive Ammonium Nitrate	F	28,670 kg	0.018	—	ditto	—
	L1			—		—
	L2			516		516
	T.			516		516
Machine Oil	F	66,000 ℓ	0.005	—	ditto	—
	L1			—		—
	L2			330		330
	T.			330		330
Compressor Oil	F	350,000 ℓ	0.01	—	ditto	—
	L1			—		—
	L2			3,500		3,500
	T.			3,500		3,500
Fuel Oil	F	35,600 ℓ	0.0045	—	ditto	—
	L1			—		—
	L2			160		160
	T.			160		160
Rock Dust	F	200 kg	0.75	—	ditto	—
	L1			—		—
	L2			150		150
	T.			150		150
Concrete Cement, Sand, Aggregate	F	86 m ³	1.1	—	ditto	—
	L1			—		—
	L2			95		95
	T.			95		95
Miscellaneous Air Hose 2", Water Hose 1" Blasting Wire	F			152	—	152
	L1			66		66
	L2			—		9
	T.			218		227
Sub-Total	F			10,075	—	10,075
	L1			4,301		4,301
	L2			4,869		9
	T.			19,254		19,254

UNDERGROUND MINE

(000's Rupees)

Description	C.	No.	Unit Price	Materials	Installation	Total
Machine Maintenance	F			143	—	143
	L1			60	—	60
	L2			—	80	80
	T.			203	80	283
Portal	F			—	Included in Development Labour Cost	—
	L1			—		—
	L2			310		310
	T.			310		310
Power	F			—	—	—
	L1			—	—	—
	L2			2,791	—	2,791
	T.			2,791	—	2,791
Sub-Total	F			143	—	143
	L1			60	—	60
	L2			3,101	80	3,181
	T.			3,304	80	3,384
TOTAL	F			10,218	—	10,218
	L1			4,361	—	4,361
	L2			7,970	89	8,059
	T.			22,549	89	22,638

OPEN PIT

A (iii) MACHINERY & EQUIPMENT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation & Erection	Total
Blast hole drill 45R x 9-7/8" ϕ	F	4	9,950	39,800	1,990	41,790
	L1			16,995	—	16,995
	L2			—	398	398
	T.			56,795	2,388	59,183
Rotary drill HBM15K/HY (80 mm ϕ)	F	2	3,780	7,560	302	7,862
	L1			3,228	—	3,228
	L2			—	76	76
	T.			10,788	378	11,166
Power shovel P & H 2100 11.5 m ³	F	4	14,850	59,400	3,564	62,964
	L1			25,364	—	25,364
	L2			—	1,188	1,188
	T.			84,764	4,752	89,516
Hydraulic excavator WH30 6.0 m ³	F	2	3,570	7,140	214	7,354
	L1			3,049	—	3,049
	L2			—	143	143
	T.			10,189	357	10,546
Wheel loader KHI 110Z 5.6 m ³	F	4	3,020	12,080	362	12,442
	L1			5,158	—	5,158
	L2			—	242	242
	T.			17,238	604	17,842
Motor Scraper WS 23S 24 m ³	F.	7	3,665	25,655	770	26,425
	L1			10,955	—	10,955
	L2			—	513	513
	T.			36,610	1,283	37,893
Motor grader GD 705R-2	F	4	1,145	4,580	137	4,717
	L1			1,956	—	1,956
	L2			—	92	92
	T.			6,536	229	6,765
Bulldozer D 355A	F	19	3,070	58,330	583	58,913
	L1			24,907	—	24,907
	L2			—	2,333	2,333
	T.			83,237	2,916	86,153
Bulldozer D 155A	F	6	2,040	12,240	122	12,362
	L1			5,226	—	5,226
	L2			—	489	489
	T.			17,466	611	18,077
Rear dump truck HD 1200 120 t	F	18	9,720	174,960	3,500	178,460
	L1			74,707	—	74,707
	L2			—	5,248	5,248
	T.			249,667	8,748	258,415
Rear dump truck HD 460 460	F	12	3,540	42,480	849	43,329
	L1			18,138	—	18,138
	L2			—	1,275	1,275
	T.			60,618	2,124	62,742

OPEN PIT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation & Erection	Total
Explosives truck	F	2	360	720	—	720
	L1			307	—	307
	L2			—	14	14
	T.			1,027	14	1,041
Water Truck KB 122	F	2	731	1,462	—	1,462
	L1			624	—	624
	L2			—	29	29
	T.			2,086	29	2,115
Crusher KAP-35	F	2	280	560	—	560
	L1			239	—	239
	L2			—	11	11
	T.			799	11	810
Stores truck TK20	F	2	260	520	Included in Development Labour Cost	520
	L1			222		222
	L2			—		—
	T.			742		742
Fuel truck	F	2	260	522	—	522
	L1			222	—	222
	L2			—	—	—
	T.			742	—	742
35 t Truck crane TG-350M	F	1	1,740	1,740	17	1,757
	L1			743	—	743
	L2			—	70	70
	T.			2,483	87	2,570
6 t Truck crane TS-60L	F	1	467	467	5	472
	L1			199	—	199
	L2			—	19	19
	T.			666	24	690
Site vehicle Pick-up	F	12	72	864	Included in Development Labour Cost	864
	L1			369		369
	L2			—		—
	T.			1,233		1,233
Drainage pump EH 1530	F	4	31	124	—	124
	L1			52	—	52
	L2			—	2	2
	T.			176	2	178
Mobilewelding unit	F	2	129	258	Included in Development Labour Cost	258
	L1			110		110
	L2			—		—
	T.			368		368
4000W Lighting set	F	4	90	360	4	364
	L1			154	—	154
	L2			—	14	14
	T.			514	18	532

OPEN PIT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation & Erection	Total
Cargo truck TK20	F	4	260	1,040	Included in Development Labour Cost	1,040
	L1			444		444
	L2			—		—
	T.			1,484		1,484
Sub-Total	F			452,860	12,419	465,279
	L1			193,368	—	193,368
	L2			—	12,156	12,156
	T.			646,228	24,575	670,803
Spare Parts Blast hole drill	F	4	3,262	13,048	Included in Development Labour Cost	13,048
	L1			5,614		5,614
	L2			—		—
	T.			18,662		18,662
Spare parts Rotary drill	F	2	1,240	2,480	ditto	2,480
	L1			1,059		1,059
	L2			—		—
	T.			3,539		3,539
Spare parts Power shovel	F	4	5,280	21,120	ditto	21,120
	L1			9,018		9,018
	L2			—		—
	T.			30,138		20,138
Spare parts Hydraulic excavator	F	2	906	1,812	ditto	1,812
	L1			774		774
	L2			—		—
	T.			2,586		2,586
Spare parts Wheel loader	F	4	968	3,872	ditto	3,872
	L1			1,653		1,653
	L2			—		—
	T.			5,525		5,525
Spare parts Motor scraper	F	7	1,198	8,386	ditto	8,386
	L1			3,581		3,581
	L2			—		—
	T.			11,967		11,967
Spare parts Motor grader	F	4	371	1,484	ditto	1,484
	L1			634		634
	L2			—		—
	T.			2,118		2,118
Spare parts Bulldozer D 355A	F	19	1,048	19,912	ditto	19,912
	L1			8,502		8,502
	L2			—		—
	T.			28,414		28,414
Spare parts Bulldozer D 155A	F	6	685	4,110	ditto	4,110
	L1			1,755		1,755
	L2			—		—
	T.			5,865		5,865

OPEN PIT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation & Erection	Total
Spare parts Rear dump truck HD 1200	F	18	3,564	64,152	ditto	64,152
	L1			27,393		27,393
	L2			—		—
	T.			91,545	—	91,545
Spare parts Rear dump truck HD 460	F	12	1,296	15,552	ditto	15,552
	L1			6,642		6,642
	L2			—		—
	T.			22,194	—	22,194
Spare parts Others	F	1	2,000	2,000	ditto	2,000
	L1			854		854
	L2			—		—
	T.			2,854	—	2,854
Sub-Total	F			157,928	—	157,928
	L1			67,479	—	67,479
	L2			—	—	—
	T.			225,407	—	225,407
TOTAL	F			610,788	12,419	623,207
	L1			260,847	—	260,847
	L2			—	12,156	12,156
	T.			871,635	24,575	896,210

OPEN PIT

(VI) CONSTRUCTION & DEVELOPMENT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation & Erection	Total
Parts supply	F			67,610	Included in Labour Cost	67,612
Truck tyre	F			30,700		30,700
Explosives	F			81,252		81,252
Sub-Total				179,562		179,562
Custom duty etc.	L1			76,672	—	76,672
Repair materials	L2			13,522	ditto	13,522
Electric power	L2			4,450	—	4,450
Fuel, oil	L2			116,081		116,081
Sub-Total				134,053		134,053
TOTAL	F L1 L2 T.			179,562 76,672 134,053 390,287	ditto	179,562 76,672 134,053 390,287

SURFACE FACILITIES

A PRODUCTION FACILITIES

(i) LAND AND IMPROVEMENT

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Earth work for surface buildings	F L1 L2 T.	20,000 m ²	0.0062	— — 124 124	— — 124 124
Earth work for site of buildings	F L1 L2 T.	190,000 m ²	0.00042	— — 80 80	— — 80 80
Earth work for roads (Coal haulage road) 20 m wide	F L1 L2 T.	6 km	3.2	— — 19 19	— — 19 19
Earth work for roads (inside mine) 10 m wide	F L1 L2 T.	3 km	1.6	— — 5 5	— — 5 5
Earth work for roads (outside mine) 10 m wide	F L1 L2 T.	30 km	1.6	— — 48 48	— — 48 48
Earth work for railway. (Narrow gauge) 5 m wide	F L1 L2 T.	4 km	0.8	— — 3 3	— — 3 3
Sub-Total	F L1 L2 T.			— — 279 279	— — 279 279

SURFACE FACILITIES

(ii) BUILDINGS

a) FACTORY BUILDINGS

(000's Rupees)

Description	C.	No.	Unit Price	Installation Materials	Total
Sub station 25 m x 50 m Reinforced concrete and brick construction	F	1,250 m ²	0.81	—	—
	L1			—	—
	L2			1,013	1,013
	T.			1,013	1,013
Power house 6 m x 25 m Reinforced concrete and brick construction	F	150 m ²	0.81	—	—
	L1			—	—
	L2			121	121
	T.			121	121
Compressor room 8 m x 25 m Reinforced concrete and brick construction	F	200 m ²	0.81	—	—
	L1			—	—
	L2			162	162
	T.			162	162
Posting room, Safty lamp room etc. 20 m x 45 m Reinforced concrete and brick construction	F	900 m ²	0.81	—	—
	L1			—	—
	L2			729	729
	T.			729	729
Main winding room 10 m x 12 m Reinforced concrete and brick construction	F	120 m ²	0.81	—	—
	L1			—	—
	L2			97	97
	T.			97	97
Sub-winding room 5 m x 6 m Reinforced concrete and brick construction	F	30 m ²	0.81	—	—
	L1			—	—
	L2			24	24
	T.			24	24
Fan room 5 m x 6 m Reinforced concrete and brick construction	F	30 m ²	0.81	—	—
	L1			—	—
	L2			24	24
	T.			24	24
Sub-Total	F			—	—
	L1			—	—
	L2			2,170	2,170
	T.			2,170	2,170

SURFACE FACILITIES

b) ROADS

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Coal haulage road Asphalted 10 m effective wide	F	6 km	360	—	—
	L1			—	—
	L2			2,160	2,160
	T.			2,160	2,160
Inbye road Asphalted 3.5 m effective wide road	F	3 km	140	—	—
	L1			—	—
	L2			420	420
	T.			420	420
Outbye road Asphalted 3.5 m effective wide Road from Khanot to mines at Lakhra etc.	F	30 km	140	—	—
	L1			—	—
	L2			4,200	4,200
	T.			4,200	4,200
Sub-Total	F			—	—
	L1			—	—
	L2			6,780	6,780
	T.			6,780	6,780

c) WATER SUPPLY FACILITIES

1) Water Intake Facilities

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Pontonns 6 m x 30 m Steel structure	F	1 lot		—	—
	L1			—	—
	L2			124	124
	T.			124	124
Pump house 3 m x 6 m Timber construction	F	18 m ²	0.72	—	—
	L1			—	—
	L2			13	13
	T.			13	13
Sand basin 4 m x 30 m x 2 mH x 2 lot Reinforced concrete construction	F	240 m ³	1.82	—	—
	L1			—	—
	L2			437	437
	T.			437	437
Sub-Total	F			—	—
	L1			—	—
	L2			574	574
	T.			574	574

SURFACE FACILITIES

2) Water Purification Facilities

(000's Rupees)

Description	C.	No.	Unit Price	Installation Materials	Total
(A light weel) Well for flow of water control 2 m x 6 m x 3 mH Reinforced concrete construction	F L1 L2 T.	36 m ³	1.82	— — 66 66	— — 66 66
Coagulation basin etc. 10 m x 30 m x 3 mH x 2 2 m x 2 m x 3 mH 4 m x 12 m x 3 mH Reinforced concrete construction	F L1 L2 T.	1,956 m ³	1.82	— — 3,560 3,560	— — 3,560 3,560
Rapid filter 8 m x 4 m x 3 mH x 2 lot Reinforced concrete construction	F L1 L2 T.	192 m ³	1.82	— — 349 349	— — 349 349
Clear water reservoir 10 m x 10 m x 3.5 mH Reinforced concrete construction	F L1 L2 T.	350 m ³	1.82	— — 637 637	— — 637 637
Chlorination room 2 m x 3 m Timber construction	F L1 L2 T.	6 m ²	0.72	— — 4 4	— — 4 4
Sub-Total	F L1 L2 T.			— — 4,616 4,616	— — 4,616 4,616

3) Water Distribution Facilities

(000's Rupees)

Description	C.	No.	Unit Price	Installation Materials	Total
Service reservoir (Mine site) 10 m x 10 m x 5.5 mH Reinforced concrete construction	F L1 L2 T.	550 m ³	1.82	— — 1,001 1,001	— — 1,001 1,001
Service reservoir (Colony) 10 m x 28 m x 5.5 mH Reinforced concrete construction	F L1 L2 T.	1,540 m ³	1.82	— — 2,803 2,803	— — 2,803 2,803
Sub-Total	F L1 L2 T.			— — 3,804 3,804	— — 3,804 3,804
Total	F L1 L2 T.			— — 8,994 8,994	— — 8,994 8,994

SURFACE FACILITIES

(iii) MACHINERY & EQUIPMENT

(a) Water Supply Equipment

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Turbine pump 1.1 m ³ /min. x 185 mH x 55 kw	F	4	92	368	Included in Labour Cost	368
	L1			158		158
	L2			—		—
	T.			526		526
Turbine pump 1.7 m ³ /min. x 90 mH x 45 kw	F	3	77	231	ditto	231
	L1			99		99
	L2			—		—
	T.			330		330
Turbine pump 2.6 m ³ /min. x 55 mH x 37 kw	F	3	72	216	ditto	216
	L1			92		92
	L2			—		—
	T.			308		308
Turbine pump 1.7 m ³ /min. x 30 mH x 15 kw	F	3	41	123	ditto	123
	L1			52		52
	L2			—		—
	T.			175		175
Cleaning equipment 1 lot (Settling pond cleaning & local pump, Pipe etc.)	F	1 lot		205	ditto	205
	L1			88		88
	L2			—		—
	T.			293		293
Spare parts of pump etc. Amount price x 5%	F	1 lot		57	ditto	57
	L1			24		24
	L2			—		—
	T.			81		81
Installation of pump etc. Total weight 50 t	F	1 lot		—	40	—
	L1			—		40
	L2			—		40
	T.			—		40
Sub-Total	F			1,200	40	1,200
	L1			513		513
	L2			—		40
	T.			1,713		1,753

SURFACE FACILITIES

(b) Pipelines

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Ductile cast iron pipe JWWA G110 250A x 1,000 m	F L1 L2 T.	1,000 m	0.47/m	470 202 — 672	Included in Labour Cost	470 202 — 672
Ductile cast iron pipe JWWA G110 200A x 29,000 m	F L1 L2 T.	29,000 m	0.37/m	10,730 4,605 — 15,335	ditto	10,730 4,605 — 15,335
Ductile cast iron pipe JWWA G110 150A x 1,000 m	F L1 L2 T.	1,000 m	0.28/m	280 120 — 400	ditto	280 120 — 400
Ductile cast iron pipe JWWA G110 50A x 6,000 m	F L1 L2 T.	6,000 m	0.14/m	840 360 — 1,200	ditto	840 360 — 1,200
Spare parts of pipes Amount price x 3%	F L1 L2 T.	1 lot		370 160 — 530	ditto	370 160 — 530
Burying pipes cost 250A 13 km x 1 km 200A 11 km x 29 km 150A 10 km x 1 km 50A 7 km x 6 km	F L1 L2 T.	1 lot		— — — —	— — 384 384	— — 384 384
Earthwork cost 150 ~ 250A 4.7 km x 31 km 50A 9.4 km x 6 km	F L1 L2 T.	1 lot		— — — —	— — 202 202	— — 202 202
Sub-Total	F L1 L2 T.			12,690 5,447 — 18,137	— — 586 586	12,690 5,447 586 18,723

SURFACE FACILITIES

(c) Machine Repairshop

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Mechanical workshop Lathe, Shaper Drilling machine, Screw cutting etc.	F L1 L2 T.	1 lot		877 375 — 1,252	Included in Labour Cost	877 375 — 1,252
Blacksmith's shop Anvil, Roots blower, Smith hearth, Air hammer etc.	F L1 L2 T.	1 lot		284 123 — 407	ditto	284 123 — 407
Foundry shop Cupola, Turbo fan, Mill etc.	F L1 L2 T.	1 lot		380 163 — 543	ditto	380 163 — 543
Wood-working plant Circle saw, Belt saw, Wood lathe, Hand planer etc.	F L1 L2 T.	1 lot		603 260 — 863	ditto	603 260 — 863
Metal working shop Electric welding, Gas welding, Hack saw, Pipe cutter etc.	F L1 L2 T.	1 lot		310 133 — 443	ditto	310 133 — 443
Mine car repairshop Drilling machine, Welding Blowtorch, Hydraulic jack etc.	F L1 L2 T.	1 lot		93 40 — 133	ditto	93 40 — 133
Other Measure instrument Spare parts Installation etc.	F L1 L2 T.	1 lot		213 91 — 304	— — 45 45	213 91 45 349
Sub-Total	F L1 L2 T.			2,760 1,185 — 3,945	— — 45 45	2,760 1,185 45 3,990

SURFACE FACILITIES

(d) Heavy Vehicle Repairshop

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Repair bay Overhead crane, Hydraulic press, ARC welder, Bearing heater, Hydraulic jack etc.	F L1 L2 T.	1 lot		734 315 — 1,049	Included in Labour Cost	734 315 — 1,049
Engine specialization Engine cart, Parts wagon, Jib crane, Overhead crane, Valve litter, Tachometer etc.	F L1 L2 T.	1 lot		524 224 — 748	ditto	524 224 — 748
Power-train specialization Bench vice, Cylinder stand, Parts cleaner etc.	F L1 L2 T.	1 lot		29 12 — 41	ditto	29 12 — 41
Welding & Fabrication area Hydraulic press, ARC welder Semiautomatic welder, High speed cutter, Annil etc.	F L1 L2 T.	1 lot		106 45 — 151	ditto	106 45 — 151
Dynamometer room Absorption, Fuel tank, Cooling tower Overhead crane etc.	F L1 L2 T.	1 lot		397 171 — 568	ditto	397 171 — 568
Radiator repair room Jib crane, Repair stand Gas cutting tool Radiator tester etc.	F L1 L2 T.	1 lot		88 38 — 126	ditto	88 38 — 126
Component cleaning room Steam cleaner Hot water cleaner etc.	F L1 L2 T.	1 lot		29 12 — 41	ditto	29 12 — 41
Battery maintenance room Water purifier, Bench vice, Battery charger etc.	F L1 L2 T.	1 lot		219 94 — 313	ditto	219 94 — 313
Machine shop Lathe, Milling machine, Drilling machine, Sawing machine grinder etc.	F L1 L2 T.	1 lot		408 176 — 584	ditto	408 176 — 584
Electric component special Test bench, Armature lathe, Dryer, Motor puller set etc.	F L1 L2 T.	1 lot		114 49 — 163	ditto	114 49 — 163
Fuel injection pump special Pump test stand, P.T pump tester, Nozzle tester, Parts cleaner etc.	F L1 L2 T.	1 lot		186 81 — 267	ditto	186 81 — 267

SURFACE FACILITIES

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Turbocharger specialization & Tool room Hydraulic press, Hot oil bath, Hand truck etc.	F	1 lot		26	Included in Labour Cost	26
	L1		10	10		
	L2		—	—		
	T.		36	36		
Undercarriage repair shop Truck link repair machine Overhead crane etc.	F	1 lot		619	ditto	619
	L1		266	266		
	L2		—	—		
	T.		885	885		
Undercarriage repair shop Roller & Idler press, Jib crane, Overhead crane etc.	F	1 lot		928	ditto	928
	L1		399	399		
	L2		—	—		
	T.		1,327	1,327		
Preventive maintenance shop Air compressor Pump & Tester etc.	F	1 lot		799	ditto	799
	L1		343	343		
	L2		—	—		
	T.		1,142	1,142		
Tyre service shop Overhead crane, Tyre mounting, Hydraulic jack, Air compressor etc.	F	1 lot		323	ditto	323
	L1		138	138		
	L2		—	—		
	T.		461	461		
Painting & Cleaning shop Ventilating fan, Painting equipment, Car cleaner, Steam cleaner etc.	F	1 lot		140	ditto	140
	L1		60	60		
	L2		—	—		
	T.		200	200		
Hydraulic test room Hydraulic tester, Work bench etc	F	1 lot		106	ditto	106
	L1		45	45		
	L2		—	—		
	T.		151	151		
Other Measure instrument Spare parts Installation etc.	F	1 lot		488	—	488
	L1		208	208		
	L2		—	64		64
	T.		696	64		760
Sub-Total	F			6,263	—	6,263
	L1			2,686	—	2,686
	L2			—	64	64
	T.			8,949	64	9,013

SURFACE FACILITIES

(e) Power House Machinery

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Mobile Generator 100 kVA, 400 V, 3 phase, 50 Hz Sled mounted type	F	2	192	384	—	384
	L1			165	—	165
	L2			—	1	1
	T.			549	1	550
Emergency Generator 500 kVA, 3.3 kV, 3 phase c/w Switches & Panels	F	2	770	1,540	—	1,540
	L1			658	—	658
	L2			—	11	11
	T.			2,198	11	2,209
Spare parts for 5 years Operation for mobile Generator	F	1 lot		156	—	156
	L1			66	—	66
	L2			—	—	—
	T.			222	—	222
Spare parts for 5 years for Emergency generator	F	1 lot		616	—	616
	L1			263	—	263
	L2			—	—	—
	T.			879	—	879
Sub-Total	F			2,696	—	2,696
	L1			1,152	—	1,152
	L2			—	12	12
	T.			3,848	12	3,860

SURFACE FACILITIES

(f) Electrical Workshop

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Overhead crane 5 ton x 10 m Travelling type	F	1		97	Included in Development Labour Cost	97
	L1			42		42
	L2			—		—
	T.			139		139
Test Operation Device 3.3 kV, 400 V, 230 V & 24 V, Oil immersed self cooling type	F	1		141	ditto	141
	L1			60		60
	L2			—		—
	T.			201		201
Induction Regulator 3 phase, 50 kVA, 230 V ± 230 V	F	1		134	ditto	134
	L1			57		57
	L2			—		—
	T.			191		191
Grinding Machine Bench type	F	1		15	ditto	15
	L1			6		6
	L2			—		—
	T.			21		21
Coil Winding Machine Manual operation type	F	1		18	ditto	18
	L1			8		8
	L2			—		—
	T.			26		26
Instruments Apparatus and Tools, etc.	F	1		295	ditto	295
	L1			126		126
	L2			—		—
	T.			421		421
Sub-Total	F			700	—	700
	L1			299	—	299
	L2			—	—	—
	T.			999	—	999
TOTAL	F			26,309	—	26,309
	L1			11,282	—	11,282
	L2			—	747	747
	T.			37,591	747	38,338

SURFACE FACILITIES

A – iv) ELECTRICAL EQUIPMENT INSTALLATION

i) Surface Power Distribution

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Overhead power line 33 kV	F	10	287.5	2,875	—	2,875
	L1			1,225	—	1,225
	L2			—	76	76
	T.			4,100	76	4,176
Overhead power line 3.3 kV	F	4	172.5	690	—	690
	L1			294	—	294
	L2			—	21	21
	T.			984	21	1,005
Mine substation 4,000 kVA, 33 kV, 3.3 kV, 50 Hz c/w 4,000 kVA oil immersed 3 phase transformer, 1ry & 2ry circuit breakers, switchgears, etc.	F	1		7,978	—	7,978
	L1			3,424	—	3,424
	L2			—	38	38
	T.			11,402	38	11,440
Lighting transformer 5 kVA, 3.3 kV to 200 & 100 V, 50 Hz Single phase, oil immersed, c/w switches	F	4	4.25	17	—	17
	L1			7	—	7
	L2			—	1	1
	T.			24	1	25
Lighting fixture Fluorescent lamp, 100 V 20 W c/w automatic switch	F	100	0.53	53	—	53
	L1			23	—	23
	L2			—	2	2
	T.			76	2	78
Ditto Mercury lamp, 200 V, 1 kW	F	4	10.5	42	—	42
	L1			18	—	18
	L2			—	2	2
	T.			60	—	62
Fluorescent Lamp 100 V 20 W, c/w Startor	F	200	0.015	3	—	3
	L1			1	—	1
	L2			—	—	—
	T.			4	—	4
Mercury lamp 200 V, 1 kW, c/w Startor	F	8	0.25	2	—	2
	L1			1	—	1
	L2			—	—	—
	T.			3	—	3
Miscellaneous	F	1 lot		720	—	720
	L1			306	—	306
	L2			—	13	13
	T.			1,026	13	1,039
Spare parts for 5 years operation for 33 kV overhead power line	F			29	—	29
	L1			13	—	13
	L2			—	—	—
	T.			42	—	42

SURFACE FACILITIES

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Spare parts for 5 year Operation for 3.3 kV overhead power line	F			7	—	7
	L1			3	—	3
	L2			—	—	—
	T.			10	—	10
Spare parts for 5 years operation for Mine substation	F			406	—	406
	L1			174	—	174
	L2			—	—	—
	T.			580	—	580
Sub-Total	F			12,822	—	12,822
	L1			5,489	—	5,489
	L2			—	153	153
	T.			18,311	153	18,464

b) Open Pit Power

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Overhead power line 3.3 kV	F	14 km	165	2,310	—	2,310
	L1			987	—	987
	L2			—	45	45
	T.			3,297	45	3,342
Mobile substation 2,500 kVA, 33 kV to 3.3 kV, 50 Hz Sled mounted type, c/w 2,500 kVA Oil immersed 3 phase transformer, 1ry & 2ry switchgears, etc.	F	2	2,360	4,720	—	4,720
	L1			2,022	—	2,022
	L2			—	4	4
	T.			6,742	4	6,746
Mobile switching station 3.3 kV, 600 A, Sled mounted type	F	14	50	700	—	700
	L1			300	—	300
	L2			—	4	4
	T.			1,000	4	1,004
Trailing cable 3 kV, 3c x 80 mm ² with 3c ground wire, Synthetic rubber cable with steel wire braid	F	800 m	1.76	1,408	—	1,408
	L1			602	—	602
	L2			—	4	4
	T.			2,010	4	2,014
Trailing cable 3 kV, 3c x 22 mm ² with 3c ground wire Same as above	F	800 m	0.528	422	—	422
	L1			180	—	180
	L2			—	2	2
	T.			602	2	604

SURFACE FACILITIES

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Cable coupler 3 kV, for 3c x 80 mm ² trailing cable	F	4	154	616	Included in Development Labour Cost	616
	L1			264		264
	L2			—		—
	T.			880		880
Cable coupler 3 kV, for 3 c x 22 mm ² trailing cable	F	4	110	440	ditto	440
	L1			188		188
	L2			—		—
	T.			628		628
Termination Material for 3 kV 3c x 80 mm ² & 22 mm ² trailing cables	F	1 lot		852	ditto	852
	L1			364		364
	L2			—		—
	T.			1,216		1,216
Cable rul for trailing cable	F	4	392	1,568	ditto	1,568
	L1			670		670
	L2			—		—
	T.			2,238		2,238
Spare parts for 5 years operation for 3.3 kV overhead power line	F			24	—	24
	L1			10		10
	L2			—		—
	T.			34		34
Spare parts for 5 years for mobile substation	F			118	—	118
	L1			50		50
	L2			—		—
	T.			168		168
Spare parts for 5 years for mobile switching station	F			62	—	62
	L1			22		27
	L2			—		—
	T.			89		89
Sub-Total	F			13,240	—	13,240
	L1			5,664		5,664
	L2			—		59
	T.			18,904		59

c) Underground Mine

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Line switch 3.3 kV, 300 A, Dry type, Explosion proof	F	1		55	Included in Development Labour Cost	55
	L1			24		24
	L2			—		—
	T.			79		79

SURFACE FACILITIES

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Line switch 3.3 kV, 100 A, Dry type, Explosion proof	F L1 L2 T.	13	37	481 206 — 687	Included in Development Labour Cost	481 206 — 687
Mine power centre 300 kV, 3.3 kV to 200 V, 50 Hz 3 phase, Dry type Explosion proof	F L1 L2 T.	1		467 200 — 667	ditto	467 200 — 667
Mine power centre 200 kVA Same as above Same as above	F L1 L2 T.	1		433 186 — 619	ditto	433 186 — 619
Mine power centre 150 kVA Same as above	F L1 L2 T.	6	418	2,508 1,077 — 3,585	ditto	2,508 1,077 — 3,585
Air circuit breaker 3.3 kV, 100 A Explosion proof	F L1 L2 T.	8	133	1,064 457 — 1,521	ditto	1,064 457 — 1,521
Air circuit breaker 400 V, 400 A Explosion proof	F L1 L2 T.	9	24	216 92 — 308	ditto	216 92 — 308
Earth relay 400V, for alarm and trip Explosion proof	F L1 L2 T.	9	19	171 73 — 244	ditto	171 73 — 244
Gate end box 400 V, 225 A, Explosion proof	F L1 L2 T.	16	13	208 89 — 297	ditto	208 89 — 297
Gate end box 400 V, 225 A, Reversible Explosion proof	F L1 L2 T.	5	22	110 47 — 157	ditto	110 47 — 157
Gate end box 400 V, 50 A Explosion proof	F L1 L2 T.	5	9.2	46 20 — 66	ditto	46 20 — 66
Gate end box 400 V, 50 A, Reversible Explosion proof	F L1 L2 T.	7	14	98 42 — 140	ditto	98 42 — 140

SURFACE FACILITIES

c) U/G Mine

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Gate end box 400 V, 25 A	F	6	8.5	51	Included in Development Labour Cost	51
	L1			22		22
	L2			—		—
	T.			73		73
Control transformer	F	7	6.7	47	ditto	47
	L1			19		19
	L2			—		—
	T.			66		66
Push button switch 1-point, for signal Explosion proof	F	100	0.36	36	ditto	36
	L1			15		15
	L2			—		—
	T.			51		51
Push button switch 2-points, for remote operation control, Explosion proof	F	50	1.28	64	ditto	64
	L1			28		28
	L2			—		—
	T.			92		92
Signal bell 24V, Explosion proof	F	20	8.4	168	ditto	168
	L1			74		74
	L2			—		—
	T.			242		242
Mine cable 3 kV, 3c x 100 mm ² Armoured cable	F	600 m	0.4	240	ditto	240
	L1			102		102
	L2			—		—
	T.			342		342
Mine cable 3 kV, 3c x 50 mm ² Armoured cable	F	1,400 m	0.264	369	ditto	369
	L1			158		158
	L2			—		—
	T.			527		527
Mine cable 3 kV, 3c x 22 mm ² Armoured cable	F	1,800 m	0.152	274	ditto	274
	L1			117		117
	L2			—		—
	T.			391		391
Cabtyre cable 600 V, 4c x 50 mm ²	F	1,200 m	0.355	426	ditto	426
	L1			183		183
	L2			—		—
	T.			609		609
Cabtyre cable 600 V, 4c x 22 mm ²	F	500 m	0.254	127	ditto	127
	L1			54		54
	L2			—		—
	T.			181		181
Cabtyre cable 600 V, 4c x 14 mm ²	F	500 m	0.166	83	ditto	83
	L1			36		36
	L2			—		—
	T.			181		181

SURFACE FACILITIES

c) U/G Mine

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Cabtyre cable 600 V, 4c x 5.5 mm ²	F L1 L2 T.	500 m	0.096	48 20 — 68	Included in Development	48 20 — 68
Vinyl cabtyre cable 600 V, 4c x 5.5 mm ²	F L1 L2 T.	1,000 m	0.04	40 17 — 57	ditto	40 17 — 57
Lighting transformer 5 kVA, 400 V to 100 V, Dry type, Explosion proof	F L1 L2 T.	5	40	200 86 — 286	ditto	200 86 — 286
Lighting fixture Incadescent lamp 100 V 60 W, Explosion proof	F L1 L2 T.	500 m	0.4	200 85 — 285	ditto	200 85 — 285
Vinyl cord 600 V, 2c x 2 mm ²	F L1 L2 T.	2,500 m		26 11 — 37	ditto	26 11 — 37
Incadescent lamp 100 V, 60 W	F L1 L2 T.	5,000 m		26 11 — 37	ditto	26 11 — 37
Miscellaneous	F L1 L2 T.			103 43 — 146	ditto	103 43 — 146
Spare parts for 5 years operation for line switch 3 kV, 100 A	F L1 L2 T.	1 lot		104 45 — 149	—	104 45 — 149
Spare parts for 5 years operation for mine power centre 300 kVA	F L1 L2 T.	1 lot		41 18 — 59	—	41 18 — 59
Spare parts for 5 years operation for mine power centre 200 kVA	F L1 L2 T.	1 lot		41 18 — 59	—	41 18 — 59
Spare parts for 5 years operation for mine power centre 150 kVA	F L1 L2 T.	1 lot		246 105 — 351	—	246 105 — 351

SURFACE FACILITIES

c) U/G Mine

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Spare parts for 5 years operation for air circuit breaker 3.3 kV, 100 A	F	1 lot		312	—	312
	L1			134	—	134
	L2			—	—	—
	T.			446	—	446
Ditto for air circuit breaker 400 V, 400 A	F	1 lot		63	—	63
	L1			27	—	27
	L2			—	—	—
	T.			90	—	90
Ditto for earth relay 400 V	F	1 lot		72	—	72
	L1			31	—	31
	L2			—	—	—
	T.			103	—	103
Ditto for gate end box 600 V, 225 A	F	1 lot		45	—	45
	L1			19	—	19
	L2			—	—	—
	T.			64	—	64
Ditto for gate end box 600 V, 225 A, Reversible	F	1 lot		40	—	40
	L1			17	—	17
	L2			—	—	—
	T.			57	—	57
Ditto for gate end box 600 V, 50A	F	1 lot		8	—	8
	L1			3	—	3
	L2			—	—	—
	T.			11	—	11
Ditto for gate end box 600 V, 50 A, Reversible	F	1 lot		21	—	21
	L1			9	—	9
	L2			—	—	—
	T.			30	—	30
Ditto for gate end box 600 V, 25 A	F	1 lot		2	—	2
	L1			1	—	1
	L2			—	—	—
	T.			3	—	3
Ditto for control transformer	F	1 lot		9	—	9
	L1			4	—	4
	L2			—	—	—
	T.			13	—	13
Ditto for signal bell	F	1 lot		8	—	8
	L1			3	—	3
	L2			—	—	—
	T.			11	—	11
Ditto for lighting transformer	F	1 lot		8	—	8
	L1			3	—	3
	L2			—	—	—
	T.			11	—	11

SURFACE FACILITIES

c) Underground Mine

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Spare parts for 5 years operation for lighting fixture	F	1 lot		20	—	20
	L1			9	—	9
	L2			—	—	—
	T.			29	—	29
Sub-Total	F			9,425	—	9,425
	L1			4,040	—	4,040
	L2			—	—	—
	T.			13,465	—	13,465

d) Communication

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Private telephone exchanger	F	1		237	—	237
	L1			102	—	102
	L2			—	7	7
	T.			339	7	346
Dial telephone Desk type	F	70	0.6	42	Included in Development Labour Cost	42
	L1			18		18
	L2			—		—
	T.			60		60
Dial telephone Wall type	F	10	0.8	8	ditto	8
	L1			3		3
	L2			—		—
	T.			11		11
Dial telephone Noise proof	F	10	1.7	17	ditto	17
	L1			7		7
	L2			—		—
	T.			24		24
Dial telephone Explosion proof	F	10	6.5	65	ditto	65
	L1			28		28
	L2			—		—
	T.			93		93
Telephone cable 0.9 mm x 30P	F	1,000 m	0.059	59	ditto	59
	L1			25		25
	L2			—		—
	T.			84		84
Telephone cable 0.9 mm x 20P	F	1,000 m	0.042	42	ditto	42
	L1			18		18
	L2			—		—
	T.			60		60

SURFACE FACILITIES

d) Communication

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Telephone cable 0.9 mm x 10P	F	2,000 m	0.023	46	ditto	46
	L1			20		20
	L2			—		—
	T.			66		66
Telephone cable 0.9 mm x 5P	F	5,000 m	0.016	80	ditto	80
	L1			35		35
	L2			—		—
	T.			115		115
Vinyl cord 600 V, 2c x 2 mm	F	200 m	0.01	2	ditto	2
	L1			1		1
	L2			—		—
	T.			3		3
Miscellaneous for telephone system	F	1 lot		11	ditto	11
	L1			5		5
	L2			—		—
	T.			16		16
Fixed station for U/G Induction radio system Transmitting output: 5 W max. Receiving output: 3 W max.	F	1		56	—	56
	L1			24	—	24
	L2			—	1	1
	T.			80	1	81
Mobile station for above Transmitting output: 100 mW Intrinsically safe type	F	60	4.94	296	Included in Development Labour Cost	296
	L1			127		127
	L2			—		—
	T.			423		423
Battery charger for above Indoor type 1 charger for 10 mobile station	F	6	12.2	73	ditto	73
	L1			31		31
	L2			—		—
	T.			104		104
Antenna for above Vinyl cable 600 V, 1c x 5 mm ²	F	3,800 m	0.0135	51	ditto	51
	L1			21		21
	L2			—		—
	T.			72		72
Fixed station for open pit wireless system Output 25 W, c/w Antenna & D.C. power equipment	F	2	46	92	—	92
	L1			39	—	39
	L2			—	3	3
	T.			131	3	134
Mobile station for above Output 10 W, c/w Antenna	F	10	10.6	166	—	166
	L1			71	—	71
	L2			—	3	3
	T.			237	3	240
Antenna tower for above 18 m height, triangular type	F	1		12	—	12
	L1			5	—	5
	L2			—	3	3
	T.			17	3	20

SURFACE FACILITIES

d) Communication

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Spare parts for telephone system	F	1 lot		7	—	7
	L1		3	—	3	
	L2		—	—	—	
	T.		10	—	10	
Spare parts for inductive radio system	F	1 lot		50	—	50
	L1		22	—	22	
	L2		—	—	—	
	T.		72	—	72	
Spare parts for wireless system	F	1 lot		10	—	10
	L1		4	—	4	
	L2		—	—	—	
	T.		14	—	14	
Sub-Total	F			1,422	—	1,422
	L1			699	—	609
	L2			17	17	17
	T.			2,031	17	2,048
TOTAL	F			36,909	—	36,909
	L1			15,802	—	15,802
	L2			—	229	229
	T.			52,711	229	52,940

SURFACE FACILITIES

(v) PRELIMINARY EXPENSES

(000's Rupees)

Description		No. Required	Unit Price	Materials	Instillation	Total
Drilling machine Wireline system c/w Drilling pump, Mixers & Drilling tower, etc.	F L1 L2 T.	2	1,000	2,000 856 — 2,856	Included in Development Labour Cost	2,000 856 — 2,856
Fuel and oil for above	F L1 L2 T.	46.2 kℓ	5.2	— — 240 240	ditto	— — 240 240
Spare parts for 5 years operation for above	F L1 L2 T.	1 lot		600 258 — 858	ditto	600 258 — 858
Installation for mobile substation in open pit	F L1 L2 T.	2	125	250 — — 250	ditto	250 — — 250
Ditto for mine substation	F L1 L2 T.	1		442 — — 442	ditto	442 — — 442
Ditto for emergency generator	F L1 L2 T.	1 lot		75 — — 75	ditto	75 — — 75
Ditto for telephone system	F L1 L2 T.	1 lot		50 — — 50	ditto	50 — — 50
Ditto for wireles system	F L1 L2 T.	1 lot		50 — — 50	ditto	50 — — 50
Ditto for inductive radio system	F L1 L2 T.	1 lot		50 — — 50	ditto	50 — — 50
Ditto for micro computer	F L1 L2 T.	1 lot		46 — — 50	ditto	46 — — 50
Total	F L1 L2 T.			3,563 1,114 240 4,917	— — — —	3,563 1,114 240 4,917

SURFACE FACILITIES

(vi) CONSTRUCTION DEVELOPMENT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Spare parts for electrical equipment	F	1 lot		390	--	390
	L1			166	--	166
	L2			281	--	281
	T.			837	--	837
Fuel and oil for mobile generator	F	20.4 kl	5.2	--	--	--
	L1			--	--	--
	L2			106	--	106
	T.			106	--	106
Ditto for emergency generator	F	34.6 kl	5.2	--	--	--
	L1			--	--	--
	L2			180	--	180
	T.			180	--	180
Power charge	F	1,060 MWH	0.518	--	--	--
	L1			--	--	--
	L2			549	--	549
	T.			549	--	549
Total	F			390	--	390
	L1			166	--	166
	L2			1,116	--	1,116
	T.			1,672	--	1,672

SURFACE FACILITIES

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Maintenance Spare parts	F	2		191	—	191
	L1			82	—	82
	L2			—	—	—
	T.			273	—	273
Maintenance Repair machine civil & construction	F	2		—	—	—
	L1			—	—	—
	L2			540	—	540
	T.			540	—	540
Material Lubricating oil 100 ℓ/day x 300 day/year	F	60,000 ℓ	7	—	—	—
	L1			—	—	—
	L2			420	—	420
	T.			420	—	420
Sub-Total	F			191	—	191
	L1			82	—	82
	L2			960	—	960
	T.			1,233	—	1,233
TOTAL	F			581	—	581
	L1			248	—	248
	L2			2,076	—	2,076
	T.			2,905	—	2,905

SURFACE FACILITIES

B. ANCILLARY FACILITIES

(i) OFFICE BUILDING ETC.

(a) Office Building

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Administration Office 21 m x 70 m x 2F Reinforced concrete and brick construction	F L1 L2 T.	2,940 m ²	1.3	— — 3,822 3,822	— — 3,822 3,822
Foremen Office 10 m x 40 m x 2 lot Reinforced concrete and brick construction	F L1 L2 T.	800 m ²	1.3	— — 1,040 1,040	— — 1,040 1,040
Mine Office 10 m x 35 m Reinforced concrete and brick construction	F L1 L2 T.	350 m ²	1.3	— — 455 455	— — 455 455
Laboratory 5 m x 10 m Reinforced concrete and brick construction	F L1 L2 T.	50 m ²	1.3	— — 65 65	— — 65 65
Sub-Total	F L1 L2 T.	4,140 m ²		— — 5,382 5,382	— — 5,382 5,382

(b) Work Shop, Shed, Stores and Garrages

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Lighland Heavy Vehicle Hardstand Fuel strage 10 m x 20 m Steel and brick construction	F L1 L2 T.	200 m ²			
Under carriage repair shop 18 m x 36 m Steel and brick construction	F L1 L2 T.	648 m ²			
P.M. shop (Protection maintenance) 18 m x 27 m Steel and brick construction	F L1 L2 T.	486 m ²			
Parts warehouse 24 m x 54 m Steel and brick construction	F L1 L2 T.	1,296 m ²			

SURFACE FACILITIES

(b) Work Shop, Shed, Stores and Garrages

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Office 18 m x 24 m Steel and brick construction	F L1 L2 T.	432 m ²			
Work shop 42 m x 63 m Steel and brick construction	F L1 L2 T.	2,646 m ²			
Tyre service shop 18 m x 27 m Steel and brick construction	F L1 L2 T.	486 m ²			
Painting bay 18 m x 18 m Steel and brick construction	F L1 L2 T.	324 m ²			
Cleaning bay 18 m x 18 m Steel and brick construction	F L1 L2 T.	324 m ²			
Sub-Total	F L1 L2 T.	6,842 m ²			
Say	F L1 L2 T.	7,000 m ²	0.65	— — 4,550 4,550	— — 4,550 4,550
Work Shops Electrical shop 15 m x 40 m Steel and brick construction	F L1 L2 T.	600 m ²			
Electrical equipment 8 m x 10 m x 10 m x 15 m Steel and brick construction	F L1 L2 T.	230 m ²			
Mine car shop 10 m x 15 m Steel and brick construction	F L1 L2 T.	150 m ²			
Machine shop 12 m x 25 m x 10 m x 20 m Steel and brick construction	F L1 L2 T.	500 m ²			

SURFACE FACILITIES

(b) Work Shop, Shed, Stores and Garrages

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Machine shop 8 m x 30 m Steel and brick construction	F L1 L2 T.	240 m ²			
Store 8 m x (25 + 30) m Steel and brick construction	F L1 L2 T.	440 m ²			
Store 8 m x 40 m Steel and brick construction	F L1 L2 T.	320 m ²			
Sub-Total	F L1 L2 T.	2,480 m ²			
Say	F L1 L2 T.	2,500 m ²	0.65	— — 1,625 1,625	— — 1,625 1,625
Office Garrages Garrages 10 m x 20 m Steel and brick construction	F L1 L2 T.	200 m ²	0.65	— — 130 130	— — 130 130
Sub-Total	F L1 L2 T.	200 m ²		— — 130 130	— — 130 130
Total	F L1 L2 T.			— — 6,305 6,305	— — 6,305 6,305

SURFACE FACILITIES

(c) Explosive Stores

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Explosive stores 10 m x 10 m Reinforced and brick construction	F L1 L2 T.	100 m ²	1.89	— — 189 189	— — 189 189
Explosive control 5 m x 6 m Steel and brick construction	F L1 L2 T.	30 m ²	0.65	— — 20 20	— — 20 20
Sub-Total	F L1 L2 T.			— — 209 209	— — 209 209

(d) Others

(000's Rupees)

Description	C.	No.	Unit Price	Installation & Materials	Total
Foundation of sub station Concrete (50 m ³), Fence (310 m) Ballast (5,350 m ³ , 1,050 m ³)	F L1 L2 T.	1 lot		— — 532 532	— — 532 532
Oil storage 50 kℓ Tank and foundation	F L1 L2 T.	1 lot		— — 240 240	— — 240 240
Loading dock Concrete 105 m ³ , Pit 50 m ³	F L1 L2 T.	1 lot		— — 214 214	— — 214 214
Fence of prohibition for invasion	F L1 L2 T.	8 km	25	— — 200 200	— — 200 200
Fuel tanks and foundation 20 kl x 2 lot Tanks and foundation	F L1 L2 T.	2 lot	92	— — 184 184	— — 184 184
Banking of explosive stores Banking (1,440 m ³)	F L1 L2 T.	1 lot		— — 4 4	— — 4 4

SURFACE FACILITIES

(d) Others

Description	C.	No.	Unit Price	Installation & Materials	Total
Sewage treatment tank Cess pool (150 m ³) Reinforced concrete construction	F L1 L2 T.	1 lot		— — 100 100	— — 100 100
Sub-Total	F L1 L2 T.			— — 1,474 1,474	— — 1,474 1,474
Total	F L1 L2 T.			— — 13,370 13,370	— — 13,370 13,370

SURFACE FACILITIES

(e) Maintenance

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Maintenance for office buildings administration office, Foremen office, Mine office, Laboratory	F	1 lot		—	Included in Development Labour Cost	—
	L1			—		—
	L2			54		54
	T.			54		54
Ditto for workshop, etc. Light & heavy vehicle hardstand, Workshop & Office garage	F	1 lot		—	ditto	—
	L1			—		—
	L2			44		44
	T.			44		44
Ditto for explosive store, etc. Explosive store	F	1 lot		—	ditto	—
	L1			—		—
	L2			2		2
	T.			2		2
Total	F			—	—	—
	L1			—		—
	L2			100		100
	T.			100		100
GRAND TOTAL	F			—	—	—
	L1			—		—
	L2			13,470		13,470
	T.			13,470		13,470

SURFACE FACILITIES

B - (ii) FURNITURE AND FIXTURE

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Computer 1 x ACOS-250 Model 40 (256 KB) 1 x Magnetic disk (160 MB) Magnetic tape, Printer, Data punch etc.	F L1 L2 T.	1		2,200 940 — 3,140	Included in Development Labour Cost	2,200 940 — 3,140
Furniture and fixture for administration office	F L1 L2 T.	1 lot		— — 876 876	ditto	— — 876 876
Ditto for mine office and other service building	F L1 L2 T.	1 lot		— — 730 730	ditto	— — 730 730
Ditto for miners canteen etc.	F L1 L2 T.	1 lot		— — 584 584	ditto	— — 584 584
Ditto for rest house	F L1 L2 T.	1 lot		— — 292 292	ditto	— — 292 292
Ditto for hospital & dispensaries, etc.	F L1 L2 T.	1 lot		— — 1,460 1,460	ditto	— — 1,460 1,460
Ditto for residential buildings	F L1 L2 T.	1 lot		— — 1,168 1,168	ditto	— — 1,168 1,168
Spare parts for computer	F L1 L2 T.	1 lot		220 94 — 314	— — — —	220 94 — 314
Maintenance for above buildings	F L1 L2 T.	1 lot		— — 51 51	Included in Development Labour Cost	— — 51 51
Total	F L1 L2			2,420 1,034 5,161 8,615	— — — —	2,420 1,034 5,161 8,615

SURFACE FACILITIES

B – (iii) TRANSPORT WITHIN FACTORY

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Personnel car 4 wheel drive, Wagon type	F	6	108	648	Included in Development Labour Cost	648
	L1			275		275
	L2			—		—
	T.			923		923
Staff car Limousine	F	2	99	198	ditto	198
	L1			84		84
	L2			—		—
	T.			282		282
Ambulance 4 wheel drive c/w standard accessories	F	1		79	ditto	79
	L1			34		34
	L2			—		—
	T.			113		113
Maintenance for above	F	1 lot		—	Included in Development Labour Cost	—
	L1			—		—
	L2			134		134
	T.			134		134
Fuel and oil for above	F	144.5 kl	5.2	—	ditto	—
	L1			—		—
	L2			751		751
	T.			751		751
Total	F			925	— — — —	925
	L1			393		393
	L2			885		885
	T.			2,203		2,203

PREPARATION PLANT

(ii) BUILDINGS

(a) Factory Buildings

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Building and utility Dump hopper & pit 8,000 W x 18,000 H x 14,000 L 4,000 W x 2,500 H x 25,000 L Concrete construction		1				
Shed for dump hopper 8,000 W x 9,000 L x 4,000 H		1				
Raw coal bin 16,000 ϕ x 24,000 H Concrete construction		1				
Support for crusher 7,000 W x 8,500 L x 15,000 H Steel construction		1				
Shed for picking room 7,000 W x 29,000 L x 10,000 H Steel construction		1				
Clean coal silos 16,000 ϕ x 19,000 H Concrete construction		2				
Clean coal stockpile 64,000 ϕ , with tower and pit Concrete construction		1				
Support for track scale Concrete construction		1				
Tramp iron stocking floor 3,000 W x 3,000 L x 2,000 H Concrete construction		1				
Shed for electric room 5,000 W x 10,000 L x 10,000 H Steel construction		1				
Shed for weigher 4,000 W x 4,000 L x 3,000 Steel construction	F L1 L2 T.	1	→ Sub- Total	5,246 2,252 — 7,498	— — 970 970	5,246 2,252 970 8,468
Exterior Material Slate	F L1 L2 T.			736 311 — 1,047	— — 159 159	736 311 159 1,206

PREPARATION PLANT

(000's Rupees)

Description	C.	No. Required	Unit Price	Materials	Installation	Total
Concrete structure Hopper bin, silo	F			—	—	—
	L1			—	—	—
	L2			9,447	—	9,447
	T.			9,447	—	9,447
Foundation, Painting Temporary work	F			—	—	—
	L1			—	—	—
	L2			10,068	—	10,068
	T.			10,068	—	10,068
TOTAL	F			5,982	—	5,982
	L1			2,563	—	2,563
	L2			19,515	1,129	20,644
	T.			28,060	1,129	29,189

PREPARATION PLANT

(iii) MACHINERY AND EQUIPMENT

(a) Raw Coal Receiving & Storage

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Dump Hopper, 100 T 8,000 W x 9,000 L x 9,000 H Concrete construction		1				
Vibrating feeder, 400 TPH 1,300 W x 1,650 L x -12° 3.7 kW, 1,500 rpm, Suspention type		1				
Raw coal belt conveyor, 400 TPH 900 W x 143,000 L x 38,500 H 100 m/min, 75 kW, 1,500 rpm Gravity take-up		1				
Raw coal bin, 1,500 T 16,000 ϕ x 17,000 H Concrete construction		1				
Sump pump, 0.5 m ³ /min. x 20 mH 5.5 kW, 1,500 rpm Self-priming type	F	1	→ Sub- Total	6,482	—	6,482
	L1			2,763	—	2,763
Ventilation fan, 30 m ³ /min. 100 mm Aq, 2.2 kW, 1,500 rpm	L2	1		—	1,081	1,081
	T.			9,245	1,081	10,326

(b) Raw Coal Treatment

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Vibrating feeder, 150 TPH 800 W x 1,200 L x -12° 0.75 kW, 1,500 rpm Suspention type		4				
Plant feed belt conveyor 400 TPH 900 W x 42,000 L x 11,300 H, 100 m/min., 30 kW, 50 rpm Gravity take-up		1				
Magnet catcher 1,200 ϕ , Traveling 15 m/min. 0.75 kW, 1,500 rpm With electric trolley		1				

PREPARATION PLANT

(b) Raw Coal Treatment

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Raw coal screen, 400 TPH 2,200 W x 4,500 L x -15° 900 rpm, 50 mm Opening 22 kW, 1,500 rpm Ripple-flow type		1				
Picking belt conveyor, 40 TPH 15 m/min, 1,400 W x 20,000 L 2.2 kW, 50 rpm, Screen take-up		1				
Single roll crusher, 40 TPH 45 kW, 1,000 rpm		1				
No. 1 Reject belt conveyor, 20 TPH, 60 m/min, 750 W x 17,000 L x 2,500 H 3.7 kW, 50 rpm, Screw take-up		1				
No. 2 Reject belt conveyor, 20 TPH, 60 m/min, 68,000 L x 15,000 H 5.5 kW, 50 rpm, Gravity take-up		1				
Reject bin, 60 T 6,000 W x 6,000 L x 5,500 H Steel construction	F L1 L2 T.	1		8,814	-	8,814
			Sub- Total	3,765	-	3,765
				-	1,224	1,224
				12,579	1,224	13,803

(c) Clean Coal Storage

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
No. 1 Clean coal conveyor, 384 TPH, 100 m/min, 900W x 160,000 L x 20,000 H 45 kW, 1,500 rpm, Gravity take-up		1				
No. 2 Clean coal conveyor, 384 TPH, 100 m/min, 900 W x 24,000 L x 2,500 H 11 kW, 50 rpm, Screw take-up		1				
Clean coal silos, 2000 T 16,000 φ x 19,000 H, Concrete construction		2				

PREPARATION PLANT

(c) Clean Coal Storage

(000's Rupees)

Description	C.	No. Required	Unit Price	Materials	Installation	Total
Clean coal stockout conveyor 384 TPH, 100 m/min 900 W x 45,000 H x 13,000 H 30 kW x 50 rpm, Gravity take-up	F L1 L2 T.	1	→ Sub- Total	6,503	—	6,503
				2,771	—	2,771
				—	1,160	1,160
				9,274	1,160	10,434

(d) Clean Coal Loading

(000's Rupees)

Description	C.	No. Required	Unit Price	Materials	Installation	Total
Vibrating feeders, 280 TPH 1,100 W x 1,500 L x -10° 2.2 kW, 1,500 rpm, Suspension type		8				
Clean coal loading conveyor 800 TPH, 110 m/min, 1,200 W x 106,000 L x 24,000 H 90 kW, 1,500 rpm, Gravity take-up		1				
Clean coal loading hopper, 110 T 7,000 W x 7,000 L x 6,500 H Steel construction		1				
Vibrating feeder, 800 TPH 1,800 W x 2,000 L x -10° 7.5 kW, 1,500 rpm, Suspension type		1				
Vibrating feeders, 400 TPH 1,300 W x 1,650 L x -12° 3.7 kW, 1,500 rpm, Suspension type		5				
Clean coal reclaim conveyor 800 TPH, 110 m/min 1,200 W x 68,000 L x 2,000 H 30 kW, 50 rpm, Gravity take-up		1				
Sump pump, 0.5 m ³ /min Total head 15 m, 3.7 kW, 1,500 rpm, Self-priming type		2				
Ventilating Fan, 100 m ³ /min, 150 mm Aq, 7.5 kW, 1,500 rpm	F L1 L2 T.	1	→ Sub- Total	8,969	—	8,969
				3,835	—	3,835
				—	1,177	1,177
				12,804	1,177	13,981

PREPARATION PLANT

(e) Other Equipment

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Service Hoist Electric hoist for lump coal breaking, 5 T, Lift 8 m 5.5 kW, 1.5 kW, 1,500 rpm with steel hammer		1				
Electric hoist for rock removing 3 T, Lift 8 m 5.5 kW, 1.5 kW, 1,500 rpm with grab bucket		1				
Electric Hoist, 3 T Lift 15 m, 5.5 kW, 1.5 kW 1,500 rpm.	F L1 L2 T.	2	Sub- Total	885 380 — 1,265	— — 32 32	885 380 32 1,297
Weigher Conveyor scales For raw coal 2, Clean coal 2, Reject 1		5				
Weight Bridge For freight car	F L1 L2 T.	1		2,412 1,033 — 3,445	— — 64 64	2,412 1,033 64 3,509
Mobil Equipment Dump truck 24 m ³ , Model HD 320		1				
Bulldozer 12 Tonne, Model D 53A	F L1 L2 T.	1		3,219 1,369 — 4,588	— — — —	3,219 1,369 — 4,588
Laboratory Equipment Modified acme dryer, Type 1 300 W x 300 L x 300 H 240 V, 1 ϕ , 1 kW		1				
Muffle furnace 150 W x 100 H x 300 L 240 V, 1 ϕ , 4 kW		1				
Total sulphur measurement device 240 V, 1 ϕ		1				
New Model nenken type adiabatic calorimeter, 240 V, 750 W		1				
Riffer sampler, Type 10 Jaw crusher, N. 1023-A 240 V, 0.4 kW		1				

PREPARATION PLANT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Horizontal type brown crusher No. 1025-A, 240V, 0.4 kW		1				
Standard testing sieve shaker 240 V, 0.2 kW		1				
Standard sieves 200 mm ϕ , 45 mmH Stainless steel	F	15		283	—	283
	L1			121	—	121
Digital balance, NL-200 TP 240 V, 1 ϕ	L2	1		—	48	48
	T.		→ Sub- Total	404	48	452
Total	F			6,799	—	6,799
	L1			2,903	—	2,903
	L2			—	144	144
	T.			9,702	144	9,846
Spare parts (Preparation plant)	F			597	—	597
	L1			255	—	255
	L2	1		—	—	—
	T.			852	—	852
Spare parts	F			8,188	—	8,188
	L1			3,508	—	3,508
	L2			—	—	—
	T.			11,696	—	11,696
GRAND TOTAL	F			46,352	—	46,352
	L1			19,800	—	19,800
	L2			—	4,786	4,786
	T.			66,152	4,786	70,938

PREPARATION PLANT

iv) ELECTRICAL EQUIPMENT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Motors 3 kV x 3 ϕ x 50 Hz for over 55 kW, 400 V x 3 ϕ x 50 Hz for up to 55 kW		1				
Power receiving equipment Transformer: 3 kV/400 – 240 V, 3 ϕ , 1,000 kVA		1				
Control equipment Control center, Operating panel, Mimic panel, Relapy panel, Local switch		1				
Instrumentation equipment Sounding devices, Conveyor scales		1				
Lighting apparatus Mercury lamp, Incandescent lamp, Fluorescent lamp, Distribution panel	F	1	→ Sub- Total	3,747	—	3,747
	L1			1,601	—	1,601
Communication system Handset station, Speaker	L2 T.	1		— 5,348	1,193 1,193	1,193 6,541

PREPARATION PLANT

(vi) PRELIMINARY EXPENSIVE

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Detail design Supervision & erection	F			4,980		—
	F			5,635		—
	T.			10,615	—	—

(v) CONSTRUCTION & DEVELOPMENT

(000's Rupees)

Description		No. Required	Unit Price	Materials	Installation	Total
Maintenance	F			—	Included in Development Labour Cost	—
	L1			—		—
	L2			264		264
	T.			264		264
Materials	F			—	ditto	—
	L1			—		—
	L2			479		479
	T.			479		479
Power	F			—	ditto	—
	L1			—		—
	L2			197		197
	T.			197		197
Total	F			—		—
	L1			—		—
	L2			940		940
	T.			940		940

RAILWAY

A -- (i) BUILDINGS

(000's Rupees)

Description	C.	No. Required	Unit Price	Materials	Installation	Total
Check & Repair shop	F			—	—	—
Loco & Wagon repair by 900 m ²	L1			—	—	—
Loco. & Wagon check bay 600 m ²	L2	1,500 m ²	0.65/m ²	—	975	975
	T.			—	975	975
Worker house	F			—	—	—
100 m ² x 2 houses — 200 m ²	L1			—	—	—
	L2	200 m ²	0.5/m ²	—	100	100
	T.			—	100	100
Storage oil tank (include checking instrument & escape oil tank etc.) 20 kl (3 m ϕ x 3 mH) x 1 lot	F	1 lot		315	—	315
	L1			135	—	135
	L2			—	—	—
	T.			450	—	450
Cleaning equipment (include high water tank & spray etc.)	F	1 lot		525	—	525
	L1			225	—	225
	L2			—	—	—
	T.			750	—	750
Total	F			—	—	840
	L1			840	—	360
	L2			360	—	1,075
	T.			1,200	1,075	2,275

(b) RAILWAY & OTHERS

(000's Rupees)

Description	C.	No. Required	Unit Price	Materials	Installation	Total
Steel rails 40 kg/m (include lateral line)	F	32.5 km	435/km	14,138	—	14,138
	L1			6,060	—	6,060
Rail 435/km x 32.5 km	L2			—	1,138	1,138
Wage 35/km x 32.5 km	T.			20,198	1,138	21,336
Wooden sleepers	F			—	—	—
Sleepers 521/km x 32.5 km	L1			—	—	—
Wage 38/km x 32.5 km	L2	32.5 km	559/km	—	18,168	18,168
	T.			—	18,168	18,168
Stone ballast	F			—	—	—
Ballast 367/km x 32.5 km	L1			—	—	—
Wage 45/km x 32.5 km	L2	32.5 km	412/km	—	13,390	13,390
	T.			—	13,390	13,390
Turnout & installation	F	20	84	1,680	—	1,680
Turnout #10 x 84/s x 20 set	L1			720	—	720
Wage 3/s x 20 set	L2			—	60	60
	T.			2,400	60	2,460

RAILWAY

A – (ii) RAILWAY & OTHERS

(000's Rupees)

Description	C.	No. Required	Unit Price	Materials	Installation	Total
Rise the ground level works (include stone ballast)	F			—	—	—
Ballast 994/km x 32.5 km	L1			—	—	—
Wage 104/km x 32.5 km	L2	32.5 km	1,098/km	—	33,685	35,685
	T.			—	35,685	35,685
Bridges and other structures (include staff quarters etc.)	F			—	—	—
413/km x 32.5 km	L1			—	—	—
	L2	32.5 km	413/km	—	13,423	13,423
	T.			—	13,423	13,423
Rail & Turnout spare parts Amount (F) x 10%	F	1 lot		1,582	—	1,582
	L1			678	—	678
	L2			—	—	—
	T.			2,260	—	2,260
Total	F			17,400	—	17,400
	L1			7,458	—	7,458
	L2			—	81,864	81,864
	T.			24,858	81,864	106,722

RAILWAY

A – (iii) MACHINERY & EQUIPMENT

(000's Rupees)

Description	C.	No. Required	Unit Price	Materials	Installation	Total
Diesel electric locomotives DD51 type 18 mL x 3 mW x 4 mH x 84 t 110 HP x 2 set	F	3	10,000	30,000	—	30,000
	L1			12,855	—	12,855
	L2			—	—	—
	T.			42,855	—	42,855
Wagon 8.8 mL x 2.7 mW x 3.4 mH x 15 t Load 35 t	F	3	570	30,210	—	30,210
	L1			12,959	—	12,959
	L2			—	—	—
	T.			43,169	—	43,169
Passenger car 80 man/car x 4 car	F	4	2,025	8,100	—	8,100
	L1			3,474	—	3,474
	L2			—	—	—
	T.			11,574	—	11,574
Loading belt feeder Belt width 1,500 mm Capacity 1,000 t/h Scale Loadsell type	F	1	790	790	—	790
	L1			339	—	339
	L2			—	—	—
	T.			1,129	—	1,129
Loco. & Wagon etc. Spare parts Amount (F) x 10%	F	1 lot		6,910	—	6,910
	L1			2,962	—	2,962
	L2			—	—	—
	T.			9,872	—	9,872
Workshop equipment Lathe, Radial drilling, Overhead crane, Welding, Instrument etc.	F	1 lot		628	—	628
	L1			269	—	269
	L2			—	16	16
	T.			897	16	913
Railroad maintenance tools Motor car, Wooden car, Dump truck etc.	F			1,575	—	1,575
	L1			675	—	675
	L2			—	—	—
	T.			2,250	—	2,250
Workshop & Railroad mainte. Spare parts Amount (F) x 5%	F	1 lot		110	—	110
	L1			47	—	47
	L2			—	—	—
	T.			157	—	157
Total	F			78,323	—	78,323
	L1			33,580	—	33,580
	L2			—	16	16
	T.			111,903	16	111,919

RAILWAY

A – (iv) ELECTRICAL INSTALLATION

SIGNALL & COMMUNICATIONS

(000's Rupees)

Description	C.	No. Required	Unit Price	Materials	Installation	Total
Electric equipment 525/station x two station	F	2	525	1,050	—	1,050
	L1			450	—	450
	L2			—	—	—
	T.			1,500	—	1,500
Signall equipment 525/station x two station	F	2	525	1,050	—	1,050
	L1			450	—	450
	L2			—	—	—
	T.			1,500	—	1,500
Communication equipment 105/km x 65 km	F	65 km	105/km	6,825	—	6,825
	L1			2,925	—	2,925
	L2			—	—	—
	T.			9,750	—	9,750
Spare parts Amount (F) x 5%	F	1 lot		446	—	446
	L1			190	—	190
	L2			—	—	—
	T.			636	—	636
Total	F			9,371	—	9,371
	L1			4,015	—	4,015
	L2			—	—	—
	T.			13,386	—	13,386
GRAND TOTAL	F			105,934	—	105,934
	L1			45,413	—	45,413
	L2			—	82,955	82,955
	T.			151,347	82,955	234,302