

Appendix 11A-1 PRODUCTION COST BY COST CENTER

Appendix 11A-1 Production Cost by Cost Center [Summary]

(Unit : US\$ 1,000)

Department Cost Center Code	Production Department													US\$/ton
	DRP	LCP	SMP	HSMP	SKL	PL	CSMP	APL	OGL	Total				
	P01	P02	P03	P04	P05	P06	P07	P08	P09	PPP				
Variable Co Total	108,249	900	57,088	5,108	-289	-810	-2,453	-2,469	5,934	171,258	184			
Materials	80,739	520	44,471	237	35	0	60	336	6,134	132,532	142			
By-products(▲)	0	0	-3,960	-825	-330	-825	-3,300	-3,630	-495	-13,365	-14			
Utility	27,257	376	16,418	4,954	6	14	666	775	267	50,734	54			
Auxiliary Department	253	3	159	742	0	0	121	50	28	1,357	1			
Fixed Costs Total	25,190	1,456	19,693	19,823	1,183	1,489	5,376	5,643	3,511	83,364	89			
Labor	220	79	612	333	93	55	200	214	73	1,880	2			
Repair	8,410	295	3,332	3,962	194	281	1,113	1,207	757	19,551	21			
Depreciation	14,257	897	10,712	11,971	737	995	3,470	3,580	2,419	49,036	53			
Auxiliary Department	2,304	185	5,037	3,558	159	157	594	641	262	12,897	14			
Total Costs	133,439	2,356	76,781	24,931	893	678	2,924	3,174	9,446	254,622	273			
US\$/ton	143	3	82	27	1	1	3	3	10	273				

Appendix 11A-1 Production Cost by Cost Center (2)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Direct Reduction Plant (DRP)		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			107,996
Material Costs			80,739
Lump ore	50.97 US\$/ton	300,000 ton	15,291
Oxide pellet	54.54 US\$/ton	1,200,000 ton	65,448
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			27,257
Electricity	0.020 US\$/kWh	130.0 GWh	2,600
Water	0.300 US\$/m3	1,500,000 m3	450
Natural Gas	0.084 US\$/Nm3	285,000,000 Nm3	23,940
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	6,075,000 Nm3	267
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			22,887
Labor Costs			220
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	1.00 person	10
Assistant Section Manager	8,400 US\$/person	1.00 person	8
Engineer & Specialist	4,700 US\$/person	8.00 person	38
Worker	2,500 US\$/person	64.00 person	160
Repair Costs			8,410
Depreciation			14,257
Total Production Costs			130,883

Appendix 11A-1 Production Cost by Cost Center (3)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Lime Calcining Plant (LCP)		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			896
Material Costs			520
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	80,000 ton	520
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			376
Electricity	0.020 US\$/kWh	2.0 GWh	40
Water	0.300 US\$/m3	1,000 m3	0
Natural Gas	0.084 US\$/Nm3	4,000,000 Nm3	336
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			1,271
Labor Costs			79
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,800 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	0.00 person	0
Assistant Section Manager	8,400 US\$/person	1.00 person	8
Engineer & Specialist	4,700 US\$/person	1.00 person	5
Worker	2,500 US\$/person	25.00 person	63
Repair Costs			295
Depreciation			897
Total Production Costs			2,167

Appendix 11A-1 Production Cost by Cost Center (4)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Steelmaking Plant (SMP)		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			56,929
Material Costs			44,471
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	167,700 ton	27,671
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	53,100 ton	16,801
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	-24,000 ton	-3,960
Other Variable Operating Costs			16,418
Electricity	0.020 US\$/kWh	617.0 GWh	12,340
Water	0.300 US\$/m3	1,800,000 m3	540
Natural Gas	0.084 US\$/Nm3	4,000,000 Nm3	336
Oxygen Gas	0.088 US\$/Nm3	32,000,000 Nm3	2,816
Nitrogen Gas	0.044 US\$/Nm3	4,000,000 Nm3	176
Argon Gas	0.300 US\$/Nm3	700,000 Nm3	210
Fixed Costs			14,656
Labor Costs			612
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	1.00 person	10
Assistant Section Manager	8,400 US\$/person	2.00 person	17
Engineer & Specialist	4,700 US\$/person	3.00 person	14
Worker	2,500 US\$/person	227.00 person	568
Repair Costs			3,332
Depreciation			10,712
Total Production Costs			71,585

Appendix 11A-1 Production Cost by Cost Center (5)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Hot Strip Mill Plant (HSMP)		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			4,366
Material Costs			237
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	368,000 ton	37
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	40 ton	200
(-) By-products (Scrap)	165.00 US\$/ton	-5,000 ton	-825
Other Variable Operating Costs			4,954
Electricity	0.020 US\$/kWh	100.0 GWh	2,000
Water	0.300 US\$/m3	2,069,000 m3	621
Natural Gas	0.084 US\$/Nm3	27,777,000 Nm3	2,333
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			16,266
Labor Costs			333
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	1.00 person	10
Assistant Section Manager	8,400 US\$/person	1.50 person	13
Engineer & Specialist	4,700 US\$/person	1.50 person	7
Worker	2,500 US\$/person	120.00 person	300
Repair Costs			3,962
Depreciation			11,971
Total Production Costs			20,631

Appendix 11A-1 Production Cost by Cost Center (6)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Skinpass Line		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			-289
Material Costs			35
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	173,000 ton	35
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	-2,000 ton	-330
Other Variable Operating Costs			6
Electricity	0.020 US\$/kWh	0.3 GWh	6
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			1,023
Labor Costs			93
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	0.00 person	0
Assistant Section Manager	8,400 US\$/person	0.50 person	4
Engineer & Specialist	4,700 US\$/person	0.50 person	2
Worker	2,500 US\$/person	33.00 person	83
Repair Costs			194
Depreciation			737
Total Production Costs			734

Appendix 11A-1 Production Cost by Cost Center (7)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Plate Line		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			-811
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si. Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	-5,000 ton	-825
Other Variable Operating Costs			14
Electricity	0.020 US\$/kWh	0.2 GWh	4
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	20,000 Nm3	2
Oxygen Gas	0.088 US\$/Nm3	100,000 Nm3	9
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			1,332
Labor Costs			55
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	0.00 person	0
Assistant Section Manager	8,400 US\$/person	0.50 person	4
Engineer & Specialist	4,700 US\$/person	0.50 person	2
Worker	2,500 US\$/person	18.00 person	45
Repair Costs			281
Depreciation			995
Total Production Costs			521

Appendix 11A-1 Production Cost by Cost Center (8)

Production Cost (2007 Year)			
Division /Department	Production Department		
Cost Center	Gold Strip Mill Plant (CSMP)		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			-2,574
Material Costs			60
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	20,000 ton	60
Coil packing for APL & GGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	-20,000 ton	-3,300
Other Variable Operating Costs			666
Electricity	0.020 US\$/kWh	27.0 GWh	540
Water	0.300 US\$/m3	226,000 m3	68
Natural Gas	0.084 US\$/Nm3	678,000 Nm3	57
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	32,000 Nm3	1
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			4,782
Labor Costs			200
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	1.00 person	10
Assistant Section Manager	8,400 US\$/person	0.50 person	4
Engineer & Specialist	4,700 US\$/person	1.50 person	7
Worker	2,500 US\$/person	70.00 person	175
Repair Costs			1,113
Depreciation			3,470
Total Production Costs			2,208

Appendix 11A-1 Production Cost by Cost Center (9)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Annealing & Processing Line		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			-2,519
Material Costs			336
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & GGL	1.50 US\$/ton	224,000 ton	336
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	-22,000 ton	-3,630
Other Variable Operating Costs			775
Electricity	0.020 US\$/kWh	11.0 GWh	220
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	4,674,000 Nm3	393
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	3,690,000 Nm3	162
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			5,001
Labor Costs			214
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	0.00 person	0
Assistant Section Manager	8,400 US\$/person	1.00 person	8
Engineer & Specialist	4,700 US\$/person	1.00 person	5
Worker	2,500 US\$/person	79.00 person	198
Repair Costs			1,207
Depreciation			3,580
Total Production Costs			2,482

Appendix 11A-1 Production Cost by Cost Center (10)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Hot-dip galvanizing Line (CGL)		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			5,906
Material Costs			6,134
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	71,000 ton	107
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	2,982 ton	5,964
Chromate liquid	3,000.00 US\$/ton	21 ton	64
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	-3,000 ton	-495
Other Variable Operating Costs			267
Electricity	0.020 US\$/kWh	3.2 GWh	64
Water	0.300 US\$/m3	71,000 m3	21
Natural Gas	0.084 US\$/Nm3	1,420,000 Nm3	119
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	1,420,000 Nm3	62
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			3,249
Labor Costs			73
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.11 person	2
Section Manager	9,900 US\$/person	0.00 person	0
Assistant Section Manager	8,400 US\$/person	0.00 person	0
Engineer & Specialist	4,700 US\$/person	1.00 person	5
Worker	2,500 US\$/person	26.00 person	65
Repair Costs			757
Depreciation			2,419
Total Production Costs			9,155

Appendix 11A-1 Production Cost by Cost Center (11)

Production Cost (2007 Year)

Division /Department	Production Department		
Cost Center	Total of Production Department		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			169,901
Material Costs			132,532
Lump ore	50.97 US\$/ton	300,000 ton	15,291
Oxide pellet	54.54 US\$/ton	1,200,000 ton	65,448
Scrap	165.00 US\$/ton	167,700 ton	27,671
Limestone	6.50 US\$/ton	80,000 ton	520
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	53,100 ton	16,801
Hydrochloric acid	3.00 US\$/ton	20,000 ton	60
Coil packing for APL & CGL	1.50 US\$/ton	295,000 ton	443
Coil packing for HSMP	0.10 US\$/ton	368,000 ton	37
Coil packing for SKL	0.20 US\$/ton	173,000 ton	35
Zinc ingot	2,000.00 US\$/ton	2,982 ton	5,964
Chromate liquid	3,000.00 US\$/ton	21 ton	64
Roll	5,000.00 US\$/ton	40 ton	200
(-) By-products (Scrap)	165.00 US\$/ton	-81,000 ton	-13,365
Other Variable Operating Costs			50,734
Electricity	0.020 US\$/kWh	890.7 GWh	17,814
Water	0.300 US\$/m3	5,667,000 m3	1,700
Natural Gas	0.084 US\$/Nm3	327,569,000 Nm3	27,516
Oxygen Gas	0.088 US\$/Nm3	32,100,000 Nm3	2,825
Nitrogen Gas	0.044 US\$/Nm3	15,217,000 Nm3	670
Argon Gas	0.300 US\$/Nm3	700,000 Nm3	210
Fixed Costs			70,467
Labor Costs			1,880
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.45 person	12
Department Manager	21,600 US\$/person	1.00 person	22
Section Manager	9,900 US\$/person	4.00 person	40
Assistant Section Manager	8,400 US\$/person	8.00 person	67
Engineer & Specialist	4,700 US\$/person	18.00 person	85
Worker	2,500 US\$/person	662.00 person	1,655
Repair Costs			19,551
Depreciation			49,036
Total Production Costs			240,368

Appendix 11A-1 Production Cost by Cost Center (12)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Electric Power		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			0
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			0
Electricity	0.020 US\$/kWh	0.0 GWh	0
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			3,485
Labor Costs			66
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.13 person	3
Section Manager	9,900 US\$/person	1.00 person	10
Assistant Section Manager	8,400 US\$/person	1.00 person	8
Engineer & Specialist	4,700 US\$/person	3.00 person	14
Worker	2,500 US\$/person	12.00 person	30
Repair Costs			828
Depreciation			2,591
Total Production Costs			3,485

Appendix 11A-1 Production Cost by Cost Center (13)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Water		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			1,040
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & GGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			1,040
Electricity	0.020 US\$/kWh	52.0 GWh	1,040
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			3,797
Labor Costs			204
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.13 person	3
Section Manager	9,900 US\$/person	0.50 person	5
Assistant Section Manager	8,400 US\$/person	1.00 person	8
Engineer & Specialist	4,700 US\$/person	2.00 person	9
Worker	2,500 US\$/person	71.00 person	178
Repair Costs			885
Depreciation			2,707
Total Production Costs			4,837

Appendix 11A-1 Production Cost by Cost Center (14)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Natural Gas		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			0
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			0
Electricity	0.020 US\$/kWh	0.0 GWh	0
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			106
Labor Costs			29
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.13 person	3
Section Manager	9,900 US\$/person	0.10 person	1
Assistant Section Manager	8,400 US\$/person	0.40 person	3
Engineer & Specialist	4,700 US\$/person	0.40 person	2
Worker	2,500 US\$/person	7.40 person	19
Repair Costs			21
Depreciation			57
Total Production Costs			106

Appendix 11A-1 Production Cost by Cost Center (15)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Plant Air		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			200
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			200
Electricity	0.020 US\$/kWh	10.0 GWh	200
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			275
Labor Costs			39
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.13 person	3
Section Manager	9,900 US\$/person	0.10 person	1
Assistant Section Manager	8,400 US\$/person	0.40 person	3
Engineer & Specialist	4,700 US\$/person	0.40 person	2
Worker	2,500 US\$/person	11.40 person	29
Repair Costs			61
Depreciation			176
Total Production Costs			475

Appendix 11A-1 Production Cost by Cost Center (16)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Oxygen/Nitrogen/Argon Gas		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			0
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			0
Electricity	0.020 US\$/kWh	0.0 GWh	0
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			29
Labor Costs			29
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.13 person	3
Section Manager	9,900 US\$/person	0.10 person	1
Assistant Section Manager	8,400 US\$/person	0.40 person	3
Engineer & Specialist	4,700 US\$/person	0.40 person	2
Worker	2,500 US\$/person	7.40 person	19
Repair Costs			0
Depreciation			0
Total Production Costs			29

Appendix 11A-1 Production Cost by Cost Center (17)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Hydrogen Gas		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			24
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			24
Electricity	0.020 US\$/kWh	0.0 GWh	0
Water	0.300 US\$/m3	2,000 m3	1
Natural Gas	0.084 US\$/Nm3	280,000 Nm3	24
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			201
Labor Costs			29
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.13 person	3
Section Manager	9,900 US\$/person	0.10 person	1
Assistant Section Manager	8,400 US\$/person	0.40 person	3
Engineer & Specialist	4,700 US\$/person	0.40 person	2
Worker	2,500 US\$/person	7.40 person	19
Repair Costs			46
Depreciation			127
Total Production Costs			225

Appendix 11A-1 Production Cost by Cost Center (18)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Steam		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			93
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & GGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKI	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			93
Electricity	0.020 US\$/kWh	0.0 GWh	0
Water	0.300 US\$/m3	15,000 m3	5
Natural Gas	0.084 US\$/Nm3	1,052,000 Nm3	88
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			64
Labor Costs			29
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.13 person	3
Section Manager	9,900 US\$/person	0.10 person	1
Assistant Section Manager	8,400 US\$/person	0.40 person	3
Engineer & Specialist	4,700 US\$/person	0.40 person	2
Worker	2,500 US\$/person	7.40 person	19
Repair Costs			9
Depreciation			26
Total Production Costs			156

Appendix 11A-1 Production Cost by Cost Center (19)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	In-works Transportation		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			0
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			0
Electricity	0.020 US\$/kWh	0.0 GWh	0
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			2,474
Labor Costs			239
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.67 person	14
Section Manager	9,900 US\$/person	1.00 person	10
Assistant Section Manager	8,400 US\$/person	2.00 person	17
Engineer & Specialist	4,700 US\$/person	10.00 person	47
Worker	2,500 US\$/person	60.00 person	150
Repair Costs			273
Depreciation			1,962
Total Production Costs			2,474

Appendix 11A-1 Production Cost by Cost Center (20)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Analysis & Inspection		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			0
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			0
Electricity	0.020 US\$/kWh	0.0 GWh	0
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			742
Labor Costs			163
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.67 person	14
Section Manager	9,900 US\$/person	1.00 person	10
Assistant Section Manager	8,400 US\$/person	1.00 person	8
Engineer & Specialist	4,700 US\$/person	2.00 person	9
Worker	2,500 US\$/person	48.00 person	120
Repair Costs			159
Depreciation			419
Total Production Costs			742

Appendix 11A-1 Production Cost by Cost Center (21)

Production Cost (2007 Year)

Division /Department		Auxiliary Department		
Cost Center		Maintenance Shop		
		Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs				0
Material Costs				0
Lump ore	50.97 US\$/ton	0 ton	0	
Oxide pellet	54.54 US\$/ton	0 ton	0	
Scrap	165.00 US\$/ton	0 ton	0	
Limestone	6.50 US\$/ton	0 ton	0	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0	
Hydrochloric acid	3.00 US\$/ton	0 ton	0	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0	
Coil packing for HSMP	0.10 US\$/ton	0 ton	0	
Coil packing for SKL	0.20 US\$/ton	0 ton	0	
Zinc ingot	2,000.00 US\$/ton	0 ton	0	
Chromate liquid	3,000.00 US\$/ton	0 ton	0	
Roll	5,000.00 US\$/ton	0 ton	0	
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0	
Other Variable Operating Costs				0
Electricity	0.020 US\$/kWh	0.0 GWh	0	
Water	0.300 US\$/m3	0 m3	0	
Natural Gas	0.084 US\$/Nm3	0 Nm3	0	
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0	
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0	
Argon Gas	0.300 US\$/Nm3	0 Nm3	0	
Fixed Costs				873
Labor Costs				673
General Manager	31,500 US\$/person	0.00 person	0	
Deputy General Manager	26,600 US\$/person	0.05 person	1	
Department Manager	21,600 US\$/person	0.13 person	3	
Section Manager	9,900 US\$/person	1.00 person	10	
Assistant Section Manager	8,400 US\$/person	6.00 person	50	
Engineer & Specialist	4,700 US\$/person	22.00 person	103	
Worker	2,500 US\$/person	202.00 person	505	
Repair Costs				22
Depreciation				178
Total Production Costs				873

Appendix 11A-1 Production Cost by Cost Center (22)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Plant Administration		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			0
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			0
Electricity	0.020 US\$/kWh	0.0 GWh	0
Water	0.300 US\$/m3	0 m3	0
Natural Gas	0.084 US\$/Nm3	0 Nm3	0
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			850
Labor Costs			785
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.67 person	14
Section Manager	9,900 US\$/person	5.00 person	50
Assistant Section Manager	8,400 US\$/person	14.00 person	118
Engineer & Specialist	4,700 US\$/person	59.00 person	277
Worker	2,500 US\$/person	130.00 person	325
Repair Costs			0
Depreciation			65
Total Production Costs			850

Appendix 11A-1 Production Cost by Cost Center (23)

Production Cost (2007 Year)

Division /Department	Auxiliary Department		
Cost Center	Total of Auxiliary Department		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			1,357
Material Costs			0
Lump ore	50.97 US\$/ton	0 ton	0
Oxide pellet	54.54 US\$/ton	0 ton	0
Scrap	165.00 US\$/ton	0 ton	0
Limestone	6.50 US\$/ton	0 ton	0
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
Hydrochloric acid	3.00 US\$/ton	0 ton	0
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	0
Coil packing for HSMP	0.10 US\$/ton	0 ton	0
Coil packing for SKL	0.20 US\$/ton	0 ton	0
Zinc ingot	2,000.00 US\$/ton	0 ton	0
Chromate liquid	3,000.00 US\$/ton	0 ton	0
Roll	5,000.00 US\$/ton	0 ton	0
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	0
Other Variable Operating Costs			1,357
Electricity	0.020 US\$/kWh	62.0 GWh	1,240
Water	0.300 US\$/m3	17,000 m3	5
Natural Gas	0.084 US\$/Nm3	1,332,000 Nm3	112
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	0
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	0
Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fixed Costs			12,897
Labor Costs			2,285
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	0.55 person	15
Department Manager	21,600 US\$/person	3.00 person	65
Section Manager	9,900 US\$/person	10.00 person	99
Assistant Section Manager	8,400 US\$/person	27.00 person	227
Engineer & Specialist	4,700 US\$/person	100.00 person	470
Worker	2,500 US\$/person	564.00 person	1,410
Repair Costs			2,304
Depreciation			8,308
Total Production Costs			14,254

Appendix 11A-1 Production Cost by Cost Center (24)

Production Cost (2007 Year)

Division /Department	Production Division		
Cost Center	Total of Production Division		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			171,811
Material Costs			132,532
Lump ore	50.97 US\$/ton	300,000 ton	15,291
Oxide pellet	54.54 US\$/ton	1,200,000 ton	65,448
Scrap	165.00 US\$/ton	167,700 ton	27,671
Limestone	6.50 US\$/ton	80,000 ton	520
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	53,100 ton	16,801
Hydrochloric acid	3.00 US\$/ton	20,000 ton	60
Coil packing for APL & CGL	1.50 US\$/ton	295,000 ton	443
Coil packing for HSMP	0.10 US\$/ton	368,000 ton	37
Coil packing for SKL	0.20 US\$/ton	173,000 ton	35
Zinc ingot	2,000.00 US\$/ton	2,982 ton	5,964
Chromate liquid	3,000.00 US\$/ton	21 ton	64
Roll	5,000.00 US\$/ton	40 ton	200
(-) By-products (Scrap)	165.00 US\$/ton	-81,000 ton	-13,365
Other Variable Operating Costs			52,644
Electricity	0.020 US\$/kWh	952.7 GWh	19,054
Water	0.300 US\$/m3	5,684,000 m3	1,705
Natural Gas	0.084 US\$/Nm3	328,881,000 Nm3	27,626
Oxygen Gas	0.088 US\$/Nm3	32,000,000 Nm3	2,816
Nitrogen Gas	0.044 US\$/Nm3	28,022,000 Nm3	1,233
Argon Gas	0.300 US\$/Nm3	700,000 Nm3	210
Fixed Costs			83,364
Labor Costs			4,165
General Manager	31,500 US\$/person	0.00 person	0
Deputy General Manager	26,600 US\$/person	1.00 person	27
Department Manager	21,600 US\$/person	4.00 person	86
Section Manager	9,900 US\$/person	14.00 person	139
Assistant Section Manager	8,400 US\$/person	35.00 person	294
Engineer & Specialist	4,700 US\$/person	118.00 person	555
Worker	2,500 US\$/person	1,226.00 person	3,065
Repair Costs			21,855
Depreciation			57,343
Total Production Costs			255,175

Appendix 12A-1 SALES PRICE ESTIMATIONS

Appendix 12A-1 SALES PRICE ESTIMATION

(販売価格の推定)

調査団はワールド・スチール・ダイナミックス、メタル・ブリティン、CAPMAS の統計データおよび調査期間中に需要家から得られた情報に基づいてエジプトにおける販売価格を推定した。

1. ワールド・スチール・ダイナミックスおよびメタル・ブリティンからのデータに基づく販売価格の推定

調査団は表 12A-1-1、図 12A-1-1、図 12A-1-2 に示すようなデータと情報に基づき販売価格を推定した。これらのデータと情報はヨーロッパのコマーシャル・グレード商品のスポット FOB 販売価格を示す。エジプトにおける販売価格はこれに船賃、保険費、輸入税等を加えねばならない。エジプトにおける現在の輸入税は 20%であるが、将来の輸入税は 10%になるだろうと推定している。

Table 12A-1-1 Average Spot Sales Price in Europe

Products	World Steel Dynamics data (Antwerp spot price) (1981-1997)	Metal Bulletin data (Outside Europe FOB) (1995-1997)
	Average (US\$/t)	Average (US\$/t)
Hot rolled coil	330	322
Plate	-	459
Cold rolled coil	430	431
Galvanized coil	-	553

Source : World Steel Dynamics, Metal Bulletin

エジプトまでの船賃	: 30 US\$/t
保険費、税金、荷役料	: 15 US\$/t
輸入税	: 10 %

ワールド・スチール・ダイナミックスに基づく推定販売価格は以下の通り計算される。

熱延コイル	$330+30+15+33=408$ US\$/t
冷延コイル	$430+30+15+43=518$ US\$/t

メタル・ブリテンに基ずく推定販売価格は以下の通り計算される。

熱延コイル	$322+30+15+32=399$ US\$/t
厚板	$459+30+15+46=550$ US\$/t
冷延コイル	$431+30+15+43=519$ US\$/t
亜鉛めっきコイル	$553+30+15+55=653$ US\$/t

2. エジプト市場の実体に基ずく推定販売価格

調査期間中に得られた価格データを表 12A-1-2 にまとめた。製品価格は熱延コイルでトンあたり 320-600 ドル、冷延コイルでトンあたり 500-1200 ドルである。これらの範囲のなかで低価格品はロシアや EISCO からの低グレード製品か低品質製品であり、高価格品は日本やヨーロッパからの高グレード製品か高品質製品である。新薄板工場では高品質のコマーシャル製品を生産することになっており、販売価格は熱延コイルでトンあたり 400-500 ドル、冷延コイルでトンあたり 500-600 ドルであろう。(Appendix 3A-1-2 参照)

Table 12A-1-2 Estimated Price from Actual Market in Egypt

unit : US\$/ton

Steel Grade	Hot rolled coil & Plate	Cold rolled coil	Galvanized coil
All steel grade	320-600	500-1200	780

3. CAPMAS 統計データに基ずく推定販売価格

製品単価(=販売価格)は表 12A-1-3 に示すように CAPMAS 統計データの合計金額を合計量で割ることにより計算される。

Table 12A-1-3 Unit Price of Imported Flat Products in Egypt

	Total value	Total quantity	Unit price
Hot rolled coil	US\$ 129,326,750	290,517 ton	445 US\$
Cold rolled coil	US\$ 95,015,339	179,354 ton	530 US\$

Source : CAPMAS Statistical Data, 1996

4. 販売価格の比較と販売価格の推定

新薄板工場における推定販売価格は表 12A-1-4 に示すように、前述のデータを比較することによって得られる。

Table 12A-1-4 Estimated Sales Price in Egypt

	World Steel Dynamics Report	Metal Bulletin data	Estimation from actual market price	CAPMAS statistical data	Estimated sales price
Hot rolled coil	408	399	400-500	445	410
Skinpassed coil	-	-	400-500	445	430
Plate	-	550	400-500	445	500
Cold rolled coil	518	519	500-600	530	530
Galvanized coil	-	653	780	-	680

unit : US\$/ton

5. 結論

- 1) 熱延コイルの販売価格はトンあたり 410 ドルと推定。
- 2) スキンパスコイルの販売価格は高品質製品のため熱延コイルよりトンあたり 20 ドル高いと推定。
- 3) 厚板製品の販売価格はトンあたり 500 ドルと推定。
- 4) 冷延コイルの販売価格は熱延コイルよりトンあたり 100-150 ドル高く、トンあたり 530 ドルと推定。
- 5) 亜鉛めっきコイルの販売価格は冷延コイルよりトンあたり 100-200 ドル高く、エジプトにおける販売価格はトンあたり 680 ドルと推定。

Figure 12A-1-1 Sales Price Data from World Steel Dynamics

PaineWebber

WORLDSTEELDYNAMICS

Exhibit 43
WSD PriceTrack history: Hot-rolled coil
(\$/ metric tonne)

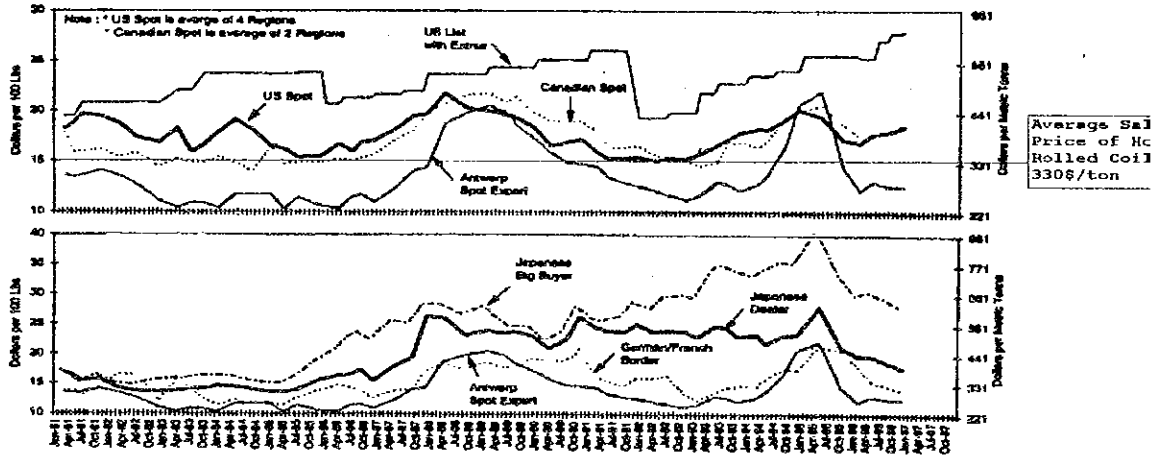


Exhibit 44
WSD PriceTrack history: Cold-rolled coil
(\$/ metric tonne)

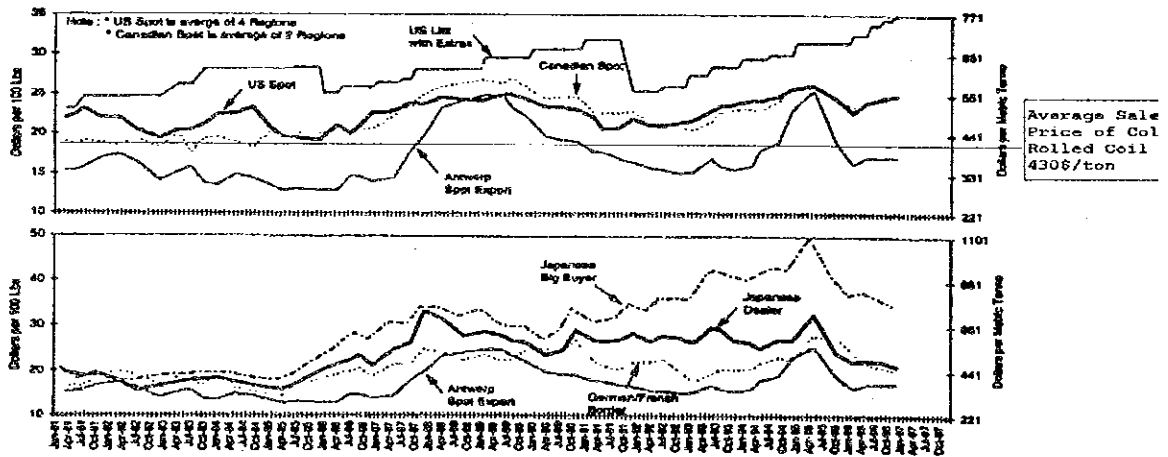
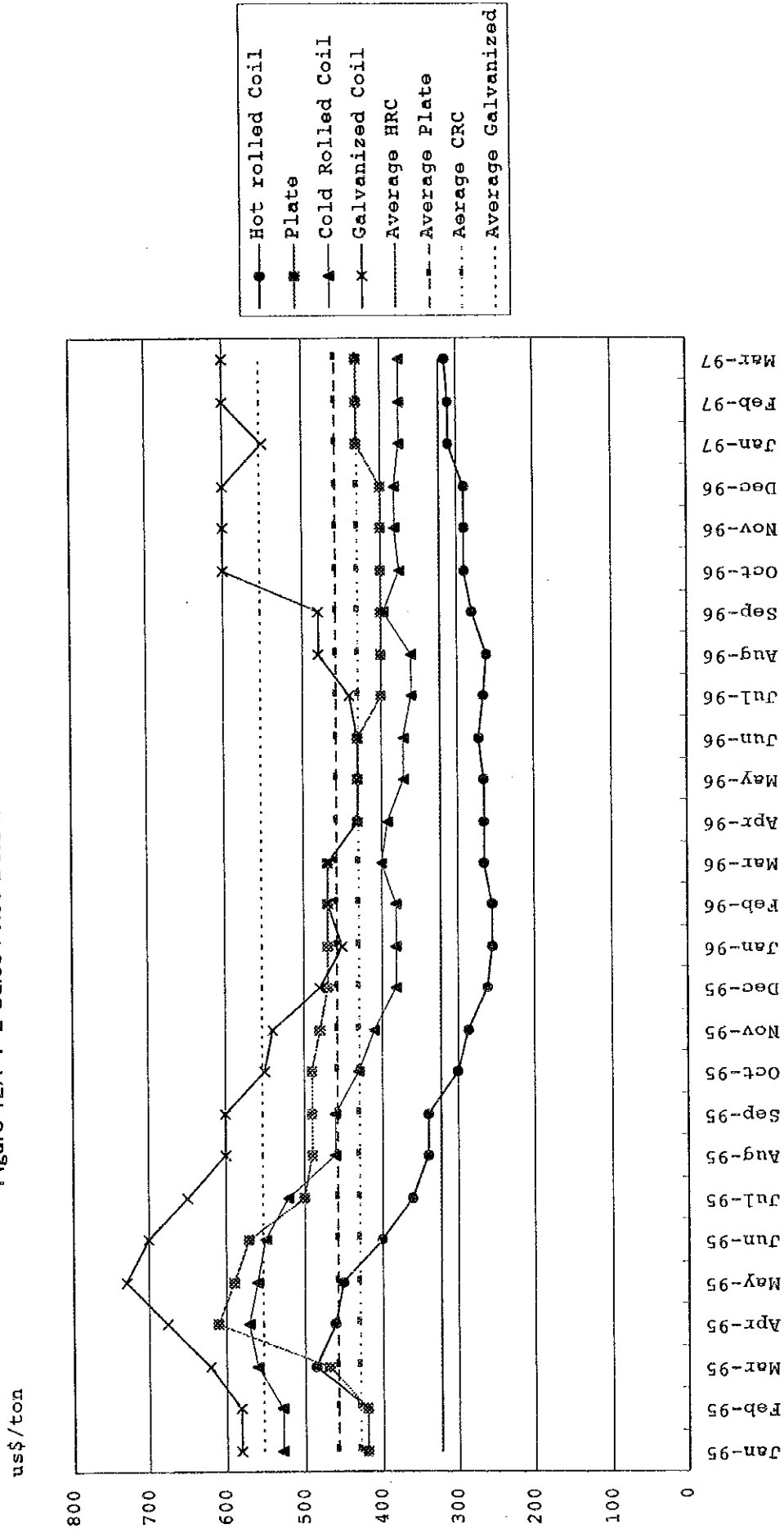


Figure 12A-1-2 Sales Price Data from Metal Bulletin



Appendix 12A-2 THE DISCOUNT CASH FLOW TABLE FOR IRR

Appendix 12A-2 The Discount Cash Flow Table for IRR

(Unit: 1,000 US\$)

<ROI (IRR on Total Investment) before Tax>		-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cash Flows from Operating Activities		0	0	0	0	-11,400	76,047	213,425	223,778	241,113	241,113	241,113	241,113	241,113	241,113	241,113	241,113	241,113	241,113	241,113	280,440
EBIT (Earnings before Interest & Tax)		0	0	0	0	0	21,210	143,070	147,570	164,670	164,670	183,735	183,735	183,735	183,735	183,735	183,735	183,735	183,735	183,735	183,735
Depreciation		0	0	0	0	0	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378
Amortization		0	0	0	0	0	19,065	19,065	19,065	19,065	19,065	0	0	0	0	0	0	0	0	0	0
Changes in Inventories		0	0	0	0	-11,400	-21,605	-6,088	-235	0	0	0	0	0	0	0	0	0	0	0	39,328
Cash Flows from Investing Activities		-3,157	-21,712	-308,882	-547,500	-216,099	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	158,045
Changes in Fixed Assets		-2,832	-20,927	-306,614	-525,178	-146,475	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	158,045
Changes in Deferred Assets		-325	-785	-2,268	-22,322	-69,625	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flows		-3,157	-21,712	-308,882	-547,500	-227,499	76,047	213,425	223,778	241,113	241,113	232,768	241,113	241,113	241,113	241,113	232,768	241,113	241,113	241,113	438,485

ROI before Tax = 14.39%

(Unit: 1,000 US\$)

<ROI (IRR on Total Investment) after Tax>		-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cash Flows from Operating Activities		0	0	0	0	-11,400	70,084	213,425	223,778	233,446	233,446	233,446	185,636	183,805	181,974	180,143	185,979	184,148	182,317	182,317	221,645
EBIT (Earnings before Interest & Tax)		0	0	0	0	0	21,210	143,070	147,570	164,670	164,670	183,735	183,735	183,735	183,735	183,735	183,735	183,735	183,735	183,735	183,735
Tax Provision		0	0	0	0	0	-5,963	0	0	-7,666	-7,666	-7,666	-55,477	-57,307	-59,138	-60,969	-55,133	-56,964	-58,795	-58,795	-58,795
Depreciation		0	0	0	0	0	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378
Amortization		0	0	0	0	0	19,065	19,065	19,065	19,065	19,065	0	0	0	0	0	0	0	0	0	0
Changes in Inventories		0	0	0	0	-11,400	-21,605	-6,088	-235	0	0	0	0	0	0	0	0	0	0	0	39,328
Cash Flows from Investing Activities		-3,157	-21,712	-308,882	-547,500	-216,099	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	158,045
Changes in Fixed Assets		-2,832	-20,927	-306,614	-525,178	-146,475	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	158,045
Changes in Deferred Assets		-325	-785	-2,268	-22,322	-69,625	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flows		-3,157	-21,712	-308,882	-547,500	-227,499	70,084	213,425	223,778	233,446	233,446	225,102	185,636	183,805	181,974	180,143	177,635	184,148	182,317	182,317	379,690

ROI after Tax = 12.60%

(Unit: 1,000 US\$)

<ROE (IRR on Equity)>		-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cash Flows from Operating Activities		0	0	0	0	-11,400	12,871	158,212	172,286	187,676	193,397	199,118	157,029	160,920	164,810	168,701	180,258	184,148	182,317	182,317	221,645
Net Income after Tax		0	0	0	0	0	-41,966	85,857	96,078	111,233	116,954	141,740	99,651	103,542	107,432	111,323	122,880	126,770	124,939	124,939	124,939
Depreciation		0	0	0	0	0	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378
Amortization		0	0	0	0	0	19,065	19,065	19,065	19,065	19,065	0	0	0	0	0	0	0	0	0	0
Changes in Inventories		0	0	0	0	-11,400	-21,605	-6,088	-235	0	0	0	0	0	0	0	0	0	0	0	39,328
Cash Flows from Investing Activities		-3,157	-21,712	-308,882	-547,500	-216,099	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	158,045
Changes in Fixed Assets		-2,832	-20,927	-306,614	-525,178	-146,475	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	158,045
Changes in Deferred Assets		-325	-785	-2,268	-22,322	-69,625	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash Flows from Financing Activities		1,578	10,856	212,824	451,442	140,630	0	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	0	0	0	0
Proceeds from Long-term Debt		1,578	10,856	212,824	451,442	140,630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment of Long-term Debt		0	0	0	0	0	0	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	0	0	0	0
Net Cash Flows		-1,578	-10,856	-96,058	-96,058	-86,869	12,871	74,479	90,553	105,942	111,664	109,041	75,296	79,187	83,077	86,968	90,180	184,148	182,317	182,317	379,690

ROE = 21.75%

Appendix 12A-3 DATA ON FIGURES FOR SENSITIVITY ANALYSIS

Appendix 12A-3 Data on Figures for Sensitivity Analysis

Change Rate	-10	-8	-6	-4	-2	0	2	4	6	8	10
ROI by Changes in Capital Investment Cost	16.10	15.74	15.39	15.05	14.71	14.39	14.08	13.78	13.48	13.19	12.91
ROI by Changes in Production Volume	13.21	13.47	13.71	13.95	14.18	14.39	14.60	14.80	15.00	15.18	15.36
ROI by Changes in Production Cost	15.51	15.29	15.07	14.85	14.62	14.39	14.16	13.93	13.70	13.47	13.23
ROI by Changes in Sales Price	11.37	12.00	12.62	13.22	13.81	14.39	14.96	15.52	16.07	16.61	17.15

Inflation rate	-5	-4	-3	-2	-1	0	1	2	3	4	5
ROI by Changes in Inflation Rate	5.82	7.87	9.69	11.37	12.93	14.39	15.79	17.12	18.40	19.63	20.83

Interest Rate	3	5	7	9	11	13	15	17
ROE by Changes in Financing Cost	26.70	24.25	21.75	19.23	16.73	14.29	11.94	9.72

Appendix 12A-4 FINANCIAL ANALYSIS ON 20% EXPORT BASIS

Table 12A-4-4 Summary of Profit and Loss (20 % Export Case)

	1 2005		2 2006		3 2007		4 2008		5 2009		10 2014		15 2019	
	(Unit)	(US\$/ton)	(1,000 US\$)	(US\$/ton)	(1,000 US\$)	(US\$/ton)	(1,000 US\$)	(US\$/ton)	(1,000 US\$)	(US\$/ton)	(1,000 US\$)	(US\$/ton)	(1,000 US\$)	(US\$/ton)
Sales Volume		(ton)	535,708	917,417	933,000	933,000	933,000	933,000	933,000	933,000	933,000	933,000	933,000	933,000
for Domestic Market		(ton)	428,567	733,933	746,400	746,400	746,400	746,400	746,400	746,400	746,400	746,400	746,400	746,400
for Exports		(ton)	107,142	183,483	186,600	186,600	186,600	186,600	186,600	186,600	186,600	186,600	186,600	186,600
Sales		(US\$/ton)	242,909	416,265	454	423,343	454	423,343	454	423,343	454	423,343	454	423,343
for Domestic Market		(US\$/ton)	204,747	350,896	478	356,863	478	356,863	478	356,863	478	356,863	478	356,863
for Exports		(US\$/ton)	38,162	65,369	356	66,480	356	66,480	356	66,480	356	66,480	356	66,480
Cost of Sales		(US\$/ton)	181,979	252,305	275	255,175	273	255,175	273	255,175	273	255,175	273	255,175
Variable Costs		(US\$/ton)	98,615	168,942	184	171,811	184	171,811	184	171,811	184	171,811	184	171,811
Fixed Costs		(US\$/ton)	83,364	83,364	91	83,364	89	83,364	89	83,364	89	83,364	89	83,364
Gross Profit		(US\$/ton)	60,930	163,960	179	168,168	180	168,168	180	168,168	180	168,168	180	168,168
General & Administrative Expenses		(US\$/ton)	49,726	38,026	41	38,026	41	20,926	22	20,926	22	1,861	2	1,861
Operating Income		(US\$/ton)	11,205	125,934	137	130,143	139	147,243	158	147,243	158	166,308	178	166,308
Non-operating Expenses		(US\$/ton)	57,213	57,213	62	51,492	55	45,771	49	40,049	43	11,443	12	0
Net income before Taxes		(US\$/ton)	-46,008	68,721	75	78,651	84	101,472	109	107,193	115	154,865	166	166,308
Net income after Taxes		(US\$/ton)	-51,971	68,721	75	78,651	84	93,806	101	99,527	107	99,473	107	113,089
Net Profit Margin		(%)	-21.4	16.5	18.6	18.6	22.2	23.5	23.5	23.5	23.5	23.5	26.7	

Table 12A-4-6 The Discount Cash Flow Table for IRR (20 % Export Case)

<ROI (IRR on Total Investment) before Tax> (Unit: 1,000 US\$)

	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Cash Flows from Operating Activities	0	0	0	0	-11,400	66,042	196,289	206,351	223,686	223,686	223,686	223,686	223,686	223,686	223,686	223,686	223,686	223,686	223,686	223,686	263,013
EBIT (Earnings before Interst & Tax)	0	0	0	0	0	11,205	125,934	130,143	147,243	147,243	166,308	166,308	166,308	166,308	166,308	166,308	166,308	166,308	166,308	166,308	166,308
Depreciation	0	0	0	0	0	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378
Amortization	0	0	0	0	0	19,065	19,065	19,065	19,065	19,065	0	0	0	0	0	0	0	0	0	0	0
Changes in Inventories	0	0	0	0	-11,400	-21,605	-6,088	-235	0	0	0	0	0	0	0	0	0	0	0	0	39,328
Cash Flows from Investing Activities	-3,157	-21,712	-308,882	-547,500	-216,099	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	0	158,045
Changes in Fixed Assets	-2,832	-20,927	-306,614	-525,178	-146,475	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	0	158,045
Changes in Deferred Assets	-325	-785	-2,268	-22,322	-69,625	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flows	-3,157	-21,712	-308,882	-547,500	-227,499	66,042	196,289	206,351	223,686	223,686	215,341	223,686	223,686	223,686	223,686	215,341	223,686	223,686	223,686	223,686	421,059

ROI before Tax = 13.23%

<ROI (IRR on Total Investment) after Tax> (Unit: 1,000 US\$)

	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Cash Flows from Operating Activities	0	0	0	0	-11,400	60,080	196,289	206,351	216,019	216,019	216,019	173,786	171,955	170,124	168,293	174,129	172,298	170,467	170,467	209,795	
EBIT (Earnings before Interst & Tax)	0	0	0	0	0	11,205	125,934	130,143	147,243	147,243	166,308	166,308	166,308	166,308	166,308	166,308	166,308	166,308	166,308	166,308	
Tax Provision	0	0	0	0	0	-5,963	0	0	-7,666	-7,666	-7,666	-49,900	-51,731	-53,562	-55,392	-49,557	-51,388	-53,218	-53,218	-53,218	
Depreciation	0	0	0	0	0	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	
Amortization	0	0	0	0	0	19,065	19,065	19,065	19,065	19,065	0	0	0	0	0	0	0	0	0	0	
Changes in Inventories	0	0	0	0	-11,400	-21,605	-6,088	-235	0	0	0	0	0	0	0	0	0	0	0	0	39,328
Cash Flows from Investing Activities	-3,157	-21,712	-308,882	-547,500	-216,099	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	0	158,045
Changes in Fixed Assets	-2,832	-20,927	-306,614	-525,178	-146,475	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	0	158,045
Changes in Deferred Assets	-325	-785	-2,268	-22,322	-69,625	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flows	-3,157	-21,712	-308,882	-547,500	-227,499	60,080	196,289	206,351	216,019	216,019	207,675	173,786	171,955	170,124	168,293	165,784	172,298	170,467	170,467	367,840	

ROI after Tax = 11.47%

< ROE (IRR on Equity) > (Unit: 1,000 US\$)

	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Cash Flows from Operating Activities	0	0	0	0	-11,400	2,866	139,076	154,859	170,249	175,970	181,691	145,179	149,070	152,960	156,851	168,407	172,298	170,467	170,467	209,795	
Net Income after Tax	0	0	0	0	0	-51,971	68,721	78,651	93,806	99,527	124,313	87,801	91,692	95,582	99,473	111,029	114,920	113,089	113,089	113,089	
Depreciation	0	0	0	0	0	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	57,378	
Amortization	0	0	0	0	0	19,065	19,065	19,065	19,065	19,065	0	0	0	0	0	0	0	0	0	0	
Changes in Inventories	0	0	0	0	-11,400	-21,605	-6,088	-235	0	0	0	0	0	0	0	0	0	0	0	0	39,328
Cash Flows from Investing Activities	-3,157	-21,712	-308,882	-547,500	-216,099	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	0	158,045
Changes in Fixed Assets	-2,832	-20,927	-306,614	-525,178	-146,475	0	0	0	0	0	-8,345	0	0	0	0	-8,345	0	0	0	0	158,045
Changes in Deferred Assets	-325	-785	-2,268	-22,322	-69,625	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash Flows from Financing Activities	1,578	10,856	212,824	451,442	140,630	0	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	0	0	0	0	0
Proceeds from Long-term Debt	1,578	10,856	212,824	451,442	140,630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment of Long-term Debt	0	0	0	0	0	0	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	0	0	0	0	0
Net Cash Flows	-1,578	-10,856	-96,058	-96,058	-86,869	2,866	57,343	73,126	88,515	94,237	91,614	63,446	67,336	71,227	75,117	78,330	172,298	170,467	170,467	367,840	

ROE = 18.99%

JICA