## Appendix 11A-1 PRODUCTION COST BY COST CENTER

Survival

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

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ts.	Droduction	Droduction Cost (2007)						•			)	(Unit : US\$ 1,000)	1,000)
Column         LCP         SMP         HSMP         SKL         PL         CSMP         APL         CGL         Total           Ne Column         P01         P02         P03         P04         P05         P06         P07         P08         P09         PPP           Ne Column         P01         P02         P03         P04         P05         P06         P07         P08         P09         PPP           Ne Column         P01         P02         P03         P04         P05         P06         P07         P08         P09         PPP           Ne Column         P01         P02         P03         P04         P05         P06         P07         P08         P07         P08         PPP         PPP           Ne Column         P01         P02         P04         P05         P05         P07         P08         P04         P07         P08         P04         P07         P08         P04         P04         P08         P04         P	Department					Produc	tion Depart	ment					US\$ ton
Political   Pol	Cost Cente	·	DRP	LCP	SMP	HSMP	SKL	ď	CSMP	APL	CGL	Totai	
le Co Total 108,249 900 57,088 5.108 -289 -810 -2.453 -2.469 5.934 171.258 11    Materials Se,739 520 44.471 237 35 0 60 336 6.134 132.532 13.365    Materials Se,739 520 44.471 237 35 0 60 60 336 6.134 132.532    By-products(▲) 27,257 376 16,418 4,954 6 14 666 775 267 50.734    Auxiliary Department 2.304 185 5.037 3.562 15.91 17.91 1	Code		P01	P02	P03	P04	P05	90d	P07	P08	P09	ddd	
ials so,739	Variable Co	› Total	108,249	006	57,088	5,108	-289	-810	-2,453	-2,469	5,934	171,258	184
roducts(♠)		Materials	80,739	520	44,471	237	35	0	09	336	6,134	132,532	142
ary Department         25.257         376         16,418         4,954         6         14         666         775         267         50.734           ary Department         253         3         159         742         0         0         121         50         28         1.357           ir         2219         1,456         19,693         19,823         1,183         1,489         5,376         5,643         3,511         83,364           ir         84,10         295         3,332         3,96         194         281         1,113         1,207         757         19,551           sciation         14,257         897         10,712         11,971         737         995         3,470         3,580         2,419         49,036           sciation         2,304         185         5,037         3,580         159         641         262         12,897           siny Department         2,304         185         5,037         24,931         893         678         3,174         9,446         254,622         2           siny Department         133,439         2,356         76,781         24,931         24,936         24,19         3,174 <t< td=""><td></td><td>By-products(▲)</td><td>0</td><td>0</td><td>-3,960</td><td>-825</td><td>-330</td><td>-825</td><td>-3,300</td><td>-3,630</td><td>-495</td><td>-13,365</td><td>-14</td></t<>		By-products(▲)	0	0	-3,960	-825	-330	-825	-3,300	-3,630	-495	-13,365	-14
ary Department         253         3         159         742         0         121         50         28         1,357         775           rith         25,190         1,456         19,693         19,823         1,183         1,489         5,376         5,643         3,511         83,364           rith         220         79         612         333         93         55         200         214         73         1,880         73         1,880         75         1,950         75         19,551         73         1,113         1,207         757         19,551         73         1,113         1,207         757         19,551         73         1,113         1,207         757         19,551         73         1,207         757         19,551         73         1,113         1,207         757         19,551         73         1,207         3,580         2,419         49,036         74         757         12,897         758         7		>	27,257	376	16,418	4,954	9	14	999	775	267	50,734	54
in the second control of the second control		Auxiliary Department	253	က	159	742	0	0	121	50	28	1,357	<b>4</b> **
ir 8410 295 3,332 3,962 194 281 1,113 1,207 757 19,551 50 200 214 73 1,880 1,980 50 214 1,113 1,207 757 19,551 50 20 2,304 185 5,037 24,931 893 678 2,924 3,174 9,446 254,622 234	Fixed Cost	Total	25.190	1.456	19,693	19,823	1,183	1,489	5,376	5,643	3,511	83,364	88
Repair         8.410         295         3,332         3,962         194         281         1,113         1,207         757         19,551         19,551         19,551         19,551         19,551         19,551         19,551         19,551         19,551         19,551         19,551         19,551         19,551         19,51		Labor	220	79	612	333	93	55	200	214	73	1,880	N
Depreciation         14,257         897         10,712         11,971         737         995         3,470         3,580         2,419         49.036           Auxiliary Department         2,304         185         5,037         3,558         159         678         641         262         12,897           133,439         2,356         76,781         24,931         893         678         3,174         9,446         254,622         2           143         3         82         7         1         3         10         273		Repair	8,410	295	3,332	3,962	194	281	1,113	1,207	757	19,551	S
Auxiliary Department         2.304         185         5.037         3.558         159         157         594         641         262         12.897           133,439         2,356         76,781         24,931         893         678         2.924         3,174         9,446         254,622         2           1343         3         3         3         3         10         273	·	Depreciation	14.257	897	10,712	11,971	737	995	3,470	3,580	2,419	49.036	53
133,439         2,356         76,781         24,931         893         678         2,924         3,174         9,446         254,622           143         3         3         27         1         1         3         3         10         273		Auxiliary Department	2,304	185	5,037	3,558	159	157	594	641	262	12,897	14
27 C	Total Cost	S	133,439	2,356	76,781	24,931	893	678	2,924	3,174	9,446	254,622	273
	US\$//ton		143	က	8 22	27			8	3	0	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 Require

Divisi	on /Department	Production Department		
Cost	Center	Direct Reduction Plant (DRP)		
		Unit Cost	Requirement	Amount (1,000 US\$)
Vari	able 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
'	Goil packing for SKL	0.20 US\$/ton	0 ton	0
1	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
1	Oxygen Gas	0.088 US\$/Nm3	0 Nm3	1 0
ĺ	Nitrogen Gas	0.044 US\$/Nm3	6,075,000 Nm3	267
	Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fix	ed Costs			22,887
	Labor Costs			220
	General Manager	31,500 US\$/person	0,00 person	C
1	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 parson	
	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
То	tal Production Costs			130,883



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

vision /Department	Production Department		
ost Center	Lime Calcining Plant (LGP)		
	Unit Cost	Requirement	Amount (1,000 US\$
Vzriable Costs			89
Material Costs			5:
Lump ore	50.97 US\$/ton	0 ton	
Oxide pellet	54.54 US\$/ton	0 ton	į
Scrap	165.00 US\$/ton	0 ton	
Limestone	6.50 US\$/ton	80,000 ton	5
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	1
Hydrochloric acid	3.00 US\$/ton	0 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	
Coil packing for HSMP	0.10 US\$/ton	0 ton	
Coil packing for SKL	0.20 US\$/ton	0 ton	i
Zinc ingot	2,000.00 US\$/ton	0 ton	
Chromate liquid	3,000.00 US\$/ton	0 ton	
Roll	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	
Other Variable Operating Costs			
Electricity	0.020 US\$/kWh	2.0 GWh	
Water	0.300 US\$/m3	1,000 m3	
Natural Gas	0,084 US\$/Nm3	4,000,000 Nm3	<b>j</b> :
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	İ
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	
Argon Gas	0,300 US\$/Nm3	0 Nm3	
Fixed Costs			1,
Labor Costs			
General Manager	31,500 US\$/person	0.00 person	
Deputy General Manager	26,600 US\$/person	0.05 person	
Department Manager	21,600 US\$/person	0.11 person	1
Section Manager	9,900 US\$/person	0.00 person	1
Assistant Section Manager	8,400 US\$/person	1.00 person	
Engineer & Specialist	4,700 US\$/person	1.00 person	
Worker	2,500 US\$/person	25.00 person	
Repair Costs			į
Depreciation			
Total Production Costs			2,



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

Production	Cost	2007	Year)

sion /Department	Production Department		
it Center	Steelmaking Plant (SMP)		
	Unit Cost	Requirement	Amount (1,000 US\$)
riable Costs			56,92
Material Costs			44,47
Lump ore	50.97 US\$/ton	0 ton	
Oxide pellet	54.54 US\$/ton	0 ton	
Scrap	165.00 US\$/ton	167,700 ton	27,67
Limestone	6.50 US\$/ton	0 ton	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	53,100 tori	16,80
Hydrochloric acid	3.00 US\$/ton	0 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	- [
Coil packing for HSMP	0.10 US\$/ton	0 ton	
Coil packing for SKL	0.20 US\$/ton	0 ton	
Zinc ingot	2,000.00 US\$/ton	0 ton	
Chromate liquid	3,000.00 US\$/ton	0 ton	
Roll	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	-24,000 ton	-3,96
Other Variable Operating Costs			16,41
Electricity	0.020 US\$/kWh	617.0 GWh	12,34
Water	0,300 US\$/m3	1,800,000 m3	54
Natural Gas	0.084 US\$/Nm3	4,000,000 Nm3	33
Oxygen Gas	0.088 US\$/Nm3	32,000,000 Nm3	2,8
Nitrogen Gas	0.044 US\$/Nm3	4,000,000 Nm3	17
Argon Gas	0.300 US\$/Nm3	700,000 Nm3	2
xed Costs			14,65
Labor Costs		· · · · · · · · · · · · · · · · · · ·	61
General Manager	31,500 US\$/person	0.00 person	<del></del> -
Deputy General Manager	26,600 US\$/person	0.05 person	
Department Manager	21,600 US\$/person	0.11 person	İ
Section Manager	9,900 US\$/person	1.00 person	
Assistant Section Manager	8,400 US\$/person	2.00 person	
Engineer & Specialist	4,700 US\$/person	3.00 person	1
Worker	2,500 US\$/person	227.00 person	5ē
Repair Costs			3,33
Depreciation			10,71
otal Production Costs			71,58







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

Division /Department	Production Department		
Cost Center	Hot Strip Mill Plant (HSMP)	<u> </u>	
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			4,366
Material Costs			237
Lump ore	50.97 US\$/ton	0 ton	1
Oxide pellet	54.54 US\$/ton	0 ton	(
Scrap	165.00 US\$/ton	0 ton	
Limestone	6.50 US\$/ton	0 ton	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	(
Hydrochloric acid	3.00 US\$/ton	0 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	
Coil packing for HSMP	0.10 US\$/ton	368,000 ton	3
Coil packing for SKL	0.20 US\$/ton	0 ton	
Zinc ingot	2,600.00 US\$/ton	0 ton	
Chromato liquid	3,000.00 US\$/ton	0 ton	
Roll	5,000.00 US\$/ton	40 ton	20
(-) By-products (Scrap)	165.00 US\$/ton	-5,000 ton	-82
Other Variable Operating Costs			4,95
Electricity	0.020 US\$/kWh	100.0 GWh	2,00
Water	0,300 US\$/m3	2,069,000 m3	62
Natural Gas	0.084 US\$/Nm3	27,777,000 Nm3	2,33
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	
Argon Gas	0,300 US\$/Nm3	0 Nm3	
Fixed Costs			16,26
Labor Costs			33
General Manager	31,500 US\$/person	0.00 person	
Deputy General Manager	26,600 US\$/person	0.05 person	
Department Manager	21,600 US\$/person	0.11 person	
Section Manager	9,900 US\$/person	1.00 person	1
Assistant Section Manager	8,400 US\$/person	1.50 person	1
Engineer & Specialist	4,700 US\$/person	1.50 person	
Worker	2,500 US\$/person	120.00 person	. 30
Repair Costs			3,96
Depreciation			11,97
Total Production Costs			20,63



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

Production	Cost	(2007	Ve ar

aiviC	ion /Department	Production Department	•	
Cost	Center	Skinpass Line		
		Unit Cost	Requirement	Amount (1.000 US\$)
Var	iable Costs			-28
	Material Costs			3:
	Lump ore	50.97 US\$/ton	0 ton	
	Oxide pellet	54.54 US\$/ton	0 ton	]
	Scrap	165.00 US\$/ton	0 ton	
	Limestone	6.50 US\$/ton	0 ton	
	Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316,40 US\$/ton	0 ton	1
	Hydrochloric acid	3.00 US\$/ton	0 ton	1
	Coil packing for APL & CGL	1.50 US\$/ton	0 ton	
	Coil packing for HSMP	0.10 US\$/ton	0 ton	- }
	Coil packing for SKL	0.20 US\$/ton	173.000 ton	3
	Zinc ingot	2,000.00 US\$/ton	0 ton	
	Chromate liquid	3,000.00 US\$/ton	0 ton	1
	Roll	5,000.00 US\$/ton	0 ton	
	(-) By-products (Scrap)	165.00 US\$/ton	-2,000 ton	-33
	Other Variable Operating Costs			
	Electricity	0.020 US\$/kWh	0.3 GWh	
	Water	0.300 US\$/m3	0 m3	
	Natural Gas	0.084 US\$/Nm3	0 Nm3	Ì
	Oxygen Gas	0.088 US\$/Nm3	0 Nm3	
	Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	
	Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fix	ed Costs			1.02
	Labor Costs			9
	General Manager	31,500 US\$/person	0.00 person	
	Deputy General Manager	26,600 US\$/person	0.05 person	
	Department Manager	21,600 US\$/person	0.11 person	
	Section Manager	9,900 US\$/person	0.00 person	1
	Assistant Section Manager	8,400 US\$/person	0.50 person	
	Engineer & Specialist	4.700 US\$/person	0.50 person	
	Worker	2,500 US\$/person	33.00 person	
	Repair Costs			19
	Depreciation			73
Toi	al Production Costs			73

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

ivision /Department	Production Department		
ost Center	Plate Line		
	Unit Cost	Requirement	Amount (1,000 US\$)
Variable Costs			-811
Material Costs	AMA		
Lump ore	50.97 US\$/ton	0 ton	
Oxide pellet	54.54 US\$/ton	0 ton	
Scrap	165.00 US\$/ton	0 ton	
Limestone	6.50 US\$/ton	0 ton	-
Graphite electrodo, Fe-Mn. Fe-Si, Refractory,	1	0 ton	-
Hydrochloric acid	3.00 US\$/ton	0 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	}
Coil packing for HSMP	0.10 US\$/ton	0 ton	
Coil packing for SKL	0.20 US\$/ton	0 ton	
Zinc ingot	2,000.00 US\$/ton	0 ton	
Chromate liquid	3,000.00 US\$/ton	0 ton	i
Roll	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	-5,000 ton	-82
Other Variable Operating Costs			1
r	0.020 US\$/kWh	0.2 GWh	
Electricity	0.300 US\$/m3	0 m3	
Water	0.084 US\$/Nm3	20.000 Nm3	
Natural Gas	0.088 US\$/Nm3	100,000 Nm3	
Oxygen Gas	0.044 US\$/Nm3	0 Nm3	
Nitrogen Gas Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fixed Costs			1,33
Labor Costs			
	34 500 1100 /	0.00 person	
General Manager	31,500 US\$/person	0.05 person	1
Deputy General Manager	26,600 US\$/person 21,600 US\$/person	0.03 person	
Department Manager	9,900 US\$/person	0.00 person	
Section Manager	8,400 US\$/person	0.50 person	
Assistant Section Manager	4,700 US\$/person	0.50 person	
Engineer & Specialist Worker	2,500 US\$/person	18.00 person	
Repair Costs			2.
Depreciation			9
Total Production Costs			5:



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

ivision /Department	Production Department		
ost Center	Cold Strip Mill Plant (CSMP)		
	Unit Cost	Requirement	Amount (1,000 US\$
Variable Costs			-2,57
Material Costs			,
Lump ore	50.97 US\$/ton	0 ton	
Oxide pellet	54.54 US\$/ton	0 ton	1
Scrap	165.00 US\$ /ton	0 ton	
Limestone	6.50 US\$/ton	0 ton	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	
Hydrochloric acid	3.00 US\$/ton	20,000 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	İ
Coil packing for HSMP	0.10 US\$/ton	0 ton	
Coil packing for SKL	0.20 US\$/ton	0 ton	1
Zinc ingot	2,000.00 US\$/ton	0 ton	j
Chromate liquid	3,000.00 US\$/ton	0 ton	
Roll	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	-20,000 ton	-3,3
Other Variable Operating Costs			6
Electricity	0.020 US\$/kWh	27.0 GWh	
Water	0.300 US\$/m3	226,000 m3	
Naturai Gas	0.084 US\$/Nm3	678,000 Nm3	
Охудел Gas	0.088 US\$/Nm3	0 Nm3	
Nitrogen Gas	0.044.US\$/Nm3	32,000 Nm3	
Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fixed Costs			4,
Labor Costs			
General Manager	31.500 US\$/person	0.00 person	
Deputy General Manager	26,600 US\$/person	0.05 person	
Department Manager	21,600 US\$/person	0.11 person	
Section Manager	9,900 US\$/person	1.00 person	
Assistant Section Manager	8,400 US\$/person	0.50 person	
Engineer & Specialist	4,700 US\$/person	1.50 person	
Worker	2,500 US\$/person	70.00 person	
Repair Costs			1,
Depreciation			3,4
Total Production Costs			2,

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

ivision ∕Pepartment	Production Department		<u>-</u>
ost 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	(
Oxide pellet	54.54 US\$/ton	0 ton	
Scrap	165.00 US\$/ton	0 ton	•
Limestone	6.50 US\$/ton	0 ton	- [ (
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	
Hydrochloric acid	3.00 US\$/ton	0 ton	-
Coil packing for APL & CGL	1.50 US\$/ton	224,000 ton	33
Coil packing for HSMP	0.10 US\$/ton	0 ton	
Coil packing for SKL	0.20 US\$/ton	0 ton	
Zinc ingot	2,000,00 US\$/ton	0 ton	
Chromate liquid	3,000,00 US\$/ton	0 ton	
Roll	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US <b>\$</b> /ton	-22,000 ton	-3,63
Other Variable Operating Costs			777
Electricity	0.020 US\$/kWh	11.0 GWh	22
Water	0.300 US\$/m3	0 m3	
Natural Gas	0.084 US\$/Nm3	4,674,000 Nm3	39
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	
Nitrogen Gas	0.044 US\$/Nm3	3,690,000 Nm3	10
Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fixed Costs			5.00
Labor Costs			2
General Manager	31,500 US\$/person	0.00 person	
Deputy General Manager	26,600 US\$/person	0.05 person	
Department Manager	21,600 US\$/person	0.11 person	
Section Manager	9,900 US\$/person	0.00 person	ļ
Assistant Section Manager	8,400 US\$/person	1,00 person	
Engineer & Specialist	4,700 US\$/person	1.00 person	
Worker	2,500 US\$/person	79.00 person	1
Repair Costs			1.2
Depreciation			3,5
Total Production Costs			2,48



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

Divis	ion /Department	Production Department		
Cost	Center	Hot-dip galvanizing Line (CGL)		
		Unit Cost	Requirement	Amount (1,000 US\$)
Vai	riable 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
l	Scrap	165.00 US\$/ton	0 ton	0
	Limestone	6.50 US\$/ton	0 ton	0
i	Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	0
	Hydrochloric acid	3.00 US\$/ton	0 ton	0
1	Goil packing for APL & CGL	1.50 US\$/ton	71,000 ton	107
i	Coil packing for HSMP	0.10 US\$/ton	0 ton	0
	Coil packing for SKL	0.20 US\$/ton	0 ton	Ö
l		2,000.00 US\$/ton	2.982 ton	5.964
ļ	Zinc ingot	3,000.00 US\$/ton	2,502 ton 21 ton	64
1	Chromate liquid	5.000.00 US\$/ton	0 ton	0
	Roll   (-) By-products (Scrap)	165.00 US\$/ton	-3,000 ton	-495
	( ) by products (core)	10000 004/ 1011		
	Other Variable Operating Costs			267
1	Electricity	0.020 US\$/kWh	3.2 GWh	64
1	Water	0.300 US\$/m3	71,000 m3	21
1	Natural Gas	0.084 US\$/Nm3	1,420,000 Nm3	119
	Oxygen Gas	0.088 US\$/Nm3	0 Nm3	( c
i i	Nitrogen Gas	0.044 US\$/Nm3	1,420,000 Nm3	62
L	Argon Gas	0.300 US\$/Nm3	0 Nm3	0
Fi	xed Costs			3,249
	Labor Costs			73
	General Manager	31,500 US\$/person	0.00 person	(
	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	
	Assistant Section Manager	8,400 US\$/person	0.00 person	
	Engineer & Specialist	4,700 US\$/person	1.00 person	
	Worker	2,500 US\$/person	26.00 person	65
	Repair Costs			75
	Depreciation			2,411
-				
IT	otal Production Costs			9,15



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

vision /Department	Production Department			
ost Center	Total of Production Department			
	Unit Cost	Requirement	Amount (1,000 US\$)	
Variable Costs			169,90	
Material Costs			132,53	
Lump ore	50.97 US\$/ton	300,000 ton	15.29	
Oxide pellet	54.54 US\$/ton	1,200,000 ton	65,4	
Scrap	165,00 US\$/ton	167,700 ton	27,6	
Limestone	6.50 US\$/ton	80,000 ton	5	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	53,100 ton	16,8	
Hydrochloric acid	3.00 US\$/ton	20,000 ton		
Coil packing for APL & CGL	1.50 US\$/ton	295,000 ton	4	
Coil packing for HSMP	0.10 US\$/ton	368,000 ton		
Coil packing for SKL	0.20 US\$/ton	173,000 ton		
Zinc ingot	2,000.00 US\$/ton	2,982 ton	5,9	
Chromate liquid	3,000.00 US\$/ton	21 ton		
Roll	5,000.00 US\$/ton	40 toп		
() By-products (Scrap)	165.00 US\$/ton	-81,000 ton	-13.0	
Other Variable Operating Costs	· · · · · · · · · · · · · · · · · · ·		50,1	
Electricity	0.020 US\$/kWh	890.7 GWh	17,8	
Water	0,300 US\$/m3	5,667,000 m3	1.	
Natural Gas	0.084 US\$/Nm3	327,569,000 Nm3	27,	
Oxygen Gas	0.088 US\$/Nm3	32,100,000 Nm3	2.	
Nitrogen Gas	0.044 US\$/Nm3	15,217,000 Nm3		
Argon Gas	0.300 US\$/Nm3	700,000 Nm3		
Fixed Costs			70.	
Labor Costs			1,3	
General Manager	31,500 US\$/person	0.00 person		
Deputy General Manager	26,600 US\$/person	0.45 person		
Department Manager	21,600 US\$/person	1.00 person	[	
Section Manager	9,900 US\$/person	4.00 person		
Assistant Section Manager	8,400 US\$/person	8.00 person		
Engineer & Specialist	4,700 US\$/person	18.00 person		
Worker	2,500 US\$/person	682.00 person	1,	
Repair Costs			19,	
Depreciation			49,	
Total Production Costs			240,3	



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

Production Cost (2007 Year)

Divisi	on /Department	Auxiliary Department		
Cost	Genter	Electric Power		
		Unit Cost	Requirement	Amount (1,000 US\$)
Vari	able Costs			
ſ	Material Costs			
	Lump ore	50,97 US\$/ton	0 ton	
I	Oxide pellet	54.54 US\$/ton	0 ton	
	Scrap	165.00 US\$/ton	0 ton	
- 1	Linrestone	6.50 US\$/ton	0 ton	
	Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	
	Hydrochloric acid	3.00 US\$/ton	0 ton	
- 1	Coil packing for APL & CGL	1.50 US\$/ton	0 ton	
i	Coil packing for HSMP	0.10 US\$/ton	0 ton	
ŀ	Coil packing for SKL	0.20 US\$/ton	0 ton	
	Zinc ingot	2,000.00 US\$/ton	0 ton	
[	Chromate liquid	3,000.00 US\$/ton	0 ton	
	Roll	5,000.00 US\$/ton	0 ton	
	(-) By-products (Scrap)	165.00 US\$/ton	0 ton	
	Other Variable Operating Costs			
İ	Electricity	0.020 US\$/kWh	0.0 GWh	
	Water	0.300 US\$/m3	0 m3	
	Natural Gas	0.084 US\$/Nm3	0 Nm3	i
	Oxygen Gas	0.088 US\$/Nm3	0 Nm3	
	Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	
]	Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fixe	d Costs			3,48
	Labor Costs			6
	General Manager	31,500 US\$/person	0.00 person	
	Deputy General Manager	26,600 US\$/person	0.05 person	
	Department Manager	21,600 US\$/person	0.13 person	
	Section Manager	9,900 US\$/person	1.00 person	1
	Assistant Section Manager	8,400 US\$/person	1.00 person	İ
	Engineer & Specialist	4,700 US\$/person	3.00 person	1
	Worker	2,500 US\$/person	12.00 person	3
	Repair Costs			82
	Depreciation			2.59
Tot	al Production Costs			3,48



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

sion /Department	Auxiliary Department		
t Center	Water		
	Unit Cost	Requirement	Amount (1,000 US\$
riable Costs			1,0
Material Costs	·		
Lump ore	50,97 US\$/ton	0 ton	
Oxide pellet	54.54 US\$/ton	0 ton	ĺ
Scrap	165,00 US\$/ton	0 ton	
Limestone	6.50 US\$/ton	0 ton	l l
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316,40 US\$/ton	0 ton	İ
Hydrochloric acid	3.00 US\$/ton	0 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	1
Coil packing for HSMP	0,10 US\$/ton	0 ton	
Goil packing for SKL	0.20 US\$/ton	0 ton	İ
Zinc ingot	2,000.00 US\$/ton	0 ton	.
Chromate liquid	3,000.00 US\$/ton	0 ton	
Roli	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	
Other Variable Operating Costs			1.0
Electricity	0,020 US\$/kWh	52.0 GWh	1,1
Water	0.300 US\$/m3	0 m3	
Natural Gas	0.084 US\$/Nm3	0 Nm3	
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	ļ
Argon Gas	0.300 US\$/Nm3	0 Nm3	
ixed Costs			3,
Labor Costs			
General Manager	31.500 US\$/person	0.00 person	
Deputy General Manager	26,600 US\$/person	0.05 person	1
Department Manager	21,600 US\$/person	0.13 person	
Section Manager	9,900 US\$/person	0.50 person	
Assistant Section Manager	8.400 US\$/person	1.00 person	
Engineer & Specialist	4,700 US\$/person	2.00 person	
Worker	2,500 US\$/person	71.00 person	
Repair Costs			
Depreciation			2.
otal Production Costs			4,



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

Production	Cont	TODO?	Vasel
Production	LOSE	12007	reari

oiaiviC	on /Department	Auxiliary Department		
Cost (	Center	Natural Gas		
		Unit Cost	Requirement	Amount (1,000 US\$)
Vari	able Costs			c
	Material Costs			C
1	Lump ore	50.97 US\$/ton	0 ton	C
	Oxide pellet	54.54 US\$/ton	0 ton	i c
l	Scrap	165.00 US\$/ton	0 ton	(
	Limestone	6.50 US\$/ton	0 ton	
1	Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	(
	Hydrochloric acid	3.00 US\$/ton	0 ton	-
l	Coil packing for APL & CGL	1.50 US\$/ton	0 ton	1
	Goil packing for HSMP	0.10 US\$/ton	0 ton	-   - (
- 1	Coil packing for SKL	0.20 US\$/ton	0 ton	1 (
	Zino ingot	2,000.00 US\$/ton	0 ton	[ (
	Chromate liquid	3,000.00 US\$/ton	0 ton	,
	Roll	5,000,00 US\$/ton	0 ton	
	(-) By-producte (Scrap)	165.00 US\$/ton	0 ton	
	Other Variable Operating Costs			,
	Electricity	0.020 US\$/kWh	0,0 GWh	
	Water	0.300 US\$/m3	0 m3	
	Natural Gas	0.084 US\$/Nm3	0 Nm3	-   -
	Oxygen Gas	0.088 US\$/Nm3	0 Nm3	
1	Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	
	Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fixe	ed Costs			10
	Labor Costs			2
	General Manager	31,500 US\$/person	0.00 person	
	Deputy General Manager	26,600 US\$/person	0.05 person	
	Department Manager	21,600 US\$/person	0.13 person	İ
l	Section Manager	9,900 US\$/person	0.10 person	- 1
	Assistant Section Manager	8,400 US\$/person	0.40 person	
	Engineer & Specialist	4,700 US\$/person	0,40 person	
	Worker	2,500 US\$/person	7.40 person	1
	Repair Costs			2
	Depreciation			5
T-1	tal Production Costs			10





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

vision ∠Department	Auxiliary Department		
ost Center	Plant Air	Plant Air	
	Unit Cost	Requirement	Amount (1,000 US\$)
/ariable Costs			20
Material Costs			
Lump ore	50.97 US\$/ton	0 ton	
Oxide pellet	54.54 US\$/ton	0 ton	
Scrap	165.00 US\$/ton	0 ton	
Limestone	6.50 US\$/ton	0 ton	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, e	1	0 ton	
Hydrochloric acid	3.00 US\$/ton	0 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	
Coil packing for HSMP	0.10 US\$/ton	0 ton	ľ
Coil packing for SKL	0,20 US\$/ton	0 ton	
Zinc ingot	2,000,00 US\$/ton	0 ton	1
Chromate liquid	3,000.00 US\$/ton	0 ton	
Roll	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	
Other Variable Operating Costs			2
Electricity	0.020 US\$/kWh	10.0 GWh	2
Water	0.300 US\$/m3	0 m3	
Natural Gas	0.084 US\$/Nm3	0 Nm3	
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	1
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	ĺ
Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fixed Costs			2
Labor Costs			
General Manager	31,500 US\$/person	0.00 person	
Deputy General Manager	26,600 US\$/person	0.05 person	
Department Manager	21,600 US\$/person	0.13 person	
Section Manager	9,900 US\$/person	0.10 person	- [
Assistant Section Manager	8,400 US\$/person	0.40 person	
Engineer & Specialist	4,700 US\$/persoл	0.49 person	1
Worker	2,500 US\$/person	11.40 person	
Repair Costs			
Depreciation			1
Total Production Costs			4



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

Divis	ion /Department	Auxiliary Department		
Cost	Center	Oxygen/Nitrogen/Argon Gas		
		Unit Cost	Requirement	Amount (1,000 US\$)
Vai	riable Costs			0
	Material Costs			
	Lump ore	50.97 US\$/ton	0 ton	
	Oxide pellet	54.54 US\$/ton	0 ton	(
	Scrap	165.00 US\$/ton	0 ton	
	Limestone	6.50 US\$/ton	0 ton	
	Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	-   - (
	Hydrochloric acid	3.00 US\$/ton	0 ton	
	Coil packing for APL & CGL	1.50 US\$/ton	0 ton	(
	Coil packing for HSMP	0.10 US\$/ton	0 ton	
ĺ	Coil packing for SKL	0.20 US\$/ton	0 ton	
	Zinc ingot	2,000.00 US\$/ton	0 ton	
	Chromate liquid	3,000.00 US\$/ton	0 ton	-   (
ĺ	Roll	5,000.00 US\$/ton	0 ton	
	(-) By-products (Scrap)	165.00 US\$/ton	0 ton	
	Other Variable Operating Costs			
ŀ	Electricity	0.020 US\$/kWh	0.0 GWh	
İ	Water	0.300 US\$/m3	0 m3	
	Natural Gas	0.084 US\$/Nm3	0 Nm3	
	Oxygen Gas	0.088 US\$/Nm3	0 Nm3	
	Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	- 1
	Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fi	xed Costs			2
	Labor Costs			2
	General Manager	31.500 US\$/person	0.00 person	
	Deputy General Manager	26,600 US\$/person	0.05 person	
	Department Manager	21,600 US\$/person	0.13 person	
İ	Section Manager	9,900 US\$/person	0.10 person	
	Assistant Section Manager	8,400 US\$/person	0.40 person	1
1	Engineer & Specialist	4,700 US\$/person	0.40 person	- 1
	Worker	2,500 US\$/person	7.40 person	1
	Repair Costs			
	Depreciation			
-	otal Production Costs			2
i '	otel i toppodoli opoto	1		i -



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

Division /Department	Auxiliary Department		
Post Center	Hydrogen Gas		
	Unit Cost	Requirement	Amount (1,000 US\$
Variable Costs			;
Material Costs			
Lump ore	50.97 US\$/ton	0 ton	
Oxide peliet	54.54 US\$/ton	0 ton	
Scrap	165.00 US\$/ton	0 ton	
Limestone	6.50 US\$/ton	0 ton	1
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	
Hydrochloric acid	3.00 US\$/ton	0 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	
Coil packing for HSMP	0.10 US\$/ton	0 ton	-
Coil packing for SKL	0.20 US\$/ton	0 ton	- 1
Zinc ingot	2,000.00 US\$/ton	0 ton	
Chromate liquid	3,000.00 US\$/ton	0 ton	l
Roll	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	
Other Variable Operating Costs			
Electricity	0.020 US\$/kWh	0.0 GWh	
Water	0.300 US\$/m3	2,000 m3	-
Natural Gas	0.084 US\$/Nm3	280,000 Nm3	
Oxygen Gas	0.088 US\$/Nm3	9 Nm3	į
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	- 1
Argon Gas	0.300 US\$/Nm3	0 Nm3	
Fixed Costs			2
Labor Costs			
General Manager	31.500 US\$/person	0.00 person	
Deputy General Manager	26,600 US\$/person	0.05 person	ĺ
Department Manager	21,600 US\$/person	0,13 person	
Section Manager	9,900 US\$/person	0.10 person	
Assistant Section Manager	8,400 US\$/person	0.40 person	
Engineer & Specialist	4,700 US\$/person	0.40 person	
Worker	2,500 US\$/person	7.40 person	
Repair Costs			
Depreciation			1
Total Production Costs			2
	1 1		1



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

Production Cost (	2007	Year)
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≀ision ∕Department	Auxiliary Department		
st Center	Steam		
	Unit Cost	Requirement	Amount (1,000 US\$)
ariable Costs			9
Material Costs			
Lump ore	50.97 US\$/ton	0 ton	
Oxide pellet	54.54 US\$/ton	0 ton	
Scrap	165.00 US\$/ton	0 ton	
Limestone	6.50 US\$/ton	0 ton	-
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	
Hydrochloric acid	3.00 US\$/ton	0 ton	
Goil packing for APL & GGL	1.50 US\$/ton	0 ton	1
Coil packing for HSMP	0.10 US\$/ton	0 ton	
Coil packing for SKL	0.20 US\$/ton	0 ton	į
Zinc ingot	2,000.00 US\$/ton	0 ton	
Chromate liquid	3,000,00 US\$/ton	0 ton	
Roll	5,000,00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	
Other Variable Operating Costs			
Electricity	0.020 US\$/kWh	0.0 GWh	
Water	0.300 US\$/m3	15,000 m3	
Natural Gas	0.084 US\$/Nm3	1,052,000 Nm3	- 1
Oxygen Gas	0.088 US\$/Nm3	0 Nm3	
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	
Argon Gas	0,300 US\$/Nm3	0 Nm3	
Fixed Costs			
Labor Costs			
General Manager	31,500 US\$/person	0.00 person	<del></del>
Deputy General Manager	26,600 US\$/person	0.05 person	
Department Manager	21,600 US\$/person	0.13 person	
Section Manager	9,900 US\$/person	0.10 person	
Assistant Section Manager	8,400 US\$/person	0.40 person	
Engineer & Specialist	4,700 US\$/person	0.40 person	
Worker	2,500 US\$/person	7.40 person	
Repair Costs			
Depreciation			
Total Production Costs			1



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

livision /Department	Auxiliary Department			
Post Center	In-works Transportation			
	Unit Cost	Requirement	Amount (1,000 US\$	
Variable Costs				
Material Costs				
Lump ore	50.97 US\$/ton	0 ton		
Oxide pellet	54.54 US\$/ton	0 ton		
Scrap	165.00 US\$/ton	0 ton		
Limestone	6.50 US\$/ton	0 ton	l l	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton		
Hydrochloric acid	3.00 US\$/ton	0 ton	:	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton		
Coil packing for HSMP	0.10 US\$/ton	0 ton		
Coil packing for SKL	0.20 US\$/ton	0 ton		
Zinc ingot	2,000.00 US\$/ton	0 ton		
Chromate liquid	3,000.00 US\$/ton	0 ton		
Roll	5,000.00 US\$/ton	0 ton		
(-) By-products (Scrap)	165.00 US\$/ton	0 ton		
Other Variable Operating Costs				
Electricity	0.020 US\$/kWh	0.0 GWh		
Water	0.300 US\$/m3	0 m3		
Natural Gas	0.084 US\$/Nm3	0 Nm3		
Oxygen Gas	0.088 US\$/Nm3	0 Nm3		
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3		
Argon Gas	0.300 US\$/Nm3	0 Nm3		
Fixed Costs			2.	
Labor Costs				
General Manager	31,500 US\$/person	0.00 person		
Deputy General Manager	26,600 US\$/person	0.05 person	Ì	
Department Manager	21,600 US\$/person	0.67 person		
Section Manager	9,900 US\$/person	1.00 person		
Assistant Section Manager	8,400 US\$/person	2.00 person		
Engineer & Specialist	4,700 US\$/person	10.00 person		
Worker	2,500 US3/person	60.00 person		
Repair Costs				
Depreciation			1,3	
Total Production Costs			2,	



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

Divisi	on /Department	Auxiliary Department				
Cost	Center	Analysis & Inspection		Analysis & Inspection		
		Unit Cost	Requirement	Amount (1,000 US\$)		
Vari	able Costs			0		
	Material Costs			0		
	Lump ore	50.97 US\$/ton	0 ton	0		
	Oxide pellet	54.54 US\$/ton	0 ton	o		
	Scrap	165.00 US\$/ton	0 ton	0		
	Limestone	6.50 US\$/ton	0 ton	o		
	Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	C C		
	Hydrochloric acid	3.00 US\$/ton	0 ton	c		
	Coil packing for APL & GGL	1.50 US\$/ton	0 ton	- l		
	Coil packing for HSMP	0,10 US\$/ton	0 ton	- I - c		
	Coil packing for SKL	0,20 US\$/ton	0 ton			
	Zine ingot	2,000.00 US\$/ton	0 ton			
	Chromate liquid	3,000.00 US\$/ton	0 ton			
l	Roll	5,000.00 US\$/ton	0 ton			
	(-) By-products (Scrap)	165.00 US\$/ton	0 ton	(		
	Other Variable Operating Costs			(		
ŀ		0.000 1106 4395	0.0 GWh			
	Electricity	0.020 US\$/kWh	0.0 GWn 0 m3			
	Water	0.300 US\$/m3	0 Nm3			
l	Natural Gas	0.084 US\$/Nm3	0 Nm3			
1	Oxygen Gas	0,088 US\$/Nm3				
	Nitrogen Gas	0.044 US\$/Nm3	0 Nm3			
<u> </u>	Argon Gas	0.300 US\$/Nm3	0 Nm3			
Fix	ed Costs			74:		
	Labor Costs			163		
	General Manager	31,500 US\$/person	0.00 person			
1	Deputy General Manager	26,600 US\$/person	0.05 person	1		
1	Department Manager	21,600 US\$/person	0.67 person	1.		
	Section Manager	9,900 US\$/person	1.00 person	1,		
	Assistant Section Manager	8,400 US\$/person	1.00 person			
	Engineer & Specialist	4,700 US\$/person	2.00 person			
	Worker	2,500 US\$/person	48.00 person	12		
	Repair Costs			15		
	Depreciation			41		
<b> </b> -	Ast Dividing Contra			74		
1 10	otal Production Costs			/"		



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

rision /Department	Auxiliary Department			
st Center	Maintenance Shop			
	Unit Cost	Requirement	Amount (1,000 US\$	
/ariable Costs				
Material Costs				
Lump ore	50.97 US\$/ton	0 ton		
Oxide pellet	54.54 US\$/ton	0 ton		
Scrap	165.00 US\$/ton	0 ton	1	
Limestone	6.50 US\$/ton	0 ton		
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton		
Hydrochloric acid	3.00 US\$/ton	0 ton		
Coil packing for APL & CGL	1.50 US\$/ton	0 ton		
' -	0.10 US\$/ton	0 ton	į	
Coil packing for HSMP	0.20 US\$/ton	0 ton		
Coil packing for SKL	2,000.00 US\$/ton	0 ton		
Zinc ingot Chromate liquid	3,000.00 US\$/ton	0 ton		
Roll	5,000.00 US\$/ton	0 ton		
(-) By-products (Scrap)	165.00 US\$/ton	0 ton		
Other Variable Operating Costs			_	
		0.0.000		
Electricity	0.020 US\$/kWh	0.0 GWh		
Water	0.300 US\$/m3	0 m3		
Natural Gas	0.084 US\$/Nm3	0 Nm3		
Oxygen Gas	0.088 US\$/Nm3	0 Nm3		
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	·	
Argon Gas	0.300 US\$/Nm3	0 Nm3		
Fixed Costs				
Labor Costs				
General Manager	31,500 US\$/person	0.00 person		
Deputy General Manager	26,600 US\$/person	0.05 person	1	
Department Manager	21,600 US\$/person	0.13 person	- [	
Section Manager	9,900 US\$/person	1.00 person		
Assistant Section Manager	8,400 US\$/person	6.00 person		
Engineer & Specialist	4,700 US\$/person	22.00 person	1	
Worker	2,500 US\$/person	202.00 person		
Repair Costs				
Depreciation				



#### Appendix 11A-1 Production Gost by Gost Genter (22)

sion /Department	Auxiliary Department		
it Center	Plant Administration		<del></del>
	Unit Cost	Requirement	Amount (1,000 US\$)
eriable Costs			
Material Costs			
Lump ore	50.97 US\$/ton	0 ton	<del> </del>
Oxide pellet	54.54 US\$/ton	0 ton	
Scrap	165.00 US\$/ton	0 ton	1
Limestone	6.50 US\$/ton	0 ton	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	0 ton	1
Hydrochloric acid	3.00 US\$/ton	0 ton	
Coil packing for APL & CGL	1.50 US\$/ton	0 ton	
Coil packing for HSMP	0.10 US\$/ton	0 ton	
Coil packing for SKL	0.20 US\$/ton	0 ton	
Zinc ingot	2,000.00 US\$/ton	0 ton	
Chromate liquid	3,000.00 US\$/ton	0 ton	İ
Roll	5,000.00 US\$/ton	0 ton	
(-) By-products (Scrap)	165.00 US\$/ton	0 ton	
Other Variable Operating Costs			
Electricity	0.020 US\$/kWh	0,0 GWh	
Water	0.300 US\$/m3	0 m3	
Natural Gas	0.084 US\$/Nm3	0 Nm3	1
Охудел Gas	0.088 US\$/Nm3	0 Nm3	
Nitrogen Gas	0.044 US\$/Nm3	0 Nm3	
Argon Gas	0.300 US\$/Nm3	0 Nm3	
xed Costs			85
Labor Costs			78
General Manager	31.500 US\$/person	0.00 person	
Deputy General Manager	26,600 US\$/person	0.05 person	
Department Manager	21,600 US\$/person	0.67 person	1
Section Manager	9,900 US\$/person	5.00 person	5
Assistant Section Manager	8,400 US\$/person	14.00 person	11
Engineer & Specialist	4,700 US\$/person	59.00 person	27
Worker	2,500 US\$/person	130.00 person	32
Repair Costs			
Depreciation			. 6
otal Production Costs			85







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

Material Costs   Lump ore	Amount 1,000 US\$)
Material Costs	1,000 US\$)
Lump ore	
Lump ore	1,35
Dxide pellet   S4.54 US\$/ton   0 ton	
Oxide pellet   54.54 US\$/ton   0 ton	
Scrap   165.00 US\$/ton   0 ton   6.50 US\$/ton   0 ton   6.50 US\$/ton   0 ton   0 ton   6.50 US\$/ton   0 ton	
Limestone   6.50 US\$/ton   0 ton   Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.   316.40 US\$/ton   0 t	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.   316.40 US\$/ton   0 ton   1.50 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0.00 US\$/ton   0 ton   0	
Hydrochloric acid   3.00 US\$/ton   0 ton	
Coil packing for HSMP	
Coil packing for SKL   0.20 US\$/ton   0 ton	
Zinc ingot	
Chromate liquid   3,000.00 US\$/ton   0 ton   5,000.00 US\$/ton   0 ton	
Roll	
(-) By-products (Scrap)  Other Variable Operating Costs  Electricity Water 0.300 US\$/kWh Natural Gas 0.084 US\$/Nm3 1,332,000 Nm3 0xygen Gas 0.088 US\$/Nm3 0 Nm3 Nitrogen Gas 0.044 US\$/Nm3 0 Nm3 Argon Gas 0.300 US\$/Nm3 0 Nm3  Fixed Costs  Labor Costs  General Manager  31,500 US\$/person 0.00 person	
Other Variable Operating Costs    Electricity	
Electricity	
Mater	1,35
Water         0.300 US\$/m3         17,000 m3           Natural Gas         0.084 US\$/Nm3         1,332,000 Nm3           Oxygen Gas         0.088 US\$/Nm3         0 Nm3           Nitrogen Gas         0.044 US\$/Nm3         0 Nm3           Argon Gas         0.300 US\$/Nm3         0 Nm3           Fixed Costs         Labor Costs         0.000 US\$/person         0.000 person	1,24
Natural Gas	
Oxygen Gas	11
Nitrogen Gas	
Fixed Costs  Labor Costs  General Manager 31,500 US\$/person 0.00 person	
Labor Costs  General Manager 31,500 US\$/person 0.00 person	
General Manager 31,500 US\$/person 0.00 person	12,85
Conclus manager	2,21
General munager	
Deputy General Manager 26,600 US\$/person 0.55 person	
Department Manager 21,600 US\$/person 3.00 person	į
Section Manager 9,900 US\$/person 10.00 person	!
Assistant Section Manager 8,400 US\$/person 27.00 person	2
Engineer & Specialist 4,700 US\$/person 100.00 person	4
Worker	1.4
Repair Costs	2.3
Depreciation	8,3
Total Production Costs	14,2



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

Production	Cost	(2007	Year

ision /Department	Production Division			
st Center	Total of Production Division			
	Unit Cost	Requirement	Amount (1,000 US	
ariable Costs			171,8	
Material Costs			132,5	
Lump ore	50.97 US\$/ton	300,000 ton	15,2	
Oxide pellet	54.54 US\$/ton	1,200,000 ton	65,4	
Scrap	165.00 US\$/ton	167,700 ton	27,6	
Limestone	6.50 US\$/ton	80,000 ton	27,6	
Graphite electrode, Fe-Mn, Fe-Si, Refractory, etc.	316.40 US\$/ton	53.100 ton	16,8	
Hydrochloric acid	3.00 US\$/ton	20,000 ton	10,3	
Coil packing for APL & CGL	1.50 US\$/ton	295,000 ton	4	
Coil packing for HSMP	0.10 US\$/ton	368.000 ton		
Coil packing for SKL	0.20 US\$/ton	173,000 ton	- 1	
Zinc ingot	2,000.00 US\$/ton	2.982 ton	5.9	
Chromate liquid	3,000.00 US\$/ton	21 ton	0,5	
Roll	5.000.00 US\$/ton	40 ton		
(-) By-products (Scrap)	165.00 US\$/ton	-81.000 ton	-13,3	
Other Variable Operating Costs			52.8	
Electricity	0.020 US\$/kWh	952.7 GWh	19,0	
Water	0.300 US\$/m3	5,684,000 m3	1,7	
Natural Gas	0.084 US\$/Nm3	328,881,000 Nm3	27.6	
Oxygen Gas	0.088 US\$/Nm3	32,000,000 Nm3	2.8	
Nitrogen Gas	0.044 US\$/Nm3	28,022,000 Nm3	1,2	
Argon Gas	0.300 US\$/Nm3	700,000 Nm3	1.4	
ixed Costs			83,3	
Labor Costs			4,1	
General Manager	31,500 US\$/person	0.00 person		
Deputy General Manager	26,600 US\$/person	1.00 person		
Department Manager	21,600 US\$/person	4.00 person		
Section Manager	9,900 US\$/person	14.00 person	1	
Assistant Section Manager	8,400 US\$/person	35.00 person	ż	
Engineer & Specialist	4,700 US\$/person	118,00 person	5	
Worker	2,500 US\$/person	1,226.00 person	3,0	
Repair Costs			21,8	
Depreciation			57,3	
otal Production Costs			255,1	



# Appendix 12A-1 SALES PRICE ESTIMATIONS

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## Appendix 12A-1 SALES PRICE ESTIMATION

The Study Team estimated the sales price in Egypt based on World Steel Dynamics Report, Metal Bulletin data, and data and information which were obtained from CAPMAS statistical data base and steel consumers during the field surveys in Egypt.

#### 1. ESTIMATION FROM WORLD STEEL DYNAMICS REPORT AND METAL BULLETIN DATA

The Study team estimated the sales price based on the data and information as shown in Table 12A-1-1, Figure 12A-1-1 and Figure 12A-1-2. These data and information show spot FOB sales price of commercial grade in Europe. The sales price in Egypt can be estimated by adding shipping fee, insurance, import tax, etc. Although present import tax is 20%, according to the information from the authorities, it is estimated that future import tax will be reduced to 10%.

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

(Unit:US\$/ton-Average)

Products	World Steel Dynamics data	Metal Bulletin data
	(Antwerp spot price)	(Outside Europe FOB)
·	(1981–1997)	(1995–1997)
Hot rolled coil	330	322
Plate		459
Cold rolled coil	430	431
Galvanized coil	-	553

Source: World Steel Dynamics, Metal Bulletin

Shipping charge to Egypt : 30 US\$/t
Insurance, Bank charge Commissions, : 15 US\$/t

Custom clearance and unloading fee

Future import tax : 10 %

Estimated sales prices in Egypt based on World Steel Dynamics are calculated as follows;

Hot rolled coil

330+30+15+33=408 US\$/t

Cold rolled coil

430+30+15+43=518 US\$/t

Estimated sales prices in Egypt based on Metal Bulletin data are calculated as follows;

Hot rolled coil

322+30+15+32=399 US\$/t

Plate

459+30+15+46=550 US\$/t

Cold rolled coil

431+30+15+43=519 US\$/t

Galvanized coil

553+30+15+55=653 US\$/t

#### 2. ESTIMATED PRICE BASED ON ACTUAL MARKET IN EGYPT

Price data obtained during the field surveys are summarized in Table 12A-1-2. Prices of products are US\$ 320-600 per ton of hot rolled products and US\$ 500-1200 per ton of cold rolled products. In these price ranges, low price products are of low quality and low grade steel from EISCO and Russia. High price products are of high quality and high grade steel from Europe and Japan. The new flat product plant will produced high quality and commercial grade steel, and prices will be US\$ 400-500 per ton of hot rolled products and US\$ 500-600 per ton of cold rolled products. (Refer to Appendix 3A-1-2)

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

Unit: US\$/ton

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

#### 3. ESTIMATION FROM CAPMAS DATA

Unit price (= Sales price) are calculated by dividing total value by total quantity in CAPMAS statistical data as shown in Table 12A-1-3.

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 <b>\$</b>
Cold rolled coil	US\$ 95,015,339	179,354 ton	530 US <b>\$</b>

Source: CAPMAS Statistical Data, 1996

#### 4. PRICE DATA COMPARISON AND ESTIMATION

Estimated sales price of the new flat product plant are made based on the comparison of above data by as shown in Table 12A-1-4.

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

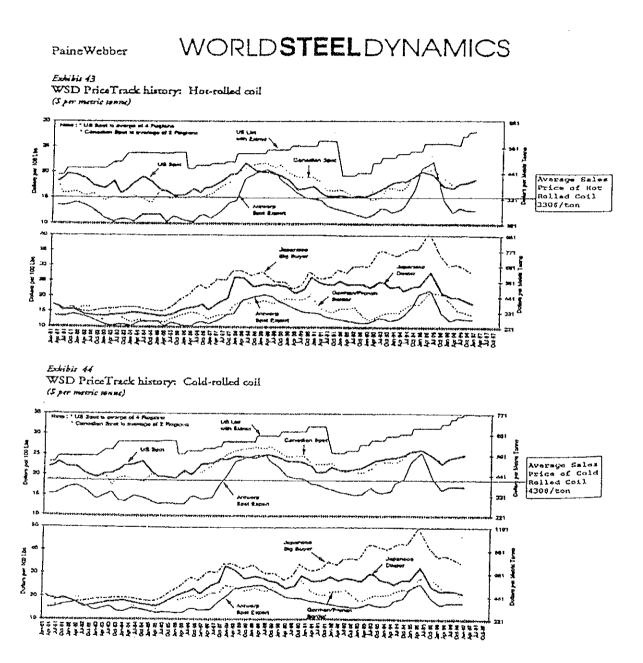
(Unit: US\$/ton)

	World Steel Dynamics	Metal Bulletin data	Estimation from actual	CAPMAS statis-tical	Estimated sales price
	Report	_	market price	data	
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

#### 5. Conclusion

- 1) Hot rolled coil sales price will be us\$410 per ton
- 2) Skinpassed coil sales price will be us\$20 per ton higher than that of hot rolled coil due to high quality.
- 3) Plate sales price will be us\$500 per ton
- 4) Cold rolled coil sales price is us\$100-150 per ton higher than that of hot rolled coil and estimated sales price will be us\$530 per ton
- 5) Galvanized coil sales price is us\$100-200 per ton higher than that of cold rolled coil and estimated sales price in Egypt will be us\$680 per ton

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



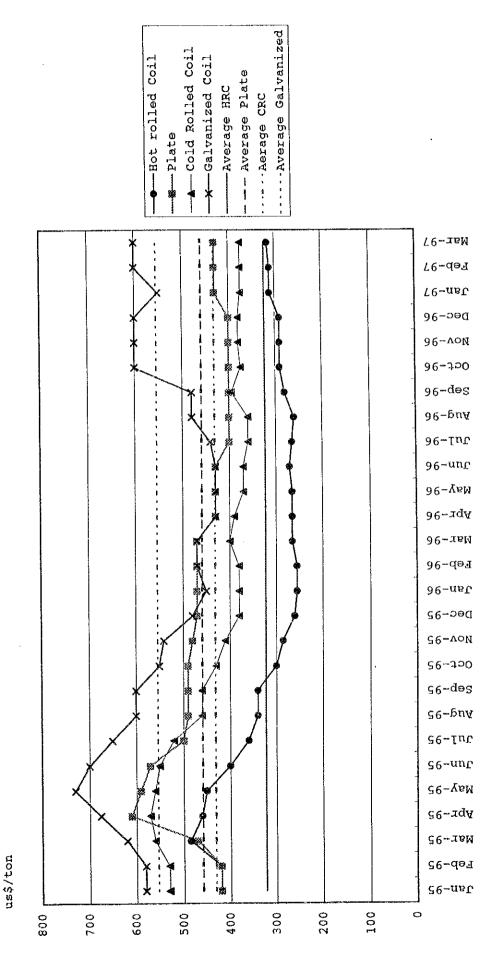
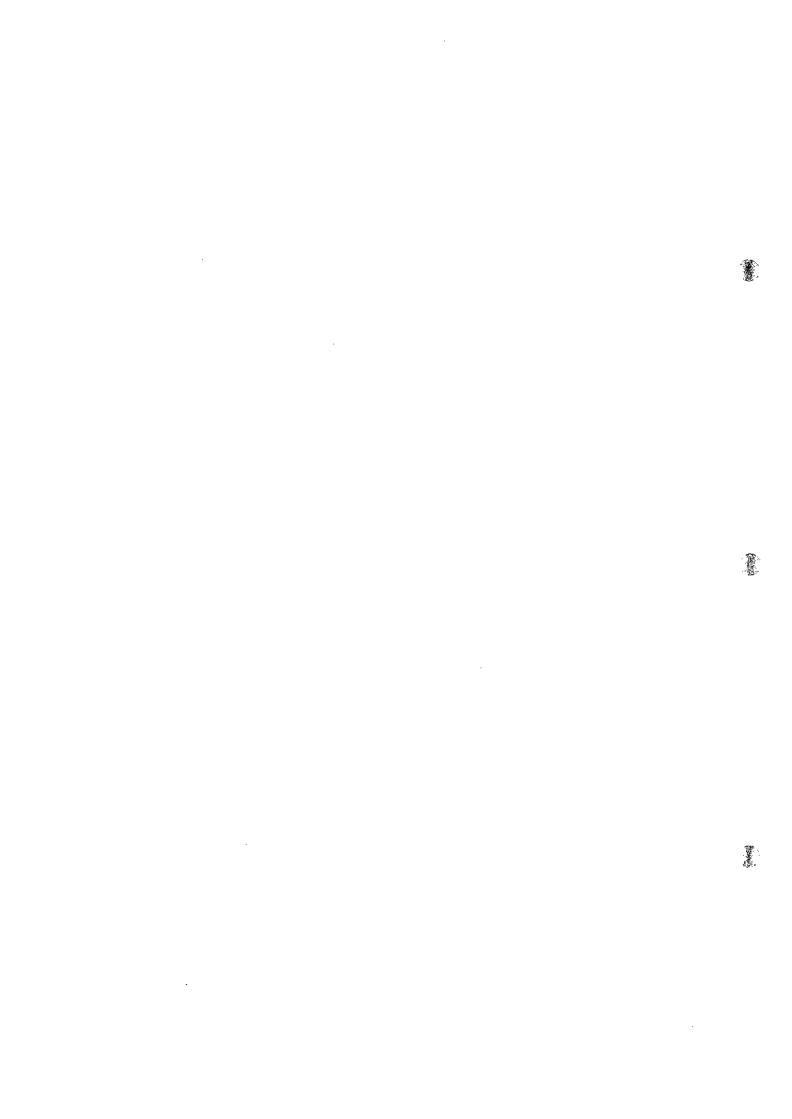


Figure 12A-1-2 Sales Price Data from Metal Bullet





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

(Unit: 1,000 US\$) <ROI (IRR on Total Investment) before Tax> 14 10 11 12 2008 2009 2010 2011 2013 2015 2016 2017 2019 2003 2004 2005 2006 2007 2012 2014 2002 2000 2001 -11,400 213.425 223.778 241,113 241.113 241,113 241,113 241,113 241,113 241,113 241,113 241,113 241,113 241,113 280,440 76.047 ash Flows from Operating Activities 0 ñ O 183,735 164,670 183,735 183,735 183 735 143,070 147,570 164,670 183.735 183.735 183.735 183,735 183,735 183.735 EBIT (Earnings before Interst & Tax) 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 Depreciation 0 0 Ω 19,065 19.065 19,065 19,065 19,065 0 Amortization -6,088 -235 39,328 -11,400-21,605 Changess in Inventories 0 158,045 -21,712 -308,882 -547,500 -216,099 0 0 -8,345 0 -8,345 Cash Flows from Investing Activities -3,157 0 -8,345 -8,345 158,045 Changes in Fixed Assets -2,832 -20,927 -306,614 -525,178 -146,475 Changes in Deferred Assets -325 -785 -2,268 -22,322 -69,625

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%

-3,157

-21,712 -308.882 -547,500 -227,499

Net Cash Flows

<ROI (IRR on Total Investment) after Tax>

CHOIT: 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

	- o	-4			; [		۷.	3	-4	J	U	,	·		10		1 %	10		
	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 Interst & 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
Changess in Inventories	0	0	0	0	-11,400	-21,605	-6,088	-235	0	0	0	0	0	0	0	00	0	0	0	39,328
Cash Flows from Investing Activities	-3,157	-21.712	-308,882	-547,500	-216,099	0	Ö	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	00	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%

ROE = 21.75%

(Unit: 1,000 US\$) < ROE (IRR on Equity) > 10 11 12 14 -2 2014 2015 2017 2019 2008 2009 2010 2011 2012 2013 2016 2018 2000 2001 2002 2003 2004 2005 2006 2007 156,212 172,286 187.676 193,397 199,118 157,029 160,920 164,810 168,701 180,258 184,148 182,317 182,317 221,645 -11,400 12,871 Cash Flows from Operating Activities 0 122,880 126,770 124,939 124,939 124.939 41,966 85,857 96,078 111,233 116,954 141,740 99,651 103,542 107,432 111,323 Net Income after Tax 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 Depreciation 0 0 19,065 19,065 19,065 19,065 19,065 0 Ω Amortization -21,605 -6,088 -235 39,328 -11,400 Changes in Inventories 0 158,045 -8.345 O -8,345 Ω Cash Flows from Investing Activities -21,712 -308,882 -547,500 -216,099 0 0 0 -8,345 -8,345 0 158,045 -20,927 -306,614 -525,178 -146,475 -2,8320 Changes in Fixed Assets

Changes in Deferred Assets -325 -785 -2,268-22,322-69,625-81,733 -81,733 -81,733 212,824 451,442 140.630 -81,733 -81,733 -81,733 -81,733 -81,733 -81,733 -81,733 10,856 Cash Flows from Financing Activities 1,578 Proceeds from Long-term Debt 10,856 212,824 451,442 140,630 1,578 -81.733 -81.733 -81.733 -81,733 -81,733 -81.733 -81,733 -81,733 -81.733 -81,733 Repayment of Long-term Debt 90,180 184,148 182,317 182,317 379,690 75,296 79,187 83,077 86.968 -96,058 -96,058 -86,869 12,871 105,942 111,664 109,041 Net Cash Flows -1.578 -10.856 74,479 90,553

12A-6

## Appendix 12A-3 DATA ON FIGURES FOR SENSITIVITY ANALYSIS

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Appendix 12A-3 Data on Figures for Sensitivity Analysis

**\*\*** 

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Change Rate	-10	φ	φ	4	-2	0	2	4	မ	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	13.71	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

Interest Rate 3	S	7	<u>თ</u>	<del>;</del> _	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

20.83

19.63

3 18.40

17.12

15.79

14.39

12.93

-2

9.69

7.87

-5 5.82

ROI by Changes in Inflation Rate

Inflation rate

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

Sec. 15

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

3

	_		2		9		4		3		10		15	
	2005	5	2006	9	2007		2008		2009	6	2014	4	2019	ெ
Sales Volume	535,708	(ton)	917,417	(ton)	933,000	(ton)	933,000	(ton)	933,000	(ton)	933,000	(ton)	933,000	(ton)
for Domestic Market	428,567	(ton)	733,933	(ton)	746,400	(ton)	746,400	(ton)	746,400	(ton)	746,400	(ton)	746,400	(ton)
for Exports	107,142	(ton)	183,483	(ton)	186,600	(ton)	186,600	(ton)	186,600	(ton)	186,600	(ton)	186,600	(ton)
(tiun)	(Unit) (1,000 US\$) (US\$/ton) (1,000	(US\$/ton)	(1,000 US\$)	(no\$\$\()	(1,000 US\$)	(US\$/ton)	(\$\$0.000(1)	(US\$/ton)	(1,000 US\$)	(US\$/tou)	(1,000 US\$)	(US\$/ton)	(1,000 US\$)	(US\$/ton)
Sales	242,909	453	416,265	454	423,343	454	423,343	454	423,343	454	423,343	454	423,343	454
for Domestic Market	204,747	478	350,896	478	356,863	478	356,863	478	356,863	478	356,863	478	356,863	478
for Exports	38,162	356	62,369	356	66,480	356	66,480	356	66,480	356	66,480	356	66,480	356
Cost of Sales	181,979	340	252,305	275	255,175	273	255,175	273	255,175	273	255,175	273	255,175	273
Variable Costs	98,615	184	168,942	184	171,811	184	171,811	184	171,811	184	171,811	184	171,811	\$
Fixed Costs	83,364	156	83,364	9	83,364	8	83,364	<b>68</b>	83,364	8	83,364	89	83,364	88
Gross Profit	60,930	114	163,960	179	168,168	180	168,168	180	168,168	180	168,168	180	168,168	130
General & Administrative Expenses	49,726	93	38,026	41	38,026	4	20,926	22	20,926	22	1,861	2	1,861	2
Operating Income	11,205	2	125,934	137	130,143	139	147,243	158	147,243	158	166,308	178	166,308	178
Non-operating Expenses	57,213	107	57,213	62	51,492	55	45,771	49	40,049	43	11,443	12	0	0
Net income before Taxes	46,008	98-	68,721	75	78,651	84	101,472	109	107,193	115	154,865	166	166,308	178
Net Income after Taxes	-51,971	-97	68,721	75	78,651	8	93,806	101	99,527	107	99,473	107	113,089	121
Net Profit Margin	-21.4	(%)	16.5	(%)	18.6	(%)	22.2	(%)	23.5	(%)	23.5	(%)	26.7	(%)
		-												

<profit &="" loss="" statement=""></profit>												_							(Unit: 1,	,ooo ooy
	-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
Sales	0	0	0	0	0	242,909	416,265	423,343	423,343	423,343	423,343	423,343	423,343	423,343	423,343	423,343	423,343	423,343	423,343	423,343
Cost of Sales	0	0	0	0	0	181,979	252,305	255,175	255,175	255,175	255,175	255,175	255,175	255,175	255,175	255,175	255,175	255,175	255,175	255,175
Variable Costs	0	0	0	0	ō	98,615	168,942	171,811	171,811	171,811	171,811	171,811	171,811	171,811	171,811	171,811	171,811	171,811	171,811	171,811
Material Costs	<u> </u>	<u>_</u>	0	0	0	68,399	117,177	119,167	119,167	119,167	119,167	119,167	119,167	119,167	119 167	119,167	119,167	119,167	119,167	119,167
	o	0	0	0	ŏ	30,216	51,765	52,644	52,644	52,644	52,644	52,644	52,644	52,644	52,644	52,644	52,644	52,644	52,644	52,644
Purchased Utility Costs				<u>_</u>	<u>~</u>		83,364	83,364	83,364	83,364	83,364	83,364	83,364	83,364	83,364	83,364	83,364	83,364	83,364	83,364
Fixed Costs	0	0	0	0		83,364							<del></del>				168,168	168,168	168,168	168,168
Gross Profit	0	0	0	0	U	60,930	163,960	168,168	168,168	168,168	168,168	168,168	168,168	168,168	168,168	168,168				
General & Administrative Expenses	0	0	0	0	0	49,726	38,026	38,026	20,926	20,926	1,861	1,861	1,861	1,861	1,861	1,861	1,861	1,861	1,861	1,861
Operating Income	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
Non-operating Expenses	0	0	0	0	0	57,213	57,213	51,492	45,771	40,049	34,328	28,607	22,885	17,164	11,443	5,721	0	0	0	C
Income before Tax	Ó	0	0	0	0	-46,008	68,721	78,651	101,472	107,193	131,980	137,701	143,422	149,144	154,865	160,586	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
Net Income (after Tax)	0		0	0	<u>-</u>	-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
				<u>~</u>		01,011	00,12.		001000											
<appropriation earnings="" of="" retained=""></appropriation>	_		_	_	_		0	_			60.457	49.004	45,846	47,791	49,736	55,515	57,460	56,545	56,545	56,545
Payment of Dividends	0	0	0	0	U	0	v	0	0	0	62,157	43,901	•					•	-	
Retained Earnings	0	0	0	0	0	-51,971	68,721	78,651	93,806	99,527	62,157	43,901	45,846	47,791	49,736	55,515	57,460	56,545	56,545	56,545
<statement cash="" flows="" of=""></statement>		<del></del>															- 10	40	(Unit: 1,	,000 US\$)
	-5	-4	-3	-2	-1	1	2	3	4	5	6	/	8	9	10	11	12	13	14	10
	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	170,467
Net Income after Tax	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	ő	0	o	Ö	n	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	ĺő	0	n	, ,	٥	19,065	19,065	19.065	19,065	19.065	0.,0.0	0.010	0.0,0	0,,5.0	0.,2,0	0	0	0	0	C
1 ;	Ö	0	0	0	11 100	-21,605	-6,088	-235	0	15,005	ŏ	0	o O	ő	Ö	ñ	ő	ő	0	7
Changes in Inventories	L	<u>`</u>		<u> </u>	-11,400									0		-8,345	0	0		
Cash Flows from Investing Activities	-3,157	-21,712	-308,882	-547,500	-216,099	0	0	0	0	0	-8,345		<u>-</u> -		<del></del>				<u>-</u>	
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	
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	
Cash Flows from Financing Activities	3,157	21,712	308,882	547,500	236,687	0	-81,733	-81,733	-81,733	-81,733	-143,890	-125,634	-127,579	-129,524	-131,469	-137,248	-57,460	-56,545	-56,545	-56,545
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	Ó	0	0	0	C
Repayment of Long-term Debt	1,700	0	0	0	'n	0	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	-81,733	0	0	O	C
Issuances of Common Stock	1,578	10,856	96,058	96,058	96,058	ň	0	0	0	0	0	0	0	0	0	. 0	0	0	0	C
1 (	i .	· ·	-	· · · · · · · · · · · · · · · · · · ·	90,050	٥	ŏ	Ö	o o	0	-62,157	-43,901	-45,846	-47,791	-49,736	-55,515	-57,460	-56,545	-56,545	-56,545
Payment of Dividends	0	0	0	0	0.400									23,436	25,381	22,815	114,838	113,923	113,923	113,923
Net Cash Flows	0	0	0	0	9,188	2,866	57,343	73,126	88,515	94,237	29,457	19,545	21,491						810,084	924,007
Accumulated Net Cash Flows	0	0	0	0	9,168	12,055	69,398	142,524	231,039	325,276	354,733	374,278	395,769	419,205	444,586	467,401	582,239	696,162	010,004	924,007
<balance sheet=""></balance>	I -5	-4	-3	-2	-1	1		3	4	5	6	7	8	9	10	11	12	13	(Unit: 1	,000 US\$; 15
<balance sheet=""></balance>	-5	-4	-3 2002	-2	O COLUMN TO THE REAL PROPERTY AND ADDRESS OF THE PARTY AND ADDRESS OF T		2006					7 2011							14	15
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	7 2011	2012	2013	2014	2015	2016	2017	14 2018	15 2019
Current Assets	2000 0	2001 0	2002 0	2003 0	2004 20,588	2005 45,060	2006 108,491	2007 181,851	2008 270,367	2009 364,604	2010 394,061	413,606	2012 435,097	2013 458,533	2014 483,914	2015 506,729	2016 621,567	2017 735,489	14 2018 849,412	2019 963,335
Current Assets Cash and Cash Equivalents	2000 0 0	2001 0 0	2002 0 0	2003	2004	2005 45,060 12,055	2006 108,491 69,398	2007 181,851 142,524	2008 270,367 231,039	2009 364,604 325,276	2010 394,061 354,733	413,606 374,278	2012 435,097 395,769	2013 458,533 419,205	2014 483,914 444,586	2015 506,729 467,401	2016	2017	14 2018 849,412 810,084	15 2019
Current Assets	2000 0	2001 0	2002 0	2003 0	2004 20,588 9,188 0	2005 45,060 12,055 0	2006 108,491 69,398 0	2007 181,851 142,524 0	2008 270,367 231,039 0	2009 364,604 325,276 0	2010 394,061 354,733 0	413,606 374,278 0	2012 435,097 395,769 0	2013 458,533 419,205 0	2014 483,914 444,586 0	2015 506,729 467,401 0	2016 621,567 582,239 1	2017 735,489 696,162 2	2018 849,412 810,084 3	2019 963,335 924,007
Current Assets Cash and Cash Equivalents	2000 0 0	2001 0 0	2002 0 0	2003 0 0 0 0	2004 20,588 9,188 0 11,400	2005 45,060 12,055 0 33,005	2006 108,491 69,398 0 39,093	2007 181,851 142,524 0 39,328	2008 270,367 231,039 0 39,328	2009 364,604 325,276 0 39,328	2010 394,061 354,733 0 39,328	413,606 374,278 0 39,328	2012 435,097 395,769 0 39,328	2013 458,533 419,205 0 39,328	2014 483,914 444,586 0 39,328	2015 506,729 467,401 0 39,328	2016 621,567 582,239 1 39,328	2017 735,489 696,162 2 39,328	14 2018 849,412 810,084 3 39,328	2019 963,339 924,007 2 39,328
Current Assets Cash and Cash Equivalents Accounts Receivable	2000 0 0	2001 0 0	2002 0 0	2003 0	2004 20,588 9,188 0 11,400	2005 45,060 12,055 0	2006 108,491 69,398 0 39,093 887,270	2007 181,851 142,524 0 39,328 829,892	2008 270,367 231,039 0	2009 364,604 325,276 0	2010 394,061 354,733 0 39,328 666,102	413,606 374,278 0 39,328 608,724	2012 435,097 395,769 0 39,328 551,346	2013 458,533 419,205 0 39,328 493,969	2014 483,914 444,586 0 39,328 436,591	2015 506,729 467,401 0 39,328 387,557	2016 621,567 582,239 1 39,328 330,179	2017 735,489 696,162 2 39,328 272,801	14 2018 849,412 810,084 3 39,328 215,423	2019 963,335 924,007 2 39,328 158,045
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories	2000 0 0 0 0	2001 0 0 0 0	2002 0 0 0 0	2003 0 0 0 0	2004 20,588 9,188 0 11,400	2005 45,060 12,055 0 33,005	2006 108,491 69,398 0 39,093	2007 181,851 142,524 0 39,328	2008 270,367 231,039 0 39,328	2009 364,604 325,276 0 39,328	2010 394,061 354,733 0 39,328	413,606 374,278 0 39,328	2012 435,097 395,769 0 39,328 551,346 39,822	2013 458,533 419,205 0 39,328 493,969 39,822	2014 483,914 444,586 0 39,328 436,591 39,822	2015 506,729 467,401 0 39,328 387,557 39,822	2016 621,567 582,239 1 39,328 330,179 39,822	2017 735,489 696,162 2 39,328 272,801 39,822	14 2018 849,412 810,084 3 39,328 215,423 39,822	2019 963,335 924,007 4 39,328 158,045 39,822
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land	2000 0 0 0 0 0 2,832	2001 0 0 0 0 0 23,759 15,929	2002 0 0 0 0 0 330,373 39,822	2003 0 0 0 0 0 855,551 39,822	2004 20,588 9,188 0 11,400 1,002,026 39,822	2005 45,060 12,055 0 33,005 944,648 39,822	2006 108,491 69,398 0 39,093 887,270 39,822	2007 181,851 142,524 0 39,328 829,892	2008 270,367 231,039 0 39,328 772,514	2009 364,604 325,276 0 39,328 715,136	2010 394,061 354,733 0 39,328 666,102 39,822	413,606 374,278 0 39,328 608,724	2012 435,097 395,769 0 39,328 551,346	2013 458,533 419,205 0 39,328 493,969	2014 483,914 444,586 0 39,328 436,591	2015 506,729 467,401 0 39,328 387,557	2016 621,567 582,239 1 39,328 330,179	2017 735,489 696,162 2 39,328 272,801	14 2018 849,412 810,084 3 39,328 215,423	2019 963,335 924,007 2 39,328 158,045
Current Assets  Cash and Cash Equivalents Accounts Receivable Inventories  Fixed Assets  Land Buildings, Merchinery and Equipment	2000 0 0 0 0 0 2,832	2001 0 0 0 0 0 23,759	2002 0 0 0 0 0 0 330,373	2003 0 0 0 0 0 855,551	2004 20,588 9,188 0 11,400 1,002,026 39,822	2005 45,060 12,055 0 33,005 944,648 39,822 962,204	2006 108,491 69,398 0 39,093 887,270 39,822 962,204	2007 181,851 142,524 0 39,328 829,892 39,822 962,204	2008 270,367 231,039 0 39,328 772,514 39,822 962,204	2009 364,604 325,276 0 39,328 715,136 39,822 962,204	2010 394,061 354,733 0 39,328 666,102 39,822 970,548	413,606 374,278 0 39,328 608,724 39,822	2012 435,097 395,769 0 39,328 551,346 39,822	2013 458,533 419,205 0 39,328 493,969 39,822	2014 483,914 444,586 0 39,328 436,591 39,822	2015 506,729 467,401 0 39,328 387,557 39,822	2016 621,567 582,239 1 39,328 330,179 39,822	2017 735,489 696,162 2 39,328 272,801 39,822	14 2018 849,412 810,084 3 39,328 215,423 39,822	2019 963,335 924,007 4 39,328 158,045 39,822
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation	2000 0 0 0 0 0 2,832 0 2,832 0	2001 0 0 0 0 23,759 15,929 7,830 0	2002 0 0 0 0 0 330,373 39,822 290,551 0	2003 0 0 0 0 855,551 39,822 815,729	2004 20,588 9,188 0 11,400 1,002,026 39,822 962,204	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268	413,606 374,278 0 39,328 608,724 39,822 970,548	2012 435,097 395,769 0 39,328 551,346 39,822 970,548	2013 458,533 419,205 0 39,328 493,969 39,822 970,548	2014 483,914 444,586 0 39,328 436,591 39,822 970,548	2015 506,729 467,401 0 39,328 387,557 39,822 978,893	2016 621,567 582,239 1 39,328 330,179 39,822 978,893	2017 735,489 696,162 2 39,328 272,801 39,822 978,893	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893	2015 963,335 924,007 2 39,328 158,045 39,822 978,893
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets	2000 0 0 0 0 2,832 0 2,832 0 325	2001 0 0 0 0 23,759 15,929 7,830 0	2002 0 0 0 0 330,373 39,822 290,551 0 3,378	2003 0 0 0 0 855,551 39,822 815,729 0 25,700	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0	2010 394,061 364,733 0 39,328 666,102 39,822 970,548 -344,268	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292	2015 963,335 924,007 2 39,328 158,045 39,822 978,893
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs	2000 0 0 0 0 2,832 0 2,832 0 325 325	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 1,000	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0	2015 963,335 924,007 2 39,328 158,045 39,822 978,893
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction	2000 0 0 0 0 2,832 0 2,832 0 325 325 0	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 1,000 110	2002 0 0 0 0 330,373 39,822 290,551 0 0 3,378 2,397 981	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0	2013 458,533 419,205 0 39,928 493,969 39,822 970,548 -516,402 0 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292	2015 963,335 924,007 2 39,328 158,045 39,822 978,893
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 1,000 110 0	2002 0 0 0 0 330,373 39,822 290,551 0 0 3,378 2,397 981	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0	2004 20,588 9,188 0 11,400 1,002,026 39,822 962,204 0 95,325 31,207 64,118	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction	2000 0 0 0 0 2,832 0 2,832 0 325 325 0	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 1,000 110	2002 0 0 0 0 330,373 39,822 290,551 0 0 3,378 2,397 981	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0	2013 458,533 419,205 0 39,928 493,969 39,822 970,548 -516,402 0 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 1,000 110 0	2002 0 0 0 0 330,373 39,822 290,551 0 0 3,378 2,397 981	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0	2004 20,588 9,188 0 11,400 1,002,026 39,822 962,204 0 95,325 31,207 64,118	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 0 920,504	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 0 951,746	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 1,000 110 0	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251	2004 20,588 9,188 0 11,400 1,002,026 39,822 962,204 0 95,325 31,207 64,118 0 1,117,939	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 0 3,157	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 110 0 24,869	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751	2003 0 0 0 855,551 39,822 815,729 25,700 8,951 16,749 0 881,251	2004 20,588 9,188 0 11,400 1,002,026 39,822 962,204 0 95,325 31,207 64,118 0 1,117,939	2005 45,060 12,055 0 33,005 944,648 39,822 982,204 -57,378 76,260 31,207 64,118 -19,065	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 0	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 0 1,022,331	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0 0 0 952,501	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 0 920,504	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 0 894,286	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 0 951,746	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 0 0 1,008,291	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 0 1,064,835	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 110 0 24,869	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751	2003 0 0 0 855,551 39,822 815,729 25,700 25,700 8,951 16,749 0 881,251	2004 20,588 9,188 0 11,400 1,002,026 39,822 962,204 0 95,325 31,207 64,118 0 1,117,939	2005 45,060 12,055 0 33,005 944,648 39,822 982,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 1,060,163	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 0 1,022,331	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0 0 0 952,501	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 0 920,504	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 0 894,286	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 0 951,746	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 0 1,008,291	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157 -5 2000 1,578	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 110 0 24,869 -4 2001 12,435	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259	2003 0 0 0 855,551 39,822 815,729 25,700 8,951 16,749 0 881,251 -2 2003 676,701	2004 20,588 9,188 0 11,400 1,002,026 39,822 962,204 0 95,325 31,207 64,118 0 1,117,939	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967 1 2005 817,331	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2 2006 735,598	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 1,060,163	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 0 1,022,331 7 2011 326,932	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0 0 0 952,501	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 0 920,504	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 0 894,286 11 2015	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 0 951,746	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 0 1,008,291	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets  Total Labilities Current Liabilities	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157 -5 2000 1,578 0	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 0 24,869 -4 2001 12,435	2002 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251 -2 2003 676,701	2004 20,588 9,188 0 11,400 1,002,026 39,822 962,204 0 95,325 31,207 64,118 0 1,117,939 -1 2004 817,331	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967 1 2005 817,331	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132 0	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 1,060,163 6 2010 408,665	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 0 1,022,331 7 2011 326,932 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443 8 2012 245,199	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0 0 0 952,501 9 2013 163,466 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 0 920,504 10 2014 81,733	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 0 894,286 11 2015 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 0 951,746	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 0 0 1,008,291	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835	19 2015 963,333 924,007 39,324 158,045 39,825 978,895 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets  Total Liabilities Current Liabilities [Accounts Payable]	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157 -5 2000 1,578	2001 0 0 0 0 23,759 7,830 0 1,110 1,000 110 24,869 -4 2001 12,435	2002 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259 0	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251 -2 2003 676,701	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118 0 1,117,939	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967 1 2005 817,331 0	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2 2006 735,598 0	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132 0	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398 0	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 1,060,163 6 2010 408,665 0	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 0 1,022,331 7 2011 326,932 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443 8 2012 245,199 0	2013 458,533 419,205 0 39,328 493,369 39,822 970,548 -516,402 0 0 0 952,501 9 2013 163,466 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 920,504 10 2014 81,733 0	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 894,286 11 2015 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 951,746	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 1,008,291 13 2017 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835	19 2015 963,333 924,007 39,324 158,045 39,825 978,895 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets  Total Liabilities Current Liabilities [Accounts Payable Long-term Liabilities	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157 -5 2000 1,578 0	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 0 24,869 -4 2001 12,435	2002 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259 0	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251 -2 2003 676,701	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118 0 1,117,939	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967 1 2005 817,331 0	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 1,060,163 2010 408,665	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 0 1,022,331 7 2011 326,932 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443 8 2012 245,199	2013 458,533 419,205 0 39,928 493,969 39,822 970,548 -516,402 0 0 0 952,501 9 2013 163,466	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 920,504 10 2014 81,733 0 0 81,733	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 894,286 11 2015 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 0 951,746 12 2016 0 0	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 1,008,291 13 2017 0 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835	19 2015 963,333 924,007 39,324 158,045 39,825 978,895 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets  Total Liabilities Current Liabilities [Accounts Payable Long-term Liabilities	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157 2000 1,578	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 1,000 110 0 24,869 -4 2001 12,435	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259 0 0 225,259	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251 -2 2003 676,701 676,701	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118 0 1,117,939 -1 2004 817,331	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967 1 2005 817,331	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2 2006 735,598 0	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398 0	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 1,060,163 6 2010 408,665 0	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 0 1,022,331 7 2011 326,932 0	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443 8 2012 245,199 0	2013 458,533 419,205 0 39,328 493,369 39,822 970,548 -516,402 0 0 0 952,501 9 2013 163,466 0	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 920,504 10 2014 81,733 0	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 894,286 11 2015 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 951,746	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 1,008,291 13 2017 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,670
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets  Total Liabilities Current Liabilities [Accounts Payable Long-term Debt	2000 0 0 0 0 2,832 0 325 325 0 0 3,157 -5 2000 1,578 0 1,578	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 110 0 24,869 -4 2001 12,435 0 0 12,435	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259 0 0 225,259	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251 -2 2003 676,701 676,701 676,701	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118 0 1,117,939 -1 2004 817,331 817,331	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967 1 2005 817,331 817,331	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2 2006 735,598 0 735,598 735,598	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865 0 653,865 653,865	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132 0 0 572,132 572,132	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398 490,398	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 1,060,163 6 2010 408,665 408,665	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 1,022,331 7 2011 326,932 0 326,932 326,932	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443 8 2012 245,199 0 0 245,199	2013 458,533 419,205 0 39,928 493,969 39,822 970,548 -516,402 0 0 0 952,501 9 2013 163,466 163,466	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 920,504 10 2014 81,733 0 81,733 81,733	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 894,286 11 2015 0 0	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 0 951,746 12 2016 0 0	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 0 1,008,291 13 2017 0 0	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835	15 2015 963,335 924,007 39,328 158,045 39,823 978,893 -860,677 ()
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets  Total Labilities Current Liabilities [Accounts Payable Long-term Labilities Long-term Debt Shareholders' Equity	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157 -5 2000 1,578 0 1,578 1,578	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 110 0 24,869 -4 2001 12,435 0 0 12,435 12,435	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259 0 0 225,259 108,492	2003 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251 -2 2003 676,701 0 676,701 204,550	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118 0 1,117,939 -1 2004 817,331 0 0 817,331	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967  1 2005 817,331 0 817,331 817,331 248,637	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2 2006 735,598 0 735,598 735,598 317,358	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865 0 0 653,865 653,865 396,008	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132 0 572,132 489,814	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398 0 490,398 490,398 589,341	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 1,060,163 6 2010 408,665 408,665 651,498	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 1,022,331 7 2011 326,932 0 326,932 695,398	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443 8 2012 245,199 0 245,199 245,199 741,244	2013 458,533 419,205 0 39,928 493,969 39,822 970,548 -516,402 0 0 0 952,501 9 2013 163,466 0 163,466 789,035	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 0 920,504 10 2014 81,733 0 81,733 81,733 838,771	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 894,286 11 2015 0 0 0 0 894,286	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 0 951,746	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 1,008,291 13 2017 0 0 0 1,008,291	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835	15 2015 963,335 924,007 39,328 158,045 39,823 978,893 -860,677 () () () () () () () () () () () () ()
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets  Total Labilities Current Liabilities	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157 -5 2000 1,578 0 0 1,578 1,578 1,578	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 110 0 24,869 -4 2001 12,435 0 0 12,435 12,435 12,435	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259 0 0 225,259 108,492 108,492	2003 0 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251 -2 2003 676,701 0 676,701 204,550 204,550	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118 0 1,117,939 -1 2004 817,331 0 0 817,331 817,331 817,331	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967  1 2005 817,331 0 0 817,331 817,331 248,637 300,608	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2 2006 735,598 0 735,598 735,598 317,358 300,608	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865 0 653,865 653,865 396,008 300,608	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132 0 0 572,132 572,132 489,814 300,608	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398 0 490,398 490,398 490,398 589,341 300,608	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 1,060,163 6 2010 408,665 0 408,665 408,665 651,498 300,608	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 0 1,022,331 7 2011 326,932 0 326,932 326,932 695,398 300,608	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443 8 2012 245,199 0 245,199 245,199 741,244 300,608	2013 458,533 419,205 0 39,328 493,969 39,822 970,548 -516,402 0 0 0 952,501 9 2013 163,466 0 0 163,466 789,035 300,608	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 920,504 10 2014 81,733 0 81,733 81,733 838,771 300,608	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 894,286 11 2015 0 0 0 0 0 894,286 300,608	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 951,746 12 2016 0 0 0 951,746 300,608	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 1,008,291 13 2017 0 0 0 1,008,291 300,608	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835 14 2018 0 0 0 0	15 2015 963,335 924,007 39,328 158,045 39,823 -860,67 ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (
Current Assets Cash and Cash Equivalents Accounts Receivable Inventories Fixed Assets Land Buildings, Merchinery and Equipment Accumulated Depreciation Deferred Assets Pre-Production Costs Interst during Construction Accumulated Amortization Total Assets  Total Labilities Current Liabilities Accounts Payable Long-term Debt Shareholders' Equity	2000 0 0 0 0 2,832 0 2,832 0 325 325 0 0 3,157 -5 2000 1,578 0 1,578 1,578	2001 0 0 0 0 23,759 15,929 7,830 0 1,110 110 0 24,869 -4 2001 12,435 0 0 12,435 12,435	2002 0 0 0 0 330,373 39,822 290,551 0 3,378 2,397 981 0 333,751 -3 2002 225,259 0 225,259 108,492 108,492	2003 0 0 0 0 855,551 39,822 815,729 0 25,700 8,951 16,749 0 881,251 -2 2003 676,701 0 676,701 676,701 204,550 204,550	2004 20,588 9,188 0 11,400 1,002,026 39,622 962,204 0 95,325 31,207 64,118 0 1,117,939 -1 2004 817,331 0 0 817,331 817,331 817,331	2005 45,060 12,055 0 33,005 944,648 39,822 962,204 -57,378 76,260 31,207 64,118 -19,065 1,065,967  1 2005 817,331 0 817,331 817,331 248,637 300,608 -51,971	2006 108,491 69,398 0 39,093 887,270 39,822 962,204 -114,756 57,195 31,207 64,118 -38,130 1,052,955 2 2006 735,598 0 735,598 735,598 317,358 300,608 16,750	2007 181,851 142,524 0 39,328 829,892 39,822 962,204 -172,134 38,130 31,207 64,118 -57,195 1,049,873 2007 653,865 0 653,865 653,865 396,008 300,608 95,401	2008 270,367 231,039 0 39,328 772,514 39,822 962,204 -229,512 19,065 31,207 64,118 -76,260 1,061,946 4 2008 572,132 0 0 572,132 572,132 489,814 300,608 189,206	2009 364,604 325,276 0 39,328 715,136 39,822 962,204 -286,890 0 31,207 64,118 -95,325 1,079,740 5 2009 490,398 0 490,398 490,398 589,341	2010 394,061 354,733 0 39,328 666,102 39,822 970,548 -344,268 0 0 0 1,060,163 6 2010 408,665 0 0 408,665 408,665 651,498 300,608 350,890	413,606 374,278 0 39,328 608,724 39,822 970,548 -401,646 0 0 1,022,331 7 2011 326,932 0 326,932 326,932 326,932 39,822 39,822 0 0 326,932 326,932 39,822 39,822 39,822 39,822 326,932 39,822 39,822 39,822 39,822 326,932 39,822 39,822 39,822 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932 326,932	2012 435,097 395,769 0 39,328 551,346 39,822 970,548 -459,024 0 0 0 986,443 8 2012 245,199 0 245,199 245,199 741,244	2013 458,533 419,205 0 39,928 493,969 39,822 970,548 -516,402 0 0 0 952,501 9 2013 163,466 0 163,466 789,035	2014 483,914 444,586 0 39,328 436,591 39,822 970,548 -573,780 0 0 0 920,504 10 2014 81,733 0 81,733 81,733 838,771	2015 506,729 467,401 0 39,328 387,557 39,822 978,893 -631,158 0 0 0 894,286 11 2015 0 0 0 0 894,286	2016 621,567 582,239 1 39,328 330,179 39,822 978,893 -688,536 0 0 951,746 12 2016 0 0 0 951,746 300,608 651,138	2017 735,489 696,162 2 39,328 272,801 39,822 978,893 -745,914 0 0 1,008,291 13 2017 0 0 0 1,008,291 300,608 707,683	14 2018 849,412 810,084 3 39,328 215,423 39,822 978,893 -803,292 0 0 0 1,064,835 14 2018 0 0 0 0	15 2015 963,335 924,007 39,328 158,045 39,822 978,893 -860,677 ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (

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

<roi (irr="" before="" investment)="" on="" t<="" th="" total=""><th>ax&gt;</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>(Unit: 1,</th><th>,000 US\$)</th></roi>	ax>																		(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	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
Depreciation	0	0	0	0	0	57 <b>,37</b> 8	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	O
Changess 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	00	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	421,059

ROI before Tax = 13.23%

<roi (irr="" after="" investment)="" on="" tax<="" th="" total=""><th><b>&gt;</b></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>(Unit: 1,</th><th>,000 US\$)</th></roi>	<b>&gt;</b>																		(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	C
Changess 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	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 <b>,</b> 3 <b>7</b> 8	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	Q	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	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%

