ANNEX 5
FINANCIAL ANALYSIS SHEETS

ANNEX 5 FINANCIAL ANALYSIS SHEETS

5.1 No.1 CDU (Operational Rate: 80%)

(1)	"WITH" Case	A5.1	-	1		A5.1	-	17
(2)	"WITHOUT" Case	A5.1	_	18	• • •	A5.1	_	34
(3)	"Incremental" Case	A5.1	-	35	• • •	A5.1	-	46
5.2	Power Plant	A5.2	_	1		A5.2	_	12
	("Incremental" Case)							

	*** CRUDE	OIL DIST		PROJECT IN	POLAND **	*			PAGE	-
	PI WITH CASE	ဦး		SALES PLAN	s sn) -	1,000)				
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
RATED CAPACITY (FUEL GAS) CAPACITY UTILIZATION (FUEL GAS) PRODUCTION (VOLUME) INCREASE IN INVENTORY (FUEL GAS) SALES COLUME (VOLUME)		0 000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.800 4435 4435 5456 500 500 500 500 500 500 500 500 500 5	80 0 80 0 80 0 80 0 80 0 80 0 80 0 80 0	600 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	488.0 448.0 408.4 408.0 408.0 808.0
SALES REVENUE (FUEL GAS)	.0	0	. ,			466.		. 1	466	466
RATED CAPACITY (LPO) CAPACITY UTILIZATION (LPO) PRODUCTION (VOLUME) INCEASE IN INVENTORY (LPC) SALES UNIT SALES PRICE (US\$/T)	0 000 0 0	0 000	27.2 40.0 27.2 40.0 27.2 40.0 20.0	24 24 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	24.056. 27.245. 27.245. 0.1200	27245. 27245. 27245. 0.1200	24058. 27248. 27248. 0.1200	24056. 0.800 27245. 27245. 0.1200	24056. 0,800 27245. 27245. 0,1200	34056 0.800 27245 27245 0.12245
SALES REVENUE (LPG)	.0	9.	3269.	3269.	3269.	3269.	3269.	3269.	3269.	3269
RATED CAPACITY (L/H NAPHTHA) CAPACITY UTIL'N (L/H NAPHTHA) PRODUCTION (YOLUME) INC. IN INVENTORY (L/H NAPHTHA) SALES UNIT. SALES PRICE (US\$/T)	000	0 00	000 00	438600 0.3600 348480. 348480. 0.1700	435600 0.800 346480 348480 0.1700	435500. 0.500 348450. 348450. 0.1700	435600 0 600 348480 348480 0 1700		435600. 0.800 348480. 348480. 0.1700	435600 0.800 346480 346480 0.346480
SALES REVENUE (L/H NAPHTHA)	0	0.	59242.	59242.	59242.	59242.	59242.	59242.	59242.	59242
RATED CAPACITY (KEROSENE) CAPACITY UTILIZATION (KEROSENE) PRODUCTION (VOLUME) INC. IN INVENTORY (KEROSENE) SALES (VOLUME) UNIT SALES PRICE (USS/T)	0 00	0 000	0.000	0 300	0.800	0.000	0.800.	0.600	0.800	0.080
SALES REVENUE (KEROSENE)	o ·	0	0	. 0	0	ė		ó	0	0
RATED CAPACITY (GAS OIL) CAPACITY UTILIZATION (GAS OIL) PRODUCTION (VOLUME) INCREASE IN INVENTORY (GAS OIL) SALES UNIT SALES PRICE (USS/T)	0 000	0 000	742104 0.800 593683. 0.1800	742104. 0.800 593689. 0.180689.	742104 0.300 593683. 0.1306	742104. 0.800. 0.900. 0.900. 0.1300. 0.1300.	742104. 0.800 899.830 599.830. 0.1800	742104. 0.800 593683. 0.1800.	742104. 0.800. 893683. 0.1800.	44210 69 69 69 69 69 69 69 69 69 69 69 69 69 6
SALES REVENUE (CAS OIL) RATED CAPACITY (V.G.G.) CAPACITY UTILIZATION (V.G.O) PRODUCTION (VOLUME) INCREASE IN INVENTORY (V.G.O.) SALES CYOLUME			66 44 66 66 66 66 66 66 66 66 66 66 66 6	644 64 64 64 64 64 64 64 64 64 64 64 64	56 44 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	664488 6.4488 6.4488 6.41890 7.600 1.600	6644 6448 641890 641890 1690	664488 6.4488 6.4488 6.41680 6.41680 1.690	664488 0.4488 631580 631680 1500	6 44 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
SALES PRIVE (V.G.O.)			85054	85054	85054.	85054.	85054.	85054.	85054.	85054

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	*** CRUDE OIL DISTILLATION PROJECT IN	OIL DIST	LLATION	ROJECT IN	POLAND	技術			PAGE	~
	- WITH CAS	PRODUCT 10	PRODUCTION AND SALES FLAN E (2,439,360 T/Y, C.U.:80)	PRODUCTION AND SALES FLAN CASE (2,439,360 T/Y, C.U.:80%)		(USS. 1.000)				
YEAR	1997	1998	1889	2000	2001	2002	2003	2004	2002	2008
CONTRACTOR OF THE PROPERTY OF	÷, c		79200	79200.	79200.	79200.	79200.	79200.	79200.	79200.
CAPACITY UTIL'N (F.O. (LS))	0.0	0	0.800	0.800	0,800	0.800	0,800	0.800	0.800	0.800
PRODUCTION (VOLUME)	o o	o c	63360.	00000	200	9979	0	0.0	9	
INC. IN INVENTORY (F.O. (ESS)	o c	ò	63360	63360.	63360.	63360.	63360	63360.	63360	63360.
UNIT SALES PRICE CUSS/T)	0	0.0	0.0850	0.0850	0.0850	0.0850	0.0850	0.0850	0.0850	0.0850
SALES REVENUE (F.O. (LS))	0	0	5386.	5386.	5386.	5386,	5386.	5386,	5386.	5386,
**************************************	Ċ	C	478355	475368.	478368.	478368.	476368.	478368.	478368.	478368.
MATERIAL CAPACITY OF CAPACITY	i c	0	000	008.0	0.800	0.800	0 800	0.800	0.800	0 800
PRODUCTION CVOLUMEN	9		382694.	382694.	382694.	382694.	382694.	382694.	382694.	382694.
INC. IN INVENTORY (F.O. (HS))	6	0 0	0.000	0.0	382694	382694	382694	382694	382694.	352694.
SALES (VOLUME) UNIT SALES PRICE (US\$/T)	0.0	0.0	0.0650	0.0650	0.0650	0.0650	0.0650	0.0650	0.0650	0.0650
SALES REVENUE (F.O. CHS)	.0		24875.	24875.	24875.	24875.	24875.	24875.	24875.	24875.
TOTAL SALES REVENUE	ó	6	285155.	285155.	285155.	265155.	285155.	265155.	285155.	285155.
					•					

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	*** CRUDE OF PR	PRODUCTIONS (2.439.	COUCTION AND SAICE 439.360 T/Y.	*** CRUDE OIL DISTILLATION PROJECT IN POLAND *** PRODUCTION AND SALES PLAN - WITH CASE (2.439.360 T/Y, C.U.:80%) - (USS,	POLAND **	** 1.000}		
YEAR	2007	2008	2009	2010	2011	2012	2013	
RATED CAPACITY (FUEL GAS)	5544.	5544.	5544.	3544.	5544	5544	5544.	4
	4435	4435.	4435	4435	4435	4435	4435.	
CVOLUME>	4	443	4435.	4435	4435	4435	4435.	
UNIT SALES PRICE (USS/T)	0, 1050	0.:050	0, 1050	0.1050	0001.0	0.1050	0.1000	
SALES REVENUE (FUEL GAS)	466.	466.	466.	466.	466.	466.	466.	
	34056.	34056.	34056.	34036	34056	34056	34056.	
CAPACITY UTILIZATION (LPG)	0.800 27245	0.800	0.800	0000	27245	27245	27245	
ASE IN	0		?	0	0	0	Ö	
SALES (VOLUME) UNIT SALES PRICE (USS/T)	27245. 0.1200	27245.	27245.	27245.	27245. 0.1200	27245, 0.1200	0.1200	
SALES REVENUE (LPG)	3269.	3269.	3269.	3269.	3269.	3269.	3269.	
RATED CAPACITY (L/H NAPHTHA)	435600	435600.	435600.	435600.	433600.	435600.	435600,	
CAPACITY UTILIN (L/H NAPHTHA) PRODUCTION (YOLUME)	348480.	348480.	343480	345450	348480,	343480.	348480.	
NAN NI	0	0	0	0	0		ò	
SALES (VOLUME) UNIT SALES PRICE (US\$/T)	343483.	348480	348480.	348480.	348480	343450.	345450.	
SALES REVENUE (L/H NAPHTHA)	59242.	59242.	59242	59242.	59242.	59242.	59242.	
RATED CAPACITY (KEROSENE)	- 6	6	- 6	6	- 6	- 6	- 6	
PRODUCTION (VOLUME)	9.0	3	3) 	· ·	} •	3	
INC. IN INVENTORY (KEROSENE)	o •	•	o ,	o -	o -	o -	o -	
UNIT SALES PRICE CUSS/T)	0, 1900	0.1800	0.1900	0.1900	0.1900	0.1900	0.1900	
SALES REVENUE (KEROSENE)	0	ò	Ö	0	ó	ö	ó	
5	742104.	742104	١٠-	742104	742104.	742104	742104.	
CAPACITY UTILIZATION (GAS OIL) PRODUCTION (VOLUME)	593683	593683.	593683.	593663	593683.	593683	593663.	
ASE IN	Ö	ö	ò	0	0	0	0	
SALES (VOLUME) UNIT SALES PRICE (US\$/T)	0.1800	0.1800	0.1800	0.1800	0.1600	0.1800	0.1600	
SALES REVENUE (GAS OIL)	106863.	106863.	106863.	106863.	106863.	106863.	106863.	
RATED CAPACITY (V.G.O.)	654488.	664488.	664488.	664488.	664438.	664483.	664438.	
CAPACITY UTILIZATION (V.G.O)	0.000	0.800	0.800	0.800	0.800	0.800	0.00	
PAGDUCTION (VOLUME) INCREASE IN INVENTORY (V.G.O.)	0.00	0.00	96196		00000	00000	200	
CVOLUMES PRICE (USS/	531590.	531590.	531590.	531590.	531590.	531590.	531590. 0.1600	
SALES REVENUE (V.G.O.)	85054	85054.	85054.	85054.	85054.	85054	85054.	

	*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***	OIL DIST	LLATION F	ROJECT IN	POLAND *	**	
	- WITH CASE (2.439.360 T/Y, C.U.:60%) - (US\$, 1.000)	PRODUCT 10	PRODUCTION AND SALES FLAN	C.U.: 50%)	SSN> -	1.000)	
-KAR	2007	2008	2009	2010	2011	2012	2013
		***	70007	70207	79200	79200	79200.
RATED CAPACITY (P.O. (LS))	19200			909	0.800	0 800	0.800
CAPACITY UTILIN (F.O. CLS)	0.00	0.000) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	63360	63360	63350	63360
PRODUCTION CYCLORES				O	0	0	ó
TAG: IN ENVENTORY CY.O. CEOVY	03863	63360.	63360	63360.	63360	63360.	63360.
UNIT SALES PRICE (USS/T)	0.0850	0.0820	0.0880	0.0850	0.0880	0.0820	0.0850
SALES REVENUE (F.O. (LS)	5366.	5386.	5366.	5386.	5336.	5386.	5386.
COMP O BY ALLOWORD COTTON	478368	478368	478368.	478368.	478368.	478366.	478368.
CONTRACTOR AND CONTRACTOR OF C	0 800	0.800	000	0.800	0.800	0.800	0.800
PRODUCTION CVOLUMEN	382694	382694.	382694	4.7	382694.	382694.	352694.
INC. IN INVENTORY (F.O. CHS)	9	ó		Ö	o		
CAN EX CVOLUME)	382694	382694.	382694.	382694.	352694.	352694.	36.20.30
SALES P	0.0650	0.0650		0,0650	0.0650	0.0650	0.0650
SALES REVENUE (F.O. CHS))	24875.	24875.	24875.	24575.	24875.	24875.	24875.
TOTAL SALES REVENUE	285155	285155.	285155.	285155.	285155.	285155.	285155.

A5.1 - 4

	000		MO114 7 11 7	1001000	*** CN4 CO	*			PAGE	•
		PRODUCT SE (2.43	PRODUCTION COST S	STATEMENTS C.U.: 50X)	_	1,000)		•		
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
PRODUCT FON CVOLUMES	0		4438	4435.	4435.	4435.	4435.	4435.	4435.	4435.
DAW WATER ALL COST	Ó	a	253694	253694	253694.	253694.	253694.	253694.	253694.	253694.
CRUDE OIL	o		253694.	253694.	253694,	253694.	253694.	253694.	253694.	253694.
UTILITIES COST	o c	00	18481	5481	5451	5461 404	546	5481	5431	5481
STEAM	0		1926.	1926.	1926.	1926.	1926.	1926.	1926.	1926.
COOL ING WATER	0	0.0	532.	532.	532	532	532.	532	532.	532.
FUEL GAS	် ဝ		1925	1194.	1.94	1194.	1194	194	1194	1194
VARIABLE COST	0	0	259175	259175.	259175.	259175.	259175.	259175.	259175.	259175.
			•	**	**	17.	178	¥.	178	178
CAPLOYMENT COST	<i>.</i>	> C	. v.		10	200	7.00	9	2 10	7
APACAMON COST		0		51.7	517.	517	317.	517	517.	517
MAINTENANCE COST	Ó	0	517	517.	517.	517	517.	21.4	517	513
OVERHEAD COST	0 6	o c	245	64.4 64.4 6.4 6.4	24.5 24.5 . 64.5	242	245	2 45	24.55 24.55	245
INSURANCE COST		• •		0	o	6	ö	ó	ó	ò
LAND LEASE COST	o o	oa	938	936.0	936.	936. 0.05.	3 3 3 8	936	936.	936.
				•						1:
CASH FACTORY COST		0	260111.	260111.	260111.	260111	260111.	260111.	260111.	260111.
							- 1			1
DEPRECIABLE ASSETS DEPRECIAE B ASSETS	o o	o o		576. 576.	576. 576.	976. 976.	576.	576.	576. 576.	576.
PRE-OPERATIONAL EXPENSES	0	. 0		9	96.	98	96	6	ö	<u>.</u>
INTEREST DRG CONST. DEPRECIATION AND AMORTIZATION	00		772.	109. 772.	772.	772.	772.	376.	576.	576.
TOTAL FACTORY COST	0	0	260883.	260883.	260883.	260883.	260853.	260687.	250687.	260687.
UNIT FACTORY COST	0.0	0.0	0.1337	0.1337	-	133	0,1337	0.1336	- 1	۳.
SALES EXPENSES	ö	0		1711.	~	1711.	1711.	1711.	1711.	1711.
CENERAL & AOM . EXPENSES	0.				1711.	1711.	1711.	-	1711.	1711,
OTHER EXPENSES GENERAL & ADM: EXPENSES	ဝ်ဝ	00	1896.	1996.	265. 1996.	1996.	285. 1996.	1996.	285. 1996,	265. 1996.
	0			1917.	1438	959	479,	0	9	9
INTEREST ON MIDDLE TERM DEBT	0	0		1917.	1438	959.	479.		0	ò
INTEREST ON SHORT TERM DEBT	O	0		o	o	ö	Ö	0	0	ò
OTHER NON-OPERATING EXPENSES	0	0		o	ं	ó	6	6	6	6
					1 1 1		1 0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
TOTAL PRODUCTION COST	0.0	0.0	. 266987. 0.1368	266508. 0.1366	266028. 0.1363	265549. 0.1361	265070.	264394. 0.1355	264394. 0.1355	264394. 0.1355

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		CUSS. 1.000)
LAND WXX		CUSS.
ĭ		•
Z	s	ž
TILLATION PROJECT	PRODUCTION COST STATEMENTS	TH CASE (2,439,360 T/Y, C,U,:50%)
	DOCT	(2,43
200	g.	CASE
2		Ξ

	- WITH CASE	ZE (Z.433.360 1/7.	:					
YEAR	2007	2008	2009	2010	2011	2012	2013	
PRODUCTION (VOLUME)	4435.	4435	4435	4435.	4435	4435.	4435.	-
	1		10000	703636	263696	263694	253604	
RAW MATERIAL COST	2500000	N03004	253694	253694.	253694.	253694.	253694.	
THOU SHIP THE	5481	5461	5461	5481.	5461.	5481.	5481.	
ELECTRIC TY	804	\$04.	804	804	804	804.	504	
MAC	1926.	1926.	1926	1926.	1926.	1926.	1926.	
	532	532	532	532.	. N 00 00 00 00 00 00 00 00 00 00 00 00 0	532	. 55%	
	1025	1025	000	1025.	1020	1396	1194	
FUEL OIL	259175	259175	259175.	259175.	259175.	259175.	259175.	
			1 1 1 1 2 2				1 1	
		1	1	7	175	175	175	
EMPLOYMENT CONT	, ic	, 40 40	10	77	173	175	175.	
MALNIENANCH CONT	517	517.	517.	517.	517.	517.	517.	
MAINTENANCE COST	517.	517.	617	517.	517,	617	517.	
OVERHEAD COST	245.	24.0 24.0	245 245	240 245	24.0 4.40 0.40	24.0	7440.	
OVERHEAD COST	n c	r c	2 0) (Ċ	Ö	0	
LANGERAGE COST	• •	ó	0	Ó	o	O	Ö	
CAND CEASE COST	936.	936.	936.	936.	936.	936.	936.	
					1			
CASH FACTORY COST	260111.	260111.	260111.	260111.	260111.	.11102		
DEPRECIABLE ASSETS	576.	576.	576	576.	576	676,	576.	
DEPRECIABLE ASSETS	576	576.	576.	576.	576.	576	576.	
	o o	o c	òc	ó c	o o	ó	.	
INTEREST DRG CONST. DEPRECIATION AND ANORTH ZATION	576.	576.	576	576,	576,	576.	576.	
					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
TOTAL FACTORY COST	260687	260687	260687	260687.	260687.	260687	260687	
UNIT FACTORY COST								
SALES EXPENSES	1711.	1711.	1711.	1711.		1711.	1711.	
İ					****	1711	1711	
CENERAL & ADMI. EXPENSES	- 100 C	2.555	285	285.	200	285	285.	
OENERAL & ADM! EXPENSES	3661	1996.	966.	1996.	1996.	1996	1996.	٠
111111536311111111111111111111111111111	0	9	0	0	9	Ö	0	
INTEREST ON MIDDLE TERM DEBT	0	ó	oʻ.	ó	o	Ö	ó	
THE FIRST OF STATE TERM DEBT	0	0	0	Ö	·	0	0	٠
			1 1 1 1 1 1 1 1		1	1 (8 8 8 8 8	111111	
OTHER NON-OPERATING EXPENSES	6	0	0	Ó	0	0	Ó	
TOTAL PRODUCTION COST	264394	264394.	264394.	264394.	264394.	264394.	264394.	
UNIT PRODUCTION COST	0.1355		0.1355	0.1355	0,1355	0,1355	0, 1355	

	*** CRUDE	OIL DISTILLATION PROJECT II		PROJECT IN	POLANO **	**:			PAGE	-
	- WITH CAS	WITH CASE (2.4.439.360 1/Y. C.U.: 80%)	360 7/4.	C.U.: 80%)	. ,	(US\$, 1.000)				
YEAR	1997	1998	900	2000	2001	2002	2003	2004	2002	2006
	,	•	•	•	•		•	•	•	
CURRENT ASSETS	o l	·	0.		, l			0		
ACCOUNT RECEIVABLE	0	0	6	0	0	ö	o	ò	0	ò
INVENTORIES		ó	ó	Ö	ó	Ö	ó	Ö	0	0
PRODUCT INVENTORY MATERIAL INVENTORY	00	00	00	00	00	66	00	00	00	00
CASH IN HAND	Ö	o l	0		0.			0	Ö	0
CURRENT LIABILITIES W/O DEBT	0	o	21346	21346.	21346.	21346.	21346.	21346.	21346.	21346.
ACCOUNT PAYABLE	8	O	21346.	21346,	21346.	21346.	21346.	21346.	21346.	21346.
CRUDE OIL ELECTRICITY OTHERS	000	000	21140.	21140. 11. 195.	21140.	21140.	21140.	21140.	21140.	21140.
PERMANENT WORKING CAPITAL	0	0	-21346.	-21348.	-21346.	-21346.	-21346.	-21346.	-21346.	-21346.
CHANGE IN WORKING CAPITAL	0	٥	-21346.	0	0	0		0		0

21346. 21346. 21140 2013 21346. 21140. - WITH CASE (2.439.360 T/Y, C.U.:80%) - (USS. 1.000) -21346 2012 *** CRUDE OIL DISTILLATION PROJECT IN POLAND *** #ORKING CAPITAL STATEMENTS -21346. ö 21346. 2011 21346. -21346. 21346. 21140 21346. -21346. 21346. Ö 21346 -21346. Ö ó 2008 -21346. 21346. 21140. ö 21346. 2007 CURRENT LIABILITIES W/O DEBT CURRENT ASSETS PERMANENT WORKING CAPITAL CHANGE IN WORKING CAPITAL PRODUCT INVENTORY MATERIAL INVENTORY ACCOUNT RECEIVABLE ACCOUNT PAYABLE CRUDE OIL ELECTRICITY OTHERS CASH IN HAND INVENTORIES YEAR

(3)				1					•		
			·								
						÷					
									·		
	*** CRUDE OIL	<u> </u>	LLATION FIE STATEME	L DISTILLATION PROJECT IN POLAND *** INCOME STATEMENTS (2,439,360 T/Y, C.U.:80X) - (USF.	POLAND *	**			PAGE	-	
YEAR	1991	1998	1999	2000	2001	2002	2003	2004	2005	2006	
						4 4 4	4 C	4	2 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	4. 4.	
COPERATING INCOME	0 0	0 0	285155.	285155.	285155.	285155.	285155.	285155.	285155.	285155.	
COST OF SALES	ó	ó	260883.	260883.	260883.	260883.	260883,	260637	250657.	260687.	
VARIABLE COST DIRECT FIXED COST DEPRECIATION AND AMORTIZATION INC. IN PRODUCT INVENTORY	0000	0000	259175. 936. 772.	259175. 936. 772.	256 175.	259175. 936. 772.	259175. 936. 772.	259175. 936. 576.	259175. 936. 576.	259175. 936. 576. 0.	
SALES	0	ó	24272	24272.	24272.	24272.	24272.	24468.	24468.	24468.	
SALES EXPENSES GENERAL & ADMI. EXPENSES	00	00	1711.	1711.	1711.	1711.	1711.	1711.	1711.	1711.	
OPERATING PROFIT	0	ó	20565,	20565.	20565.	20565.	20565.	20761.	20761.	20761.	
	0	· o	2397.	1917.	1438.	959	479,	o	ò	0	
INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT OTHER NON-OPERATING EXPENSES	000	000	2397. 0.	1917. 00.	14. 86. 0.0	959.	4. 0. 0.	800	000	000	
NET PROFIT OR (LOSS) BEFORE TAX	0	o.	15168.	15645	19127.	19606.	20086.	20761.	20761.	20761.	
INCOME TAX	o.	ó	7267.	7459.	7651.	7842.	8034.	5304.	8304.	8304.	
NET PROFIT OR CLOSSY AFTER TAX	Ď	0	10901.	11189.	11476,	11764.	12051.	12456.	12456.	12456.	
DIVIDENDS	ó	ó	545	559.	574.	588.	603	623.	623.	623	
RETAINED EARNINGS	0	Ö	10356.	10629.	10902.	11176,	11449.	11834.	11834.	11834.	

	*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***	OIL DIST	LLATION F	ROJECT IN	POLAND *	*	
	- WITH CA	INCOME STATEME WITH CASE (2,439,360 T/Y.	18COME STATEMENTS. 439.360 T/Y. C.U.	C.U.: 80%)	,	(USS. 1.000)	
YEAR	2007	2008	2009	2010	2011	2012	2013
OPERAT I NG I NOOME	285155.	285155.	285155.	285155.	285155.	265155.	285155
TOTAL SALES REVENUE	285155.	285155.	265155.	285155.	265155.	285155.	285155
COST OF SALES	260687.	260687.	260687.	260687.	260687.	260687.	260687
VARIABLE COST DIRECT FIXED COST DEPRECIATION AMORTIZATION INC. IN PRODUCT INVENTORY	259175. 936. 576.	259175. 936. 576.	25 25 25 25 27 27 27 20 27 20 20 20 20 20 20 20 20 20 20 20 20 20	259175. 936. 876.	259175. 936. 576.	259175. 936. 576. 0.	259175 936 576
GROSS PROFIT ON SALES	24468.	24468.	24468	24468.	24468	24468.	24468
SALES EXPENSES GENERAL & ADMI. EXPENSES	1711.	1711.	1711.	1711.	1711.	1711. 1996.	1711
OPERATING PROFIT	20761	20761,	20761.	20761.	20761.	20761.	20761
NON-OPERATING EXPENSES	O	Ö	o	ö	ó	Ġ.	
INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT OTHER NON-OPERATING EXPENSES	000	000	600	000	000	000	000
NET PROFIT OR CLOSSY BEFORE TAX	20761.	20761.	20761.	20761.	20761.	20761.	20761
I NCOME TAX	3304.	8304.	6304.	\$304.	8304.	\$304.	
NET PROFIT OR (LOSS) AFTER TAX	12456.	12456.	12456.	12456.	12456.	12456.	12456
DIVIDENDS	623	623.	623	623.	623.	623.	623
	11834	11634.	11834.	11634.	11834.	11834.	11834
			1	í			

	*** CRUDE OI	HE DISTE	L DISTILLATION PROJECT	ROJECT IN	POLAND ***	*:			PAGE	•-
	- WITH CASE		360 T/Y.	42,439,360 T/Y, C.U.:80X)	- KUSS.	1,000			•	
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
SOURCE OF FUNDS	15339.	23008.	14070.	13878.	13686.	13494.	13303.	13033.	13033.	13033.
CASH GENERATED FROM OPERATION	0	Ö	14070	13878.	13686.	13484	13303.	13033.	13033.	13033.
PROFIT AFT. TAX, BFR INT. DEPRECIATION AND AMORTIZATION FINANCIAL RESOURCES	10000	23008.	13298.	13106.	12914. 772. 0.	12722. 772. 0.	12531. 772. 0.	12456. 576. 0.	12456. 576.	12456. 576. 0.
SHARE CAPITAL MIDOLE TERM DEBT SHORT TERM DEBT	14669	11504.	000	800	000	000	000	000	000	666
USES OF FUNDS	3849.	5773.	-14570.	6311.	5847.	5382.	4917.	623.	623.	623.
FIXED CAPITAL EXPENDITURE	3849	5773.	0	o.	O	o	ó	ó	o	ó
NON-DEPRECIABLE ASSETS DEPRECIABLE FIXED ASSETS INTEREST DURING CONSTRUCTION	3630. 219.	84.60 9.28.60	000	666	000	000	000	000	666	000
CHANGE IN WORKING CAPITAL	0	0	-21346.	0	o	0	0	0	0	0
DEBT SERVICES	0	O	6231.	5752.	5273.	4793	4314.	ò	ö	o,
REPAYMENT OF MIDDLE TERM DEBT REPAYMENT OF SHORT TERM DEBT INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT	0000	0000	23 55. 23 67.	3635. 1917.	38.35. 14.38.00.	8 8 8 8 8 8 9 9	38.86 4.70 .00	0000	0000	0000
DIVIDENDS	Ö	,	345.	659	574.	588.	603.	623.	623.	623.
CASH INCREASE OR (DECREASE)	00411	17235.	28639.	7566.	7840,	8119.	8386.	12410.	12410.	12410.
BEGINNING CASH BALANCE ENDING CASH BALANCE	11490.	11490.	28725.	57365. 64931.	64931.	72771.	80884. 89270.	89270. 101679.	101679,	114059.

				1	2	2	
	*** CRUDE OIL DISTILLATION PROJECT IN TOLDING THE FUNDS FLOW STATEMENTS - WITH CASE (2,439,360 1/7, C.U.:80%) - (USS.	FUNDS F FX 42.439.	1.0W STATE	L DISTILCATION FACUSES TA FUNDS FLOW STATEMENTS <2,439,360 T/Y, C.U.:80X)	\$SD) -	(US\$. 1.000)	1
YEAR	2007	2008	2009	2010	2011	2012	2013
SOURCE OF FUNDS	13033.	13033.	13033.	13033.	13033.	13033.	13033.
CASH GENERATED FROM OPERATION	13033	13033.	13033.	13033.	13033,	13033.	13033.
	12486	12456	12456.	12456.	12456.	12456.	12456.
DEPRECIATION AND AMORTIZATION FINANCIAL RESOURCES	376. 0.	8.76.	576.	576. 0.	576 0	576. 0.	576 0
			0	0		0.	Ö
MIDDLE TEAM DEST		; i	6	6	0.0	ó	oe
SHORT TERM DEBT	0			5	.	j	5
USES OF FUNDS	623.	623	623.	623.	623.	623.	623.
FIXED CAPITAL EXPENDITURE	o	0.0	6	Ö	ò	Ö	o
	0	0	0	0	0	.0	0
DEPRECIABLE FIXED ASSETS	o c	06	oc	o c	00	60	00
INTEREST DURING CONSTRUCTION	.	;	•	•			•
CHANGE IN WORKING CAPITAL	ò		0	0	0	0	0
rces	o	0	0	o	0	o	0
REPAYENT OF MIDDLE TERM DEBT	0	0	0	·	6	0	6
ö	o c	60	o ć	o a	o o	o o	o o
ON SHORT TERM D	ó		Ö	ò	o	6	0
DIVIDENDS	623	623	623.	623	623	623.	623
			,				
	12410.	12410.	12410.	12410.	12410.	12410,	12410.
BEGINNING CASH BALANCE ENDING CASH BALANCE	126499.	138909	151318.	163728.	176138.	168548. 200957.	200957.

	*** CRUDE	OIL DISTI	LLATION P	ROJECT IN	POLAND *	*			PAGE	-
	- WITH CASE	Ü	ANCE SHEE 360 T/Y.	BALANCE SHEET 2.439,360 T/Y, C.U.:80X) - (US\$,	\$500 -	(000,1,				
YEAR	1007	1996	1999	2000	2001	2002	2003	2004	2002	2008
ASSETS	15339.	36347.	66214.	73009.		87417.	95031	106865.	118698.	130532.
AND STATE OF THE S	O		0	0	0	0	6	o	ó	Ö
CASH IN HAND	0	0.	0	0	0	0	0.	0	Ö	100
ACCOUNT RECEIVABLE INVENTORIES	00	் ்	00	66	00	o o	.	öö	o o	òò
ACC. EXCESS CASH	11490.	28725.	57365.	64931.	72771.	80884.	89270.	101679.	114069.	126499.
NET FIXED ASSETS	0.400 0.400	9622.	8850	8078.	7306.	6534.	5762.	5135	4609	4033,
INVESTMENT	3849.	9622.	9622,	9622.	9622	9622.	9622.	9622.	9622.	9622.
NON-DEPR. ASSETS DEPRECIABLE ASSETS AMORTIZATION	3630 219	9075.	9078 847	9075	9075. 547.	9075.	9075.	9078.	9075.	9075.
LESS: ACC. DEPRECIATION		o .	772.	1544.	2316.	0000	3860.	4436.	5012.	5559.
LIABILITIES	7669.	19173.	36685	32850.	29016.	25161	21346.	21346	21346,	21346.
CURRENT LIABILITIES	O	3333.	25181.	25151,	25181.	25181,	21346.	21346.	21346,	21346.
ACCOUNT PAYABLE CURRENT PORTION OF M/T DEBT SHORT TERM DEBT	000	3835.0	21346 3835. 0.	21346. 3835. 0.	21346. 3835. 0.	21346. 3835. 0.	21346.	21346	21346.	21346. 0.
FIXED LIABILITIES	7669	15339.	11504.	7669.	3885.	0	0	0	•	0
MIDDLE TERM DEST BALANCE OTHER FIXED LIABILITIES	7669.	15339. O.	11504.	7669.	3838.	66	o o	66	00	66
STOCK HOLDERS EQUITY	7669	19173.	29529	40158	51061,	62236.	73685.	85519.	97352,	109156.
SHARE CAPITAL ACC. RETAINED EARNINGS	7669.	19173.	19173.	19173.	31687.	19173.	19173.	19173.	19173.	19173.
LIABILITIES & S/H EQUITY	15339	38347.	66214.	73009.	80076.	87417.	95031.	106865,	118698,	130532.

	*** CRUDE OIL DISTILLATION PROJECT IN POLAND *** BALANCE SHEET - WITH CASE (2.439.360 T/Y, C.U.:80%) - (USS.	01L DIST 8AL 8E (2,439.	ANCE SHEE	L DISTILLATION PROJECT IN BALANCE SHEET (2.439,360 T/Y, C.U.:80%)	POLAND ***	1.000)	
YEAR	2007	2002	2009	2010	2011	2012	2013
ASSETS	142366.	154199.	166033.	177866.	189700.	201534.	213367.
	1 1 1 1 1 1		!				
CURRENT ASSETS	6	0	o	0	0	0	o .
CASH IN HAND	0	ó		0.	ė		Ö
ACCOUNT RECEIVABLE INVENTORIES	00	00	00	00	ó ó	00	00
ACC. EXCESS CASH	138909	151315.	163728.	176138.	188548,	200957	213367.
		; 1 1 1 1 1 1		t 0 5 1 1			
NET FIXED ASSETS	3457.	2881.	2305.	1729.	1152.	576.	0
	1 4 4 1 1 1	! ! ! ! !	1 6 6 1 6 6 6				
INVESTMENT	9622.	9622.	9622.	9622.	9622,	9622.	9622.
NON-DEPR. ASSETS	0	ó	o	6	0	0	o
DEPRECIABLE ASSETS	9078	9075.	3075	9075.	9075	9075	9075.
AMORT I ZAT I ON	54 7	547.	547	547	54.	547.	740
LESS: ACC. DEPRECIATION	6165.	6741.	7317	7893.	8469.	9046.	9622.
	-:						
LIABILITIES	21346.	21346.	21346	21346.	21346.	21346.	21346.
			1				
CURRENT LIABILITIES	21346.	21346.	21346.	21346.	21346.	21346.	21346.
ACCOUNT PAYABLE	21346.	21346.	21346.	21346.	21346.	21346.	21346.
SHORT TERM DEBT		òò	0	0 0	• •	0	0
FIXED LIABILITIES	0	0	0	ó	Ö	Ó	ó
MIDDLE TERM DEBT BALANCE OTHER FIXED LIABILITIES	00	00	00	66	00	60	00
			.*				
STOCK HOLDERS EQUITY	121019.	132653.	144687.	156520.	168354.	180187.	192021.
SHARE CAPITAL ACC. RETAINED EARNINGS	19173.	19173.	19173.	19173.	19173.	19173.	19173.
LIABILÍTIES & S/H EQUITY	142366.	154199.	166033.	177866.	189700.	201534.	213367.

*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***

9173. 2.500 PER CENT/YEAR 2.500 PER CENT/YEAR YEAR-EQUAL-INSTALLMENT-REPAYMENT (ANNUAL REPAYMENT) 1. INTEREST DEBT SERVICE BALANCE AFT. PAYMENT 1917. 2397. 1917. 2397. 6231. 15339. 6273. 3535. 479. 60. 60. 60. 60. 60. 60. 60. 60. 60. 60	ATE 19173 OEST 19173 OEST 19173 OFFIN CIPAL 1917	AMOUNT OF DEF INTEREST RATE REPAYMENT YEAR SER, NO 1997 1 1997 1 1998 3 2000 2 2001 5 2005 10 2005 11 2005 11
---	--	--

*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***
PROFITABILITY AND FINANCIAL INDICATORS
- WITH CASE (2,439,360 T/Y, C.U.:80%) - (US\$, 1,000)

CASH B.E.P. CAPACITY UTICIZE (PCT)	0000000	21.8
CASH & CASH & SALES PRICE (PRICE)	00000000000000000000000000000000000000	60032.5
(9)* PROF!T 8.E.P CAPACITY UTILIZE (PCT)	46.5000000000000000000000000000000000000	17.7
(8) L/T DEBT -TO- S/H EQUITY	% % % % % % % % % % % % % % % % % % %	76 / 6
(7) DEST SERVICE RATIO	**************************************	****** ******
(6) QUICK RATIO	000000000000000	00
CURENT RATIO	0000000000000000	00
(4) AFT TAX PROFIT -TO- S/CAPITAL (PCT)	ଅଧାର ଓ ଅଧାର ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ ଓ	66. 67. 6. 0.
(3) BFR TAX PROFIT - TO- INVESTMENT (PCT)		210.1 192.2
(2) AFT TAX PROFIT -TO- 1 S/H EQUITY (PCT)	0 00 00 00 00 00 00 00 00 00 00 00 00 0	9.4.0 9.01
(1) AFT TAX PROFIT -TO- SALES REV S (PCT)	०००० स्थान्य वर्ष वर्ष वर्ष वर्ष ठेळचे वर्ष वर्ष वर्ष वर्ष वर्ष वर्ष	4.4 6.0
YEAR	2000 200 200 200 200 200 200 200 200 20	AVERAGE1 AVERAGE2

(AVERAGE)): SUM OF ANNUAL FIGURES OF PERCENTAGE AND RATIO IS DIVIDED BY NO. OF YEARS(SIMPLE AVERAGE)
(AVERAGE2): AVERAGE FIGURES ARE CALCULATED BY ACTUAL VALUES ACCUMULATED OVER THE PROJECT LIFE(WEIGHTED AVERAGE)
** NOTE FOR (9)(10)(11)
WHEN THERE ARE TWO OR WORE PRODUCTS, AND DURING THE VEARS WHEN ALL OF PRODUCTS ARE NOT PRODUCED AT THE SAME RATE
OF CAPACITY UTILIZATION, ABOVE BREAK-EVEN-POINTS CANNOT GIVE CORRECT FIGURES.

*** CRUDE OIL DISTILLATION PROJECT IN POLAND *** RETURN ON INVESTMENT (IN '94 FIXED PRICE) - WITH CASE (2,439,360 T/Y, C.U.:80%) - (USS, 1,000

(S) AFT-TAX NET IN-FLOW (4)-(3)	-3630.	-5445	35416.	13878.	13686.	13494.	13303.	13033.	13033,	13033.	13033.	13033.	13033	13033.	13033.	13033.	-6314.		189682.
(4) BFR-TAX NET IN-FLOW (2)-(1)	-3630.	-5445.	42683	21337,	21337.	21337.	21337.	21337.	21337.	21337.	21337,	21337,	21337,	21337.	21337.	21337.	.6 -		310978.
TAX	0	0	7267	7459.	7651.	7842.	8034	8304	8304	6304	6304.	6304	8304	8304	8304	8304	8304.	1 1 1 1 1 1 1	121296.
ê					,				-									i	
CASH CASH IN-FLOW	ó	ó	21337.	21337.	21337.	21337.	21337	21337	21337.	21337.	21337,	21337.	21337.	21337.	21337.	21337.	21337.		320052.
Z	•				1.	· _ :			٠.									•	
DEPRECIATN		0	772	772	772	772	772	576	576	576	576	576	576	576	576	576	576.		9622
OPERATING PROFIT	o	ó	20565.	20565	20565	20565.	20565.	20761	20761.	20761.	20761.	20761.	20761.	20761	20761.	20761.	20761.		310430.
(1) GROSS CAPITAL EXPENDTR	3630	5445	-21346.	o	6	ó	0	ó	0	ò	o	ó	o	o	ó	6	21346.	1144444	9075
WORKING CAPITAL	0	0	-21346.	o	6	0	o	o	6	o	ó	6	•	0	o	ó	21346.	1111111	6
FIXED APLTAL EXPEND.	3630	5445	0	a	0	0	o	0	0	o	ó	o	Ó	O	o	o	o		9075

INTERNAL RATE OF RETURN
ON (4) BFR-TAX NET IN-FLOW (2)-(1)****** PER CENT
ON (5) AFT+TAX NET IN-FLOW (4)-(3) 177.57 PER CENT

	*	CRUDE	ROBUCTION	OIL DISTILLATION PROJECT PRODUCTION AND SALES PLAN	ROJECT IN	POLAND ***	600 0.			PAGE	-
YEAR	3 1	₩/O CASE 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
RATED CAPACITY (FUEL GAS) CAPACITY UTILIZATION (FUEL GAS) PRODUCTION (VOLUME) INCREASE IN INVENTORY (FUEL GAS) UNIT SALES UNIT SALES PRICE (US\$/T)	0	0 00	6 666	95.0 76.00 1.000 1.000 1.000 1.000	9504. 0.800 7603. 7603.	9504. 7.803. 7.603.	9504. 7603. 7603.	980 7 800 7 800 7 900 7 900 9 1 900	9804. 7 609. 7 609. 7 609.	9504. 0,800 7603. 7603. 0,1050	9804. 7609. 7609. 7603.
SALES REVENUE (FUEL GAS)	!		0	798.	; (5) (1) (1) (1)	798.	796.	795.		796.	795.
RATED CAPACITY (LPG) CAPACITY UTILIZATION (LPG) PRODUCTION (VOLUME) INCREASE IN INVENTORY (LPG) SALES		. 0	0 000		-0-0-6	-008.0	6000	0.800	0 800 1200 1200 1200 1200 1200 1200 1200	0.80 .00.0 .00.0 .00.0	0.600
UNIT SALES PRICE (US\$/T)	? [0	ó	9 0	- 1	ò		: \$	0		o .
RATED CAPACITY (L/H NAPHTHA) CAPACITY UTIL'N (L/H NAPHTHA) PRODUCTION (VOLUME) SALES (VOLUME) UNIT SALES PRICE (USS/T)	•	0000	0 000	471240. 376992. 376992. 0.1700	471240 0.800 376992. 376992. 0.1700	471240. 0.800 376992. 376992. 0.1700	471240. 6.800. 376992. 376992. 0.1700.	471240. 0.800 376992. 376992. 0.1700	471240. 0.800 376992. 376992. 0.1700	471240. 0.800 376992. 376992. 0.376992.	471240. 0.800 376992. 376992. 0.1700
SALES REVENUE (L/H NAPHTHA)	•	0	0	64089.	64049	64089.	8		64089.	64089.	•
RATED CAPACITY (KEROSENE) CAPACITY UTILIZATION (KEROSENE) PRODUCTION (VOLUME) INC. IN INVENTORY (KEROSENE) SALES UNIT SALES PRICE (US\$/T)	- o	0 000	0 000	. 10 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	129886. 0.129886. 0.129886.	162360. 0.2060. 12988. 12988. 0.1900	12988 12988 12988 0 12988	162360 0.600 129888 129888 0.129888	162360. 0.500 129558. 129858. 0.1900	162360. 0-800 129886. 129886. 0-139886.	162360. 0.800. 129888. 129888. 0.1900.
SALES REVENUE (KEROSENE)		0		24679.	24679.	24679.	24679.		24679.	24679.	24679.
RATED CAPACITY (GAS OIL) CAPACITY UTILIZATION (GAS OIL) PRODUCTION (VOLUME) INCREASE IN INVENTORY (GAS OIL) SALES UNIT SALES PRICE (US\$/T) SALES REVENUE (GAS OIL)	• [0 000 0	0 000 0	486584 0,800 397267 0,1800 71508	496584. 0.800 397267. 0.397267.	496584. 0.600 397267. 0.1800	496584. 0.800. 397267. 0.1800. 11506.	496584. 0,800 397267. 0,1800 71506.	496584. 0.800 397267. 0.1800 71506.	496584. 397267. 0.94267. 1.15067.	496564. 0.800. 397267. 0.1800
RATED CAPACITY (V.G.O.) CAPACITY UTILIZATION (V.G.O.) PRODUCTION (VOLUME) INGREASE IN INVENTORY (V.G.O.) SALES (VOLUME) UNIT SALES PRICE (US\$/T)	• {	6 666	0 000	683496. 0.800 546797. 846797. 0.16797.	683496. 0.800 546797. 546797. 0.1600	663496. 0.800 546797. 546797. 0.1600	663496. 0.300 546797. 0.1600	583496. 0.800 546797. 0.1600	683496. 0.800. 546797. 646797. 0.1600	663496. 0.800 546797 546797 0.1600	683496. 0.800 546797. 546797. 0.1600
SALES REVENUE (V. G.O.)	i	0	o ·	57456.	87488.	87488.	87488.	67488.	87488.	87488.	57456.

	*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***	OIL DIST	CLATION P	ROJECT IN	POLAND *	*	:		PAGE	N
	- W/O CAS	PRODUCT 10	CASE (2.439.360 T/Y. C.U.:80%)	ES PLAN	ssn) -	(USS. 1,000)				
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2008
		•		84744	84744	84744	84744	84744	84744	34744
RATED CAPACITY (F. O. (LS)	ć	c c	000	000	000	0.800	0.00	0.800	0.800	0.800
PRODUCTION CYOLUMES			67795.	67795.	67795.	67795.	67795.	67795.	67795.	67795.
INC. IN INVENTORY (F.O. CLS>)	ö	ö	ö	Ó	0	0	Ö		Ö	
SALES (VOLUME)		0	67795	67795.	67795.	67795.	0.0850	0.0880	0.0850	0.0850
SALES REVENUE (F.O. (LS)	0	0	5763	5763.	5763.	5763,	5763.	5763	5763.	5763.
	•	•		221420	E31433	531432	531432	531432	531432.	531432.
RAYED CAPACITY (F.O. CHS)	, c		00100	001452	0.000	800			0.800	0.800
PRODUCTION (VOLUME)	; ;	·	425146.	425146.	425146.	425146.	425146,	4	425146.	425146.
INC. IN INVENTORY (F.O. CHS)	0 (o c	0 7.107	.0.4.40	428146	42=146	425146	425146	425146	425146
SALES (VOLUME) UNIT SALES PRICE (US\$/T)	0.0	0	0.0650	0.0650	0.0650	0.0650	0.0650	0,0650	0.0650	0.0650
SALES REVENUE (F.O. (HS))	0	0	27634.	27634.	27634.	27634.	27634.	27634.	27634.	27634.
TOTAL SALES REVENUE	ó	ó	251958	251958.	261958.	281958	281956.	281958.	261956.	281958.
		•					٠			
		·								

	*** CRUDE OIL DISTILLATION PROJECT IN POLAND *** PRODUCTION AND SALES PLAN W/O CASE (2.439,360 T/Y, C.U.:80X) - (USS,	01L DISTI PRODUCTIC 3E (2.439.	L DISTILLATION P COUCTION AND SAL (2.439.360 T/Y.	ROJECT IN ES PLAN	POLAND **	**	
YEAR	2007	2008	2009	2010	2011	2012	2013
öä	9504. 7509	9504.	9804. 0.8004.	9504. 0.600 7603.	9504. 0.600 7603.	9804. 7600.	9504 0 500 7603.
PRODUCTION (VOLUME) INCREASE IN INVENTORY (FUEL GAS) SALES CYOLUME)	7 603.	9 9 9	7663.	7603.	7603.	7603.	7603.
SALES REVENUE (FUEL GAS)	799.	798.	798.	798.	798.	798.	795.
RATED CAPACITY (LPG)	0.800	000	0,800	0.800	0.800	0.800	0.800
	-0	-0	r o	`≓ d :	0	-0.	. o .
SALES (VOLUME) UNIT SALES PRICE (USS/T)	0.1200	0.1200	0.1200	0.1200	0.1200	0 1200	0, 1200
SALES REVENUE (LPG)			0	o.	0	ö	6
RATED CAPACITY (L/H NAPHTHA)	471240.	471240.	471240.	471240.	471240.	471240.	471240
CAPACITY UTIL'N (L/H NAPHTHA) PRODUCTION (VOLUME)	376992.	376992.	376992.	376992.	376992	376992	376992.
INC. IN INVENTORY (L/M NAPHTHA) SALES (VOLUME) HN (T SALES PRICE (USE/T)	376992.	376992.	376992.	376992.	376992.	376992.	376992.
SALES REVENUE (L/H NAPHTHA)	64089.	64089.	64039.	64089	64039.	64089.	64089.
RATED CAPACITY (KEROSENE)	162360.	162360.	162360.	162360.	162360.	162360.	162360.
PRODUCTION CVOLUMED PRODUCTION CONTRACTOR CVOLUMED C	129655.	129888.	129556.	129858.	129888.	129665.	129888.
SALES (VOLUME) UNIT SALES PRICE (US\$/T)	129888.	129888.	129888.	129888.	129888.	129888.	129888.
SALES REVENUE (KEROSENE)	24679.	24679.	24679.	24679,	24679.	24679.	24679.
	496584.	496584.	496554.	496554.	496534.	496584.	495584.
PRODUCTION CYCLUMES	397267	397267	397267.	397267.	397267	397267.	397267.
INCREASE IN INVENTORY (GAS 01C) SALES (VOLUME) UNIT SALES PRICE (US\$/T)	397267.	397267.	397267.	397267. 0.1800	397267	397267	397267.
SALES REVENUE (GAS OIL)	71508.	71508.	71508.	71508.	71508.	71508.	71508.
RATED CAPACITY (V.G.O.)	683496.	683496.	683496.	683496.	663496 0.800	653496. 0.500	653496. 0.800
PRODUCTION CVOLUMES INCREASE IN INVENTORY (V. 0.0.)	546797	546797.	546797. 0.	546797.	546797.	546797.	546797. 0.
(VOLUME)	546797,	546797.	546797.	546797.	546797.	546797.	546797.
SALES REVENUE (V.G.O.)	87488.	87468.	87488.	87488.	37458.	87488.	87488.

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	*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***	OIL DIST	DESCRIPTION PROJECT	ROJECT IN	POLAND *	**	
	- W/O CA	SE (2.439.	360 1/4	CASE (2.439.360 T/Y. C.U.:80%)		CUSS. 1,000)	
YEAR	2007	2008	2009	2010	2011	2012	2013
The state of the s	34764	84744	84744	34744	84744	54744	84744
7.00 TO 10 30 1151 541-6864	0 800	008.0	0 200	000	000	0.800	0.800
PRODUCTION CVOLUMEN	67798	67795.	67795	67795.	67795.	67795.	67795.
INC. IN INVENTORY (F.O. (LS))	0	ó	ó	o	ò	6	Ö
SALES (VOLUME)	67795.	67795,	67795	67795.	67795,	67795.	67795
Ä	0.0850	0.0850	0.0820	0.0850	0.0880	0.0850	0.0850
SALES REVENUE (F.O. (LS))	5763.	5763.	5763.	5763.	5763.	5763.	5763
BATED CAPACITY (F. O. CHS)	531432	531432.	531432	531432.	531432	531432.	531432
CAPACITY UTILIZATION (F.O. CHS)	008.0	0.800	0.800	0.800	0.800	0.800	0,800
PRODUCTION CVOLUMES	425146.	425146	425146. 4	425146.	Ŧ	425146.	425146
INC. IN INVENTORY (F.O. CHS)		6	0	0		0	o (
SALES	425146.	425146.	425146	425146.		425146.	425146
SALES P	0.0650	0.0650	0,0650	0.0650	0,0650	0.0650	0.0650
SALES REVENUE (F.O.(HS))	27634.	27634.	27634.	27634.	27634.	27634.	27634
TOTAL SALES REVENUE	261956.	281958.	281958.	261958, 251958, 281958, 261958.	261958.	261958.	251955.

	*** CRUDE	DIL DISTI	OIL DISTILLATION PROJECT	ROJECT IN	POLAND **	*			PAGE	-
	PI - W/O CASE	PRODUCT : (05UCTION COST ST (2.439.360 T/Y.	C.U.: SOX>	SSA) -	. 1.000)				
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
PRODUCTION (VOLUME)	.0	ó	7603.	7603.	7603.	7603.	7603.	7603.	7603.	7603.
	•	•		•	10000	- 1	263696	263694	263696	263696
RAW MATERIAL COST	o o	óc	253534.	250004	253694.	253694.	253694	253694.	253594.	253694.
CHODE OIL	je	ò	5444	•	5444		5444	5444	5444	5444.
>+	Ġ	ó	854	•	854	554.	854	854.	854.	854.
STEAS	ö	ó	1541	•	1541	1541.	1541.	1541.	1541.	1541,
COOL ING WATER	ó	ö	532.		532	532.	0.00	, 537 , 537	532.	. 200 0.00 0.00 0.00 0.00 0.00 0.00 0.00
FUEL GAS	ó	ö	1025.	•- '	023	1020.	1000		2000	1000
FUEL OIL	<i>i</i> «	ö	1499.	ç	. 50 to 50 t	080 DBC	259138	259138	259133	259198
VARIABLE COST		9	707170.		.001004			:		
		c	17.5	175.	175.	175.	175.	175.	175.	175.
	ic		12	175.	175	175.	175	175.	173.	175
1000 - RUX FOLKER	ò	ó	- 10	417	517.	517.	517.	517.	517.	517
MAINTENANCE COST	ö	ó	517.	517.	51.7	517.	517,	517.	517	
OVERHEAD COST	ö	Ö	245	245	245	245	245		2.0	245
OVERHEAD COST	ė,	o (245	243	0 4 0 4	, 4, 0, 0	, c	i c	ę c	i C
INSURANCE COST	<i>.</i>		o o	5 C	j o	ó	ò		ó	ò
LAND LEASE COST	ó	0	920	939	936.	936.	936.	936	936.	936,
					1	1	-	1 1		i
ACTORY C		ö		260074.	260074	260074.	260074.	260074.	260074.	260074.
	[• • • • • • • • • •								
	o	Ó	218.	218.	218.	218.	218,	218.	216.	218.
DEPRECIABLE ASSETS	0	o	218.	218.	218	218.	218	218.	218.	218.
PRE-OPERATIONAL EXPENSES	o ·	o .	99	3	33	33	0 v			
INTEREST DRG CONST.	o c	5 6	292	202	292	282	292	218	23.0	, v
びがする内でして、大きの一つのでは、これで、これでは、これでは、これでは、これでは、これでは、これでは、これで		1		1	11111111				!	1
TOTAL FACTORY COST UNIT FACTORY COST	0	0.0	260366. 0.1334	260366.	260366.	260366.	260366. 0.1334	260292.	260292,	260292.
					603	1607	1,602	1697	6091	1692
SALES EXPENSES			700-	, ,	- 1		•	•		
GENERAL & ADM! EXPENSES	,	c	1692	1692,	1692	1692.	1692.	1692	1692.	1692.
OTHER EXPENSES DENERAL & ADMI. EXPENSES	<i>.</i> .	00	1974.	1974.	1974.	1974.	1974.	1974.	1974.	1974.
					1 1 1		1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		•	•
INTEREST ON MIDDLE TERM DEBT	00	00	2016.	1612.	1209	306.	403	9 0	o o	ÖÖ
- NTEREST ON SHORT TERM DEBT	0.	,0	0	0	0	0.	ò		ó	ö
	1 1 5 0 9 9 1	1 1 1	;	1111111		t 6 9 1 1 1 1 1 1			£ 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
OTHER NON-OPERATING EXPENSES	0	0			0	ó	0	ő	0	0
# 1	0	0	266047	265644.	6524	264835.	ı võ	263958	263958.	263955.
	0.0	0.0	0.1383	0.1361	0.1359	0,1357	0.1355	0, 1353	0,1333	<u> </u>
										-

	*** CRUDE	OIL DIST	LLATION P	ROJECT IN	POLAND *	**	
	PRODUCTION COST STATEMENTS - W/O CASE (2.439,360 T/Y, C.U.:80X) - (US\$.	PRODUCT 10	360 T/Y.	A:EMEN:0	* (US\$	1,000)	
YEAR	2007	2008	2003	2010	2011	2012	2013
PRODUCTION (VOLUME)	7603,	7603.	7603.	7603.	7603.	7603.	7603.
1000 - 1000 HASS 840	253694	753694	253694	253694.	253694.	253694.	253694,
	253694	253694.	253694.	253694.	253694.	253694.	253694.
UTILITIES COST	5444	8444	5444	5444	5444	5444	5444
ELECTRICITY	854.	654	354	. 6554.	854.	400	400
STEAM	1.40	- 60 W	- 64°	100	- 60 60 60	0.00	632
	1025	1025	1025	1025	1025	1025	1025
	1493	1493.	1493	1493.	1493.	1493.	1493.
ABLE	259138.	259136.	259138.	259138.	259138.	259138.	259135.
))) ! !				
EMPLOYMENT COST	175.	175.	5	 	175.	173	178
EMPLOYMENT COST	175	10	- K	- K	. ¥	0 F	ÓN
MAINIENANCE CONI	10	12.	1	2.5	517	2	14
OVERHEAD COST	24.5	245.	245	245.	245.	245	245.
OVERHEAD COST	245.	245.	245.	245.	245	245.	245
INSURANCE COST	ö (o •	ó	o o	6 (60	
LAND LEASE COST	936.	936.	936.	936	936.	936.	936.
			1	1 1 1 1 1 1 1			* * * * * * * * * * * * * * * * * * * *
CASH FACTORY COST	260074	260074.	260074.	260074.	260074.	260074.	260074.
							,
DEPRECIABLE ASSETS	218	218	216	218.	218.	218	23.0
DEPRECIABLE ASSETS	20,00	218		N C	, N	o c	, o c
PRE-OFERATIONAL EXPENSES	, 0	óò	ó	; o		် ဝ	; o
5.3	218	218.	218.	218.	218.	2.8	218.
10101	260242	260202	260292	260292	260292	260292.	260292.
UNIT FACTORY COST	0.1334	0.1334	0.1334	0.1334	0,1334	0.1334	0.1334
			# # # # # # #	 			
EXPENSES	1692.	1692.	1692,	1692	1692.	1692.	1692.
GENERAL & ADM EXPENSES	1692.	1692.	1692.	1692.	1692.	1692.	1692.
W ·	252.	282.	282.	282.	282.	282.	1974
CENTRAL & ACAL CENTRACIO		t	·				
INTEREST ON MIDDLE TERM DEBT	00	00	့စ် စံ	00	66	60	66
		1	; ; ; ;	• C			d
		>	<i>></i>) 		
OTHER NON-OPERATING EXPENSES	0	0	0	0	ò	0	o i
TOTAL PRODUCTION COST UNIT PRODUCTION COST	263958. 0.1353	263958.	263958. 0.1353	263958.	263958. 0.1353	263956. 0.1353	263956. 0.1353

	≈	WORKING	LLATION F	WORKING CAPITAL STATEMENTS	90LA	**			PAGE	_
	- W/O CAS	E (2,439,	360 T/Y.	CASE (2,439,360 T/Y, C.U.:80%)	ı	(085, 1,000)				
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
CURRENT ASSETS	0	Ö	0	o.	Ó	Ö	Ö	Ó	ö	6
ACCOUNT RECEIVABLE	0	0	0	0 1	ó	0 1	0	0	0	0
INVENTORIES	ö	Ö	o	ó	Ö	•	ó	ö	ó	o
PRODUCT INVENTORY MATERIAL INVENTORY		00	00	00	00	00	00			00
CASH IN HAND	0		0	0	0	0	0	0	0	0
CURRENT LIABILITIES W/O DEBT	0	0	21343.	21343.	21343.	21343.	21343.	21343.	21343.	21343.
ACCOUNT PAYABLE	ö	ó	21343	21343.	21343.	21343,	21343.	21343.	21343.	21343,
CRUDE OIL ELECTRICITY OTHERS	000	000	21140.	21140.	21140.	21140.	21140. 12. 191.	21140.	21140. 12. 191.	21140.
PERMANENT WORKING CAPITAL	0	0 !	-21343	-21343.	-21343.	-21343.	-21343.	-21343.	-21343.	-21343.
CHANGE IN WORKING CAPITAL	0	Ö	-21343.		0	0	Ö	ó	9,	0

	*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***	OIL DIST	ILLATION P	ROUBERT IN	POLAND #3	¥	
	- W/O CAS	#ORK! NG 1	#ORKING CAPTIAL SIMIEMENIS E (2,439,360 T/Y: C.U.:60%	CASE (2,439,360 T/Y, C.U.:80%)	1	(USS. 1.000)	
YEAR	2007	2008	2009	2010	2011	2012	2013
CURRENT ASSETS	Ó		O	Ö	0	ó	0
ACCOUNT RECEIVABLE		0	o	ō	b	0	0
INVENTORIES	Ö	ó	ö	6	o	Ö	0
PRODUCT INVENTORY MATERIAL INVENTORY	00	00	60	00	00	öö	00
CASH IN HAND	0	ó	Ö	ó	0	0	0
1	21343.	21343.	21343.	21343.	21343.	21343.	21343.
ACCOUNT PAYABLE	21343.	21343.		21343.	21343.	21343.	21343.
CRUDE OIL ELECTRICITY OTHERS	21140.	21140.	21140.	21140. 12. 191.	21140. 12. 191.	21140. 12. 191	21140.
PERMANENT WORKING CAPITAL	-21343.	-21343.	-21343	-21343.	-21343.	-21343,	-21343.
CHANGE IN WORKING CAPITAL	0 1	o	o	Ö	ó	o	0.

	*** CRUDE OIL) i O ii C		DISTILLATION PROJECT	ROJECT IN	POLAND ***	**			PAGE	-
	0 0/3 -	CASE (2.439.	360 1/7.	(2.439.360 T/Y, C,U.:80%)	ı	(000'1 '550)				
YEAR	1997	••	866	1999	2000	2001	2002	2003	2004	2005	2006
OPERATING INCOME	0	°.	o	251956.	281958.	281958.	281956.	281958.	281958.	281958.	261958.
TOTAL SALES REVENUE		 6	ó	251955.	281958.	281958.	281958.	281958.	251955.	261956.	281956.
COST OF SALES		6	•	260366.	260366.	260366.	260366.	260366.	260292.	260292.	260292.
VARIABLE COST			6	259138.	259138.	259138.	259138.	259138.	259135.	259138.	259138.
DERECT FIXED COST DEPRECIATION AND AMORTIZATION INC. IN PRODUCT INVENTORY		000	000	2 6 2 6 2 6 2 6 2 6	282	0 00 0 00 0 00 0 0	285. 0	6 0 0 9 00 8 00	250	218.	22.0
GROSS PROFIT ON SALES			ó	21592.	21592.	21592.	21592.	21592.	21666.	21666.	21666.
THE THE THE PROPERTY OF A PA		6	i	1692	1692.	1692.	1692.	1692.	1692.	1692,	1692.
GENERAL & ADMI. EXPENSES			ó	1974.	1974.	1974.	1974.	1974.	1974.	1974.	1974.
OPERATING PROFIT			ö	17927.	17927.	17927.	17927.	17927.	18001.	15001.	15001.
			c		1619	1204	808	603	o	6	6
NON-OPERATING EXPENSES	•	; ; ;	:	· · · · · · · · · · · · · · · · · · ·					1 1 1 1		
INTEREST ON NIDDLE TERM DEST	0,	0.6	o c	2015.	1612.	1209.	808	გი	o d	o o	o o
INTEREST ON SHORT TERM DEBT OTHER NON-OPERATING EXPENSES				6	56	öö	66		ö		6
NET PROFIT OR CLOSS) BEFORE TAX		0	ó	15912.	16315.	16718.	17121	17524.	18001	18001.	18001.
ENCOME TAX		ó	o	6365.	6526.	6687.	6848.	7009.	7200.	7200.	7200.
NET PROFIT OR (LOSS) AFTER TAX		0	ó	9547.	9789.	1,0031	10272.	10514.	10800.	10800.	10800.
DIVIDENDS		 •	i	477.	489.	502.	514,	526.	540.	540.	540,
RETAINED EARNINGS		0	6	9070	9299.	9529	9759	9988.	10260	10260.	10260.
				! ! !							

	*** CRUDE OIL		DISTILLATION PROJ	DISTILLATION PROJECT IN POLAND ***	POLAND *	**	
	- #/0 CAS	SE (2,439.	360 1/7.	CASE (2,439,360 1/Y, C.U.:80X)	:	(USS. 1,000)	
YEAR	2007	2002	2009	2010	2011	2012	2013
				. •			
OPERATING INCOME	281958.	281958.	281958.	281958.	281958.	281955.	
TOTAL SALES REVENUE	281958.	281958.	281958.	281958.	281958.	251958.	281958.
COST OF SALES	260292.	260292.	260292.	260292.	260292.	260292.	260292.
VARIABLE COST DI RECT FIXED COST DEPRECIATION AND AMORTIZATION INC. IN PRODUCT INVENTORY	259136. 936. 218.	259138. 236. 218.	259 259 236, 216, 0	259139 259139 2036 2036	259138. 936. 218.	259138. 836. 218.	259138. 936. 218. 0.
GROSS PROFIT ON SALES	21666.	21666.	21666.	21666,	21666.	21666.	21666.
SALES EXPENSES GENERAL & ADMI. EXPENSES	1692.	1692.	1692.	1692.	1692,	1692.	1692. 1974.
OPERATING PROFIT	18001.	16001.	16001.	18001	18001.	18001.	18001.
	0	Ö	0	0	Ö	0	o
INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT OTHER NON-OPERATING EXPENSES	000	600	000	000	000	000	၀ ၀ ၀
NET PROFIT OR CLOSSY BEFORE TAX	18001.	18001.	15001,	18001.	18001.	15001.	18001.
INCOME TAX	7200.	7200.	7200.	7200.	7200.	7200.	7200.
NET PROFIT OR CLOSS) AFTER TAX	10300	10800.	10800.	10800.	10500.	10800.	10800.
DIVIDENDS	540.	540.	540.	540.	540.	540,	540,
RETAINED EARNINGS	10260.	10250.	10260.	10260	10260.	10260.	10260.

			1			•			i Ç	•
	٠,	FUNDS F	FUNDS FLOW STATE	MENTS - 2	OK) - CISE	, coo) (-
	#/O CASE		111	W00 - 10 - 4	7					
YEAR	1991	1998	1999	2000	2001	2002	2003	2004	2005	2006
		1094	11854	11693	1532	11370.	11209.	11018.	11018.	11018.
SOURCE OF FUNDS	*******									
CASH GENERATED FROM OPERATION	0		11854.	11693.	11532.	116/0.	1203.	11000	-1010.	.01010
PROFIT AFT, TAX, BFR INT. DEPRECIATION AND AMORTIZATION FINANCIAL PESOURCES	24 0 0 0 4	0. 19341.	11562. 292. 0.	11401. 292.	11239. 282.	11078. 292.	10917. 292.	10800. 218.	10800. 218.	10800. 218.
SHARE CAPITAL	6447	9670.	000		60	ő	óc	00	óc	00
MIDDLE TERM DEBT	0.0	0	0		ö	6	6	Ö	6	o
USES OF FUNDS	1457.	2165.	-15628.	5325.	4934.	4543.	4152.	540.	540	540
FIXED CAPITAL EXPENDITURE	1457.	2185.	0	o,	0	0	o	O	ö	o
		0	o	0	0		ó	ö	ö	ó
NON-DEPARCIABLE ASSETS DEPARCIABLE FIXED ASSETS	476	2061	o c	60	00	00	00	o o	o o	o o
INTEREST DOR'ING CONSTROCTION	3		- 21343	·	d	o	o	o	Ó	ö
CHANGE IN WORKING CAPITAL										
DEBT SERVICES	0	ó	5238	4635.	4432.	4029.	3626,	0	0	
REPAYMENT OF MIDDLE TERM DEBT	,	ó	3223.	3223.	3223.	3223.	3223.	66	óá	60
REPAYMENT OF SHORT TERM DEBT INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT	566	ici	2013	1612. 0.	1209.	900	60	666	66	00
DIVIDENDS	0	o	477	489.	502.	514,	526.	540.	540.	540.
	,		6		. ec	40	7.902	10478	10478	10478.
CASH INCREASE OF (DECREASE)	11436	1 (130.	Z (40K.	0000	2000		· !			
SECINNING CASH BALANCE ENDING CASH BALANCE	11437.	11437.	28593. 56075.	56075.	62443.	69041 75868	75866.	82925 93404	93404. 103552.	103882.

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	*** CRUDE	OIL DIST	LLATION P	ROJECT IN	POLAND **	*	
	FUNDS FLOW STATEMENTS - W/O CASE (2,439,360 T/Y, C.U.: 60%) - (US\$.	FUNDS F E (2.439.	10W STATE 360 T/Y,	FUNDS FLOW STATEMENTS (2.439,360 T/Y, C.U.:80%)	* ssn) -	(USS. 1,000)	
YEAR	2002	2008	2009	2010	2011	2012	2013
SOURCE OF FUNDS	11018.	11018.	11018.	11018.	11018.	11018.	11018.
CASH GENERATED FROM OPERATION	11016.	11018.	11018.	11018.	11018.	11018.	.11018.
PROBLET ARY TAX, BEN LNT	10600	10800.	10800.	10800.	10800.	10800.	10800.
DEPRECIATION AND AMORTIZATION	218	23.0	216	218. 0.	200	24 0.6	218.
			0	0		0	0.
MIDDLE TERM DEBT	ó		6	ó	ó	ō	ö
SHORT TERM DEBT	ó	ó	6	6	Ó	ò	o o
SOUTH AC SHOTH	540	540	040	540.	540.	540.	540.
		1 0				6	0
FEXED CAPTIBLE EXPERCITORS				• • • • • • • • • • • • • • • • • • • •	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;		;
NON-DEPRECIABLE ASSETS	0	ö	6	61	ó	o c	66
DEPRECIABLE FIXED ASSETS INTEREST DURING CONSTRUCTION	00	oʻ oʻ	00	90	öö	6	ာ် စ
CHANGE IN WORKING CAPITAL	0	ó	Ó	ó	o	ò	ö
DEBT SERVICES	0.	Ö	i	i	·		0
REPAYMENT OF MIDDLE TERM DEBT	0	.0	0	Ö	0	o,	o
REPAYMENT OF SHORT TERM DEBT	6	ó	0	<i>•</i> •	o c	0.0	o c
INTEREST ON MICOLE 164M DEBI	. o		5 6		òò		6
DIVIDENDS	540.	540.	540.	540.	540.	540.	540.
CASH INCREASE OR (DECREASE)	10478.	10478;	10478	10478.	10478.	10478.	10478.
BEGINNING CASH BALANCE ENDING CASH BALANCE	114361.	124839.	135318. 145796.	145796.	156275.	166753.	177231.

	*** CRUDE OIL	OIL DIST!	LLATION P	ROJECT IN	POLAND ***	*			PAGE	_
	- W/O CASE		BALANCE SHEET (2,439,360 T/Y, C,U.: 8	G.U.:80%)	· cuss.	1,000				
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2002
ASSETS	12894.	32235.	59424.	65500.	71806.	75341.	85106.	95367.	105627.	115887.
CURRENT ASSETS		. 6	Ó	Ö	Ö	ó	o	ö	ö	ö
CASH IN HAND ACCOUNT RECEIVABLE INVENTORIES	600	000	000	000	000	666	000	666	000	000
ACC. EXCESS CASH	11437.	28593.	56075.	62443.	69041.	75668.	\$2925.	93404.	103552.	114361,
NET FIXED ASSETS	1457.	3642.	3350	3057.	2765.	2473.	2181.	1963.	1745.	1627.
NVESTMENT	1457.	3642.	3642.	3642.	3642.	3642.	3642.	3642.	3642.	3642.
NON-DEPR. ASSETS DEPRECLABLE ASSETS AMORTIZATION	0. 1374. 83.	3435.	94.00 2000 2000	3435.	3435.	3435.	3435. 207.	3436. 207.	3435. 207.	3435.
LESS: ACC. DEPRECIATION	· 6	6	292.	554.	877.	1169.	1461.	1679.	1897.	2115.
LIABILITIES	6447.	16117.	34237.	31014.	27790.	24567.	21343.	21343.	21343.	21343.
CURRENT LIABILITIES	Ó	3223.	24567.	24567.	24567.	24567.	21343.	21343.	21343,	21343.
ACCOUNT PAYABLE CURRENT PORTION OF M/T DEBT SHORT TERM DEBT	666	3223. 0.	21343. 3223. 0.	21343. 3223. 0.	21343. 3223. 0.	21343. 3223. 0.	21349.	21349. 0.0	21343.	N 1946 60.00
FIXED LIABILITIES	6447.	12894.	9670	6447.	3223	0	0	0	ó	ő
MIDDLE TERM DEBT BALANCE OTHER FIXED LIABILITIES	6447.	12894,	9670.	6447.	3223.	00	òò	00	66	60
STOCK HOLDERS EQUITY	6447.	16117.	25187	34486.	44016	53774.	63.763	74023	84284.	94544
SHARE CAPITAL ACC. RETAINED EARNINGS		16117.	16117.	16317.	16117.	37657.	16117.	16117. 57906.	16117.	16117.
LIABILITIES & S/H EQUITY	12894.	32235.	59424.	65500.	71806.	78341.	85106.	95367.	105627.	115587.

*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***

	BALANCE SHEET - W/O CASE (2,439.360 T/Y, C.U.:80%)	BAL (2,439,	ANCE SHEE	C.U.: 80%)		(USS. 1.000)	
YEAR	2007	2008	2009	2010	2011	2012	2013
Assets	126148.	136408.	146668.	156929,	167169.	177449.	187710.
CURRENT ASSETS	ó	ó	Ö	ó	ó	ó	ö
CASH IN HAND ACCOUNT RECEIVABLE INVENTORIES	000	000	000	000	000	666	000
ACC. EXCESS CASH	124339.	195918.	145796	156275.	166753,	177231.	187710.
NET FIXED ASSETS	1309.	1090.	872.	654.	436,	218.	Ö
: NVESTMENT	3642	3642.	3642.	3642.	3642.	3642.	3642.
NON-DEPR. ASSETS DEPRECIABLE ASSETS AMORT:ZATION	3435. 207.	3435.	3435. 207.	3435. 207.	3435.	3435.	3435. 207.
LESS: ACC, DEPRECIATION	2333.	2551.	2770.	2988.	3206.	3424.	3642.
LIABILITIES	21343.	21343.	21343.	21343.	21343.	21343.	21343,
CURRENT LIABILITIES	21343.	21343.	21343.	21343.	21343.	21343.	21343.
ACCOUNT PAYABLE CURRENT PORTION OF M/T DEBT SHORT TERM DEBT	21349.	21348. 0.	2134.	21.043.	21343.	N 10 00.	21343.
FIXED LIABILITIES	0	o	0	ò	Ó	0	ò
MIDDLE TERM DEBT BALANCE OTHER FIXED LIABILITIES	00	00	00	ø ö	00	00	00
STOCK HOLDERS EQUITY	104804	115065.	125325.	135585.	145846.	156106.	166366.
SHARE CAPITAL ACC. RETAINED EARNINGS	16117.	16117.	16117	119468.	129728.	139989	i
LIABILITIES & S/H EQUITY	126148.	136408.	146668.	156929.	167189.	177449.	187710.

*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***
MIDDLE TERM DEBT
- W/O CASE (2.439.360 T/Y, C.U.:80%) - (USS. 1.000)

16117.

AMOUNT OF DEBT

REPAYMENT YEAR SER.NO					
		S YEA	R-EQUAL-INS	STALLMENT-REPAY!	5 YEAR-EQUAL-INSTALLMENT-REPAYMENT (ANNUAL REPAYMENT)
	9	PRINCIPAL	INTEREST	DEBT SERVICE	BALANCE AFT. PAYMENT
	_		0	6	6447.
-	۸.	ő	0	ö	16117,
000	ie	3223	2015.	5238.	12894.
2000	. 🕶	3223.	1612.	4835	9670.
2001	· mit	3223	1209.	4432.	6447
_	• 4 Δ	3223	806	4029	3223
2003		3223.	403	3626.	0
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2009	e	0	o ·	ь.	.
2010	4	ó	ŏ	<i>i</i> •	் (
•	K)	0		o (.
	9	ö	ó		ร์ (
2013		o	ં ,	0	•
TOTAL		16117.	6044.	22161.	ó

(USS. 1.000) *** CRUDE OIL DISTILLATION PROJECT IN POLAND ***
PROFITABILITY AND FINANCIAL INDICATORS
- #/O CASE (2.439,360 T/Y, C.U.:80%) - (US\$, 1

CASH CASH 8.E.P. CAPACITY UTILIZE (PCT)		23.6
CASH CASH B. E. P. SALES PRICE	0.000000000000000000000000000000000000	34967.9
CONTROLLA CAPACITY CAPACITY CAPACITY CACTO	4 4 4 5 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4.61
(8) L/T DEBT -TO- S/H EQUITY	% # 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 / 97
(7) DEBT SERVICE RATIO	2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本
65) OULCK RATIO	000000000000000	00
(5) CURRENT RATIO	00000000000000	00
(4) AFT TAX PROFIT -10- S/CAPITAL (PCT)	00000000000000000000000000000000000000	ស ស ច 4 ស
(3) BFR TAX PROFIT *10* INVESTMENT (PCT)	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	462.5
(2) AFT TAX PROFIT -TO- S/H EQUITY (PCT)	8 4 4 4 4 4 4 5 4 5 4 5 4 5 4 5 5 4 5 5 5 6 5 6	7.4° 6.0°
(1) AFT TAX PROF IT -TO- SALES REV (PCT)	4 8 6 6 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4.4 66
YEAR	22222222222222222222222222222222222222	AVERAGE1 AVERAGE2

CAVERAGE!) : SUM OF ANNUAL FIGURES OF PERCENTAGE AND RATIO IS DIVIDED BY NO. OF YEARS(SIMPLE AVERAGE)
(AVERAGEZ) : AVERAGE FIGURES ARE CALCULATED BY ACTUAL VALUES ACCUMULATED OVER THE PROJECT LIFE(WEIGHTED AVERAGE)
** NOTE FOR 695 (10) / 10)
** NOTE FOR 695 (10) / 10)
** NOTE FOR ARE TWO NOR WORE PRODUCTS. AND DURING THE YEARS WHEN ALL OF PRODUCTS ARE NOT PRODUCED AT THE SAME RATE
OF CAPACITY UTILIZATION. ABOVE BREAK-EVEN-POINTS CANNOT GIVE CORRECT FIGURES. : SUM OF ANNUAL FIGURES OF PERCENTAGE AND RATIO IS DIVIDED BY NO. OF YEARS(SIMPLE AVERAGE) : AVERAGE FIGURES ARE CALCULATED BY ACTUAL VALUES ACCUMULATED OVER THE PROJECT LIFE(WEIGHTED AVERAGE)

A5.1 -33

*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***
DETTION ON INVESTMENT (IN TOL FLYED OBLOE)

(5) AFT-TAX NET IN-FLOW (4)~(3)	-1374	-2061.	33197.	11693.	11532.	11970.	11209	11018	11018	11018.	11018.	11016.	1:016.	11018	11018	11016	-10325.		164408.
4) 8FR-TAX NET IN-FLOW (2)-(1)	-1374.	-2061	39562.	18219.	18219.	18219,	18219,	18219.	18219.	15219.	16219.	18219.	16219.	15219.	18219,	18219.	-3125.	1	269846.
- NCOME	6	ó	6365.	6526.	5687.	6848.	7009	7200.	7200.	7200.	7200,	7200.	7200.	7200,	7200.	7200.	7200.	9 0 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	105438.
ම																			
2) GROSS CASH IN-FLOW	D	0	16219.	18219.	18219.	18219.	18219.	18219.	18219,	18219,	18219.	18219,	15219.	18219.	18219.	18219.	18219.		273280.
DEPRECIATN (o	ó	292	292	292.	292,	292.	218.	218	218	218	218.	218	218	218	218	218	1 1 1 1 1 1	3642.
OPERATING PROFIT	ó	0	17927.	17927	17927.	17927.	17927.	16001	18001	18001	18001	18001	18001	18001	18001	18001	18001.	1111111	269639.
(1) GROSS CAPITAL EXPENDIR	1374.	2061	-21343	ď	ä	Ó	6	6	a	á			ď	c c	C	0	21343.	1 1 1 1	3435.
CHANGE IN WORKING CAPITAL	c		-21343	0	ć	Ġ	G		ic	· c	•	ā	ā	c	c	a	21343	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ó
FIXED CAPITAL EXPEND.	1374	2061	0	c	; c	; c				ć			ć	ć	ċ	; c	Ģ		3435.
YEAR	1001	800	000	0000	2000	000	1000	0000	1	900	7	000	000	000) ·	200	100	! ! !	
	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CAPITAL WORKING CAPITAL PROFIT CASH TAX NET IN-FLOW NET EXPENDER (2)-(1) (2)-(1)	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CAPITAL WORKING CAPITAL PROFIT CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDIR (2)=(1) (4) 1374.	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CAPITAL WORKING CAPITAL PROFIT CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (2)=(1) (4) 1374. 0. 1374. 0. 0. 0. 0. 0. 01374.	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CAPITAL WORKING CAPITAL PROFIT CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDIR 1374. 0. 0. 0. 0. 0. 01374. 2051. 0. 0. 0. 0. 0. 02061. 2061. 2061. 2061. 2062.	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CAPITAL WORKING CAPITAL PROFIT IN-FLOW NET	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CAPITAL WORKING CAPITAL PROFIT IN-FLOW NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR IN-FLOW O. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) 8FR-TAX (5) CAPITAL WORKING CAPITAL PROFIT CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (2)-(1) (4) 1374. 0. 1374. 0. 0. 0. 01374. 2061. 0. 0. 02061. 2061. 0. 0. 02061. 2061. 0. 02061. 2061. 0. 0. 17927. 282. 18219. 6585. 18219. 207. 18219. 6687. 18219. 2082. 18219. 6688. 18219.	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CASH TAX NET IN-FLOW NET EXPEND. CAPITAL PROFIT IN-FLOW NET IN-FLO	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (2)=(1) (4) CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (2)=(1) (4) CASH TAX NET IN-FLOW NET CASH TAX NET CASH T	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) 8FR-TAX (5) CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (2)=(1) (4) CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (2)=(1) (4) CASH TAX NET IN-FLOW NET NET IN-FLO	EXPEND. CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (2) - (1) (4) CASH TAX NET IN-FLOW NET CASH TAX NET CASH TAX NET IN-FLOW NET CASH TAX NET IN-FLOW NET CASH TAX NET CASH TAX NET IN-FLOW NET CASH TAX	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (ASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (ASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDER (ASH TAX NET IN-FLOW NET EXPENDED (ASH TAX NET IN-FLOW NET I	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CASH TAL WORKING CAPITAL PROFIT IN-FLOW NET IN-FLOW NE	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CASH WORKING CAPITAL PROFIT IN-FLOW NET IN-FLOW NET EXPEND. EXPEND. CAPITAL EXPENDTR IN-FLOW NET IN-F	EXPEND. CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) 8FR-TAX (5) CASH WORKING CAPITAL PROFIT IN FLOW NET IN-FLOW NET	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CASH TAX NET IN-FLOW NET EXPENDT TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR CASH TAX NET IN-FLOW NET EXPEND. CASH TAX NET IN-FLOW NET CASH TAX NET CASH TAX NET CASH TAX NET CASH TAX NET IN-FLOW NET CASH TAX NE	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CASH CASH CASH TAX NET IN-FLOW NET EXPENDTR CASH TAX NET IN-FLOW NET EXPEND. CAPITAL EXPENDTR (2)=(1) (4) CASH TAX NET IN-FLOW NET EXPENDED (2) CASH TAX NET IN-FLOW NET CASH TAX NE	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CAPITAL EXPENDTR CAPITAL PROFIT IN-FLOW NET CASH TAX NET NET	FIXED CHANGE IN (1) GROSS OPERATING DEPRECIATN (2) GROSS (3) INCOME (4) BFR-TAX (5) CAPITAL CAPITAL PROFIT IN-FLOW NET CASH TAX NET

**** IRR CAN NOT BE OBTAINED. BECAUSE OF EXTREMELY HIGH OR LOW ****

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1 · · · · · · · · · · · · · · · · · · ·	*** CRUDE ON CREMENTAL CA	PRODUCT	TILLATION F ION COST ST 39.360 T/Y.	ROJECT IN ATEMENTS C.U.:80%)	POLAND ***	. 1.000)			PAGE E	-
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
PRODUCTION (YOU'ME)	0	0	-3168.	-3168.	-3168.	-3168	-3168.	-3168.	-3168,	-3168.
TOO A TODIEN BYO	o .		6	o	· o	0	ö	ó	ó	ö
CRUDE OF L	ö			o	Ó	ó	o į	o i	o į	0 8
UTIL ITIES COST	o (00	(n)	P (0	. 64	r (, c	66.	. o	9 10
ELECTRICITY	0		9000	900	999	900	385.	900	385.	385.
COOLING WATER		0		0	ó	Ö	6	0	o e	o 6
FUEL GAS	o c	96	o 600	0 00	000	-280	2000	-240.	. 65.	1290
FUEL OIL VARIABLE COST	90	50	. 76	63	37.	97		37.	96	97
			(. (c	
EMPLOYMENT COST	0 0	о с		ò c	. c	ò	ó	ó	öö	0
MAINTENANCE CONT	ó	• •		•	; ₆	Ö	6	ó	ö	o
MAINTENANCE COST	0		<i>i</i> •	ö	ó	66	o o	o c	o 0	o c
OVERHEAD COST	00	00	ó	3 0	3 D	9		i		òó
INSURANCE COST			o.	0	ö	0	6	<i>.</i>	<i>•</i>	<u>.</u>
LAND LEASE COST	0	00	o o	o o	o o	00	o o		90	90
			76	3.4	7.5	37.	37.	37.	37.	37.
							1	1 1 1 1 1 1 1		
	,	c	. V	80	938	60 60	90	338	356	356
DEPRECIABLE ASSETS	ö	• •		358.	356.	336.	989	356	356	358
PRE-OPERATIONAL EXPENSES	o c	00	. 54.	4.6	7. °	4 6	4. 88 4. 88	o 0	0 0	6 6
DEPRECIATION AND AMORTIZATION	6	• •		480	480.	480.	480.	356.	358.	355.
TOTAL FACTORY COST UNIT FACTORY COST	0.0	0	517.	517.	0.0003	6.0003	0.000a	395,	395.	395.
SALES EXPENSES	ö		19.	61	19,	60	19.	19.	19.	40
OFNERAL & ADM. FXPENSES	o	0		19.	19.	19.	19.	19.	19.	19.
OTHER EXPENSES GENERAL & ADM! EXPENSES	00	00	22.3	6 5 5 6 5 5 5 6 5 6 5 6 5 6 5 6 5 6 5 6	6,6		23.9	e 2	. 23 . 3	
INTEREST ON MIDDLE TERM DEBT	0.0		382.	306.	229.	153.	76. 76.	00	00	00
INTEREST ON SHORT TERM DEBT	0.	0	0	0	0	0.	ò	0	o	.0
			-			b E E E E E E E E E E E E E E E E E E E	* • • • •	 	4 1 1 1 1	
OTHER NON-OPERATING EXPENSES	0		6	0	0	o	ö	0	o	Ö
TOTAL PRODUCTION COST UNIT PRODUCTION COST	0.0	0	940.	864.	787.	711.	635.000.0	437.	437.	437. 0.0002

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	2013	-3168,	Ò	,	o vi	900	0	0 6	 	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ö	o ·	0	0 0	ò	ò	o.		94		600 600 600 600 600 600 600 600 600 60	9	ö	358,	395	0,0002	ō		တ္ င	2,4	6				0	437.
. 1.000)	2012	-3168.	ဝံ	; ć	 	365	Ó	0 6	 		o	ó	o e	o c	ò	ó	o,	ö.	9		10 to 10 to	900	ò	356,	395	0.0002	. 0	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	ற் எ	, či	o ·	,	0		0	437.
IN POLAND *** TS 50% - (USD.	2011	-3165.	Ö		S IS	365	o	0 8	7 C		o	ó	0 (0 0	ja	6	o.		37.		358		0	358	395.	0.0002	•		<u> </u>	23.5	0	D.	O		0	437,
PROJECT IN STATEMENTS Y, C.U.:80%)	2010	-3168,	ö	ָ הַ נַּ	. c	385	ó	9	1 (C)			6	ö	0 6	ò	ö	o,	o	37.		900 000 000 000	9	6	358.	395	2000 0	9		<u>.</u>	8		ċ	ó	*.	0	437.
LLATION PI N COST ST.	2009	-3168.	0	o į	7 K	9000	ó	o g	1.28 1.45 1.45		o	ò	o'	o c	<i>.</i>	6	ó	o	37.			, c	o	356.	3000	0.0002	9		€.	22.	O		0		0	437.
DE OIL DISTILLATION PRODUCTION COST S CASE (2,439.360 T/Y	2008	-3168.	ö	ė į	9 4		ó	ö	568 688		ö	ó	o.	o c	<i>.</i>		ó	0	37.		358.	900	á	358.		0.0002		. D	9,0	2 2	0	0	o		Ö,	437.
*** CRUDE	2007	-3166.	ó	o i	20 4) in	ó	ţ	. 200		Ö	Ġ	•	6	.		ö	Ö	37.	; ; ; ; ;	358.	999	ė	356		0.0002		- 1 - 1 - 1	9		0	0	Ó		O	437.
NI •	YEAR	PRODUCTION (VOLUME)	RAW MATERIAL COST	CRUDE OFL	UTIL ITIES COST		COOL - NO WATER	FUEL GAS	FUEL OIL	VAR: AGE 1000 1	HSCO INDIANC INTE	Z	MAINTENANCE COST	MAINTENANCE COST	OVERHEAD COST	OVERMEAD COST	LAND LEASE COST		CASH FACTORY COST		DEPRECIABLE ASSETS	v)	TARTOTARY CONT. CONT. CANDON	DEPRECIATION AND AMORTIZATION	TOTAL STATEMENT FORTHURS AND TALESTON	UNIT FACTORY COST		SALES EXPENSES	GENERAL & ADMI. EXPENSES	GENERAL & ADMI, EXPENSES	INTEREST ON MIDDLE TERM DEST	INTEREST ON MIDDLE TERM DEBT	INTEREST ON SHORT TERM DEBT		OTHER NON-OPERATING EXPENSES	TOTAL PRODUCTION COST UNIT PRODUCTION COST

	*	*** CRUDE C	-	ATION	PROJECT IN	POLAND #	***			PAGE	-
	- NCRE	NCREMENTAL CASE		(2,439,360 T/Y.	C.U.:80%)	GSO - C	. 1.000)				
YEAR		1997	866	1999	2000	2001	2002	2003	2004	2005	2006
	-						•	•	•		•
CURRENT ASSETS		· • 	·	0			0	0		0	
ACCOUNT RECEIVABLE		0	ö	0	6	ó	0	0	0	0	0
		0	o	O	Ö	Ó	o	0	0	0	0
PRODUCT INVENTORY MATERIAL INVENTORY		00	00	00	60	00	66	00	00	00	00
CASH IN HAND		ö	o i	ò	0	0	0	Ö	0.	Ö	0,
CURRENT LIABILITIES W/O DEST		0	0	n	6	6	e)	e l	69	0	6
ACCOUNT PAYABLE		o	ó	n		Ö	6	e,	ė	ė	
CRUDE OIL ELECTRICITY OTHERS	ŧ	000	000	0-4	o - 4	Q-4	o - 4	o-4	o - 4	Q-4	o - 4
PERMANENT WORKING CAPITAL		0	ö	é	-3.	연	. 65	6	6	.6-	.e.
CHANGE IN WORKING CAPITAL	. •	0	0	9	0 1	0	•	ò	0	0	0

	*** CRUDE OIL DISTILLATION PROJECT IN POLAND *** WORKING CAPITAL STATEMENTS - INCREMENTAL CASE (2.439,360 T/Y, C.U.:80%) - (USD.	SOL DISTILLATION PROJECT IN F WORKING CAPITAL STATEMENTS CASE (2.439.360 T/Y, C.U.:80%)	LLATION PAPITAL ST	ATEMENTS C.U.: 80%	FOLAND **	(USD, 1,000)	
YEAR	2007	2008	2009	2010	2011	2012	2013
CURRENT ASSETS	Ö	ó	Ö	0	0	ò	0
ACCOUNT RECEIVABLE	0	ò	0	0 1	0	ó	9
INVENTORIES	6	0	ó	ó	Ó	o	ö
PRODUCT INVENTORY MATERIAL INVENTORY		00	00	66	00	òò	00
CASH IN HAND	0	ó	0	0.	ö	ò	Ö
CURRENT LIABILITIES W/O DEBT	Ö	6	n	. 	6	9.	9.
Ş	'n	ก่	n	8	ń	e e	ė
CRUDE OIL ELECTRICITY OTHERS		0 - 4	0 F 4	5 1 ₹	Q = 4	o 무 ·	0-4
PERMANENT WORKING CAPITAL		6	6	6	6	6	٠,
CHANGE IN WORKING CAPITAL	0	0	O	0		0	Ö

				·				÷		
	*** CRUDE OFL	NE O+L DISTIL INCOME CASE (2,439,	LATION STATEN	ROJECT NTS C.U.:8	IN POLAND ***	**			PAGE	F
YEAR		1998	1999	2000	2001	2002	2003	2007	2002	2006
OPERATING INCOME	ò	ó	3197	3197.	3197.	3197.	3197.	3197.	3197.	3197.
TOTAL SALES REVENUE	0	0	0197	3197,	3197.	3197.	3197.	3197.	3197.	3197,
COST OF SALES	0	Ó	517.	517.	517.	517.	517.	395,	395.	395.
VARIABLE COST	o (0.0	37.	37.	37.	. C	37.	34	37.	۲.
DIRECT FIXED COST DEPRECIATION AND AMORTIZATION INC. IN PRODUCT INVENTORY	• • •		500		4 500	4 50 0	4 500	9 0 9 0	98 0	98.0 0
GROSS PROFIT ON SALES	ó	6	2650.	2680.	2680.	2680.	2680.	2802.	2802.	2802.
SALES EXPENSES GENERAL & ADMI. EXPENSES	00	00	19. 22.	19. 22.	19. 22.	19. 22.	19. 22.	19.	19.	19. 22.
OPERATING PROFIT	Ö	ò	2638.	2638.	2638.	2638,	2638.	2760.	2760.	2760.
NON-OPERATING EXPENSES	0	Ö	362	306.	229.	153.	76.	0	o.	0
INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT OTHER NON-OPERATING EXPENSES	000	000	8 8 000	306.	229.	153 0.0	600	000	666	000
NET PROFIT OR CLOSSY BEFORE TAX	o	ó	2256.	2333.	2409.	2486.	2562.	2760.	2760.	2760.
INCOME TAX	0	0	903.	933.	964.	994.	1025.	1104.	1104.	1104.
NET PROFIT OR (LOSS) AFTER TAX	•	ó	1354.	1400.	1445.	1491.	1537.	1656.	1656.	1656.
DIVIDENDS	ó	o	83	6	72.	, Ž	77.	63.	83.	, (a)
RETAINED EARNINGS	0	0	1286.	1330.	1373.	1417.	1460.	1573.	1573.	1573.

	*** CRUDE OIL		LLATION P	ROJECT IN	DISTILLATION PROJECT IN POLAND ***	*	
•	- INCREMENTAL CA	CASE (2,439	2.439.360 T/Y, C.	(2,439,360 T/Y, C.U.:80%)		- KUSD, 1.000)	
YEAR	2007	2008	2009	2010	2011	2012	2013
							•
OPERATING INCOME	3197.	3197.	3197.	3197.	3197.	3197.	3197.
TOTAL SALES REVENUE	3197.	3197.	3197.	3197.	3197.	3197.	3197.
COST OF SALES	395.	395,	395.	395.	393	395.	395
VARIABLE COST	. 60	37.	37.	97,	94.	37.	37.
DIRECT FIXED COST DEPRECIATION AND AMORTIZATION INC. IN PRODUCT INVENTORY	9 80 80 80 80 80 80 80 80 80 80 80 80 80 8	38.0	,	358.	6 6	99	80
GROSS PROFIT ON SALES	2602.	2802.	2802.	2802.	2602	2802.	2802.
SALES EXPENSES GENERAL & ADMI. EXPENSES	5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	19. 22.	22.	19.	19.	22.0	19.
OPERATING PROFIT	2760.	2760,	2760.	2760.	2760.	2760.	2760.
NON-OPERATING EXPENSES	Ó	6	0	ó	0	ó	ó
INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT OTHER NON-OPERATING EXPENSES	000	000	000	000	000	888	000
NET PROFIT OR CLOSSY BEFORE TAX	2760.	2760.	2760.	2760.	2760.	2760.	2760,
INCOME TAX	1104.	1104.	1104.	1104.	1104.	1104.	1104.
NET PROFIT OR CLOSSY AFTER TAX		1656	1656.	1656.	1656.	1656.	1656.
DIVIDENDS	9	83.	99.	83.	63.	83.	53.
Č.	1573.	1573.	1573.	1573.	1573.	1573.	1573.

	*** CRUDE	OIL DISTIL	L DISTILLATION PROJECT FUNDS FLOW STATEMENTS		IN POLAND ***	*			PAGE	-
•	NCREMENTAL CA	CASE (2.439.360 T/Y.	.360 T/Y.	C.U.: 80%)	. cusb.	1,000				
YEAR	1997	800	1999	2000	2001	2002	2003	2004	2005	2006
		. •		;					7,000	4100
SOURCE OF FUNDS	2445	3667.	2216.	2185.	2154.	2124.	2802			
CASH GENERATED FROM OPERATION		ö	2216.	2185,	2154.	2124.	2093.	2014.	2014.	2014.
PROFIT AFT, TAX, BFR INT. DEPRECIATION AND AMORTIZATION FINANCIAL RESOURCES	2445	3667.	1736. 480.	4 60 60 60 60 60 60 60 60 60 60 60 60 60	1675.	1644 600.	1614. 050.	3.5 8.5 8.5 0.5 0.5	1656. 358. 0.	1656. 356. 0.
SHARE CAPITAL MIDDLE TERM DEBT SHORT TERM DEBT	1222.	1834.	600	000	000	000	000	666	000	000
uses of funds	2392.	3588	1058.	987.	913.	83.9	765.	83		83.
FIXED CAPITAL EXPENDITURE	2392.	3588.	ò		· ·	0	0	0	0	o .
NON-DEPRECIABLE ASSETS DEPRECIABLE FIXED ASSETS INTEREST DURING CONSTRUCTION	2256. 136.	3384.	000	000	800	000	000	000	666	000
	0	0	6	Ö	0	0	ò	0,	o.	ö
DEBT SERVICES	o	Ö	.666	917.	840.	764.	688.	9	0	. !
REPAYMENT OF MIDDLE TERM DEST REPAYMENT OF SHORT TERM DEST INTEREST ON MIDDLE TERM DEST INTEREST ON SHORT TERM DEST	0000	0000	88.0 + 0.99.0	906.	229 0.00	611. 50. 0.	6. 0.60 0.00	0000	6666	0000
OIVIDENDS	0	ö	66.	70.	72.	75.	77.	63.	. 69	83.
CASH INCREASE OR (DECREASE)	53.	00	1158.	1199	1242.	1285.	1329.	1931.	1931,	1931.
BEGINNING CASH BALANCE ENDING CASH BALANCE	တို့ တို့	133.	133. 1290.	1290.	2488.	3730.	5015,	6344. 8276.	5276. 10207.	10207.

*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***
FUNDS FLOW STATEMENTS

	2007	2002	2009	2010	2011	2012	2013
							•
SOURCE OF FUNDS	2014.	2014.	2014.	2014.	2014.	2014.	2014.
CASH GENERATED FROM CPERATION	2014.	2014.	2014.	2014.	2014.	2014	2014.
PROFIT AFT. TAX. BFR INT. DEPRECIATION AND AMORTIZATION FINANCIAL RESOURCES	1656 1656 0.056	1656. 363. 0.	1656. 356. 0.	1656 358. 0.	1656. 356.	18.66 25.86 0.00	1656. 358. 0,
SHARE CAPITAL MIDDLE TERM DEBT	000	000	000	800	666	000	000
USES OF FUNDS	83.	89.	83,	83	8		83.
FIXED CAPITAL EXPENDITURE		ó	o	Ö	Ö	ó	0
NON-DEPRECIABLE ASSETS DEPRECIABLE FIXED ASSETS INTEREST DURING CONSTRUCTION	000	000	666	000	000	000	000
CHANGE IN WORKING CAPITAL	ó	O	0	0	0	0	0
DEST SERVICES		o	o	0	0	0	ò
REPAYMENT OF MIDDLE TERM DEBT REPAYMENT OF SHORT TERM DEBT INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT	0000	0000	0000	0000	0000	0000	8 8 8 8
DIVIDENDS	88	83.	\$3.	63.	63.	8	6
CASH INCREASE OR (DECREASE)	0 I	1931	1931.	1931.	1 00 to 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1931.	1931.
BEGINNING CASH BALANCE ENDING CASH BALANCE	12138.	14069.	15001.	17932.	19863. 21795.	21795.	23726,

•	1 INCREMENTAL CASE	2021	2000	•	•	*				
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
	2445	6113	6790	7509	8271	9076	9925.	11498.	13072.	14645.
				3						
CURRENT ASSETS	0	o	O	0	ó	o	ó	0	Ö	Ö
CASH IN MAND	0	Ö	ö	0	ó	0	ö	o	Ó	6
ACCOUNT RECE VABLE INVENTORIES	00	00	ö ö	66	<i>o</i> o	00	86	ဝ ဝ	00	66
3	53.	133.	1290.	2458.	3730.	5015.	6344.	8276.	10207.	12138.
NET FIXED ASSETS	2392.	5980.	5500	5020.	4540	4061.	3581	3223,	2865.	2507.
1						, c			08.08	. C.
INVESTMENT	738K.		0000			3 8				
NON-DEPR. ASSETS DEPRECIABLE ASSETS	2256. 136	36.40 0.40 0.00	5640	5640.	36 440 440	5640.		5640. 340.	5640. 340.	56.40
LESS: ACC. DEPRECIATION		ó	480.	960.	1439.	1919.	2399.	2757.	3115.	3473.
LIABILITIES	1222.	3056.	2448.	1837.	1225.	614,	ė	ó	ė	ë.
CURRENT LIABILITIES	. 0	611.	614.	614.	614.	614.	ด	ņ	3.	3,
ACCOUNT PAYABLE CURRENT PORTION OF M/T DEBT SHORT TERM DEBT	000	9.50	6 0 0 0	61.0		e 0	A 0 0	400	m 0 0	က်တ်ဝ
FIXED LIABILITIES	1222.	2445.	1834.	1222.	611.	ė	o.	0	Ŷ	0
MIDDLE TERM DEBT BALANCE OTHER FIXED LIABILITIES	1222.	2445.	1834	222	611.	o o	00	o o	o o	o o
	1222.	3056	4342.	5672.	7045.	5462.	9922.	11495.	13069	14642.
SHARE CAPITAL ACC. RETAINED EARNINGS	1222.	3056.	3056. 1256.	3056. 2616.	3056 3056 3056	3056. 3406.	3056. 5866.	3056, 8439.	3056. 10012.	3056. 11556.
LIABILITIES & S/H EQUITY	2445.	6112.	6790.	7509	8271.	9076.	9925,	11498.	13072	14645.

25654. 3056. 22598. 5980. 25657 25657 2013 24061. 3056. 21025. 358. *** CRUDE OIL DISTILLATION PROJECT IN POLAND ***
BALANCE SHEET
INCREMENTAL CASE (2,439,360 1/Y, C.U.:80%) - (USD, 1,000) 24054. 5640. 340. 5980, 5622. 2012 22508. 3056. 19452. 22511. 716. 5960 5264 21795. 2011 3056. 1074. 20936, 19863 2010 3056. 16305. 19364. 1432. 5980. 2009 340 17791. 3056. 17758. 1790. 5980. 4189. 3056. 16215, 3640. 340. 16218. 2149. 5980. 3631. 14069, ACCOUNT PAYABLE CURRENT PORTION OF M/T DEBT SHORT TERM DEBT MIDDLE TERM DEBT BALANCE OTHER FIXED LIABILITIES LESS: ACC. DEPRECIATION SHARE CAPITAL ACC. RETAINED EARNINGS STOCK HOLDERS EQUITY LIABILITIES CASH IN HAND ACCOUNT RECEIVABLE INVENTORIES NON-DEPR. ASSETS DEPRECIABLE ASSETS AMORTIZATION CURRENT LIABILITIES FIXED LIABILITIES ACC. EXCESS CASH NET FIXED ASSETS CURRENT ASSETS INVESTMENT ASSETS

25657.

24084.

22511.

20938.

19364.

17791.

16218.

LIABILITIES & S/H EQUITY

*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***
PROFITABILITY AND FINANCIAL INDICATORS
- INCREMENTAL CASE (2.439.360 T/Y, C.U.:80%) - (USD, 1.000)

(11) * CASH . B.E.P. CAPACITY UTILIZE . PCT)	40000	۵. ن
CASH CASH B.E.P. SALES PRICE (PRICE)	0.4.0.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4	-122.4
(3)* PROFIT B.E.P. CAPACITY UTILIZE (PCT)		****
(5) L/T DEBT *TO* S/H EQUITY	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	96 / 6
CT> DEBT SERVICE RATIO	**************************************	**************************************
66) OUICK RATIO	00000000000000	00
CURRENT RATIO		00
(4) AFT TAX PROFIT -TO- S/CAPITAL	4 4 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	0.4 4.7 9.0
C3> BFR TAX PROFIT -TO-TNVESTMENT (PCT)		44 4 4 4 4
AFT TAX PROFIT -TO- S/H EQUITY (PCT)	~ 4 0 5 5 4 4 5 5 9 8 5 5 5 8 8 8 8 8 8 8 8 8 8 8 8 8	13.6 10.6
C1) AFT TAX PROF IT -TO- SALES REV (PCT)	444444២២២២២២២២២២២២២២២២២២២២២២២២២២២២២២២	7 49.6
YEAR	2000 200 200 200 200 200 200 200 200 20	AVERAGE1 AVERAGE2

(AVERAGE1): SUM OF ANNUAL FIGURES OF PERCENTAGE AND RATIO IS DIVIDED BY NO. OF YEARS(SIMPLE AVERAGE)
(AVERAGE2): AVERAGE FIGURES ARE CALCULATED BY ACTUAL VALUES ACCUMULATED OVER THE PROJECT LIFE(WEIGHTED AVERAGE)
** NOTE FOR (9)(10)(11)
** WHEN THERE ARE TWO OR WORE PRODUCTS, AND DURING THE YEARS WHEN ALL OF PRODUCTS ARE NOT PRODUCED AT THE SAME RATE
OF CAPACITY UTILIZATION, ABOVE BREAK-EVEN-POINTS CANNOT GIVE CORRECT FIGURES.

A5.1 - 45

*** CRUDE OIL DISTILLATION PROJECT IN POLAND ***
RETURN ON INVESTMENT (IN '94 FIXED PRICE)
CREMENTAL CASE (2.439,360 T/Y, C.U.:80%) - (USD, 1,000)

YEAR

	1 1		ACT TAKE TO LOCATE	33000 101	- AE	NCOME	CAN BER-TAX	CS AFT-TAX
CHANGE IN WORKING CAPITAL	(1) GROSS CAPITAL EXPENDIR	PROFIT		CASH IN-FLOW		1AX	NET IN-FLOW (2)-(1)	NET 1N-FLOW (4)-(3)
	3		c	ó		ó	-2256.	-2256.
;	7730.	•		ó		ó	-338k	-3364.
j,	. do		Š	3116		000	3121	2219
;	į	2000	700			933	3118.	2185.
o	.	2007	4 4 5	3118		964	3118.	2154.
, D (o c	7000	200	(A)		984	3116	2124.
	j e	7636	. 0	3110.		1025	3116.	2083.
<i>i</i> 6	÷ c	2750		3110		1104.	3116.	2014.
; c	·	2750	9 60 60 60 60 60 60 60 60 60 60 60 60 60 6	3110		1104.	3116.	2014.
;	•	276	10 20 21 21 21	3118.		1104.	3118.	2014
;	· •	2750	2 K	3110		1104	3118.	2014.
; •	÷ •		200	3110		1104.	3118.	2014.
; c	÷ c	2750	9 60	3716.		1.04.	3118.	2014.
		2750		3116.		1104.	3118.	2014.
> c	; c	2780	000	3116.		1104.	3118.	2014
		2760	40 40 40	3110		1104.	3116	2014.
; c	÷ e	2760	900	3116		1104	3118	2011
9					1	1000	£ 1 £ 1 £ 1 1	
d	5640	40792.	5980	46772.		15555.	41132.	25274.

INTERNAL RATE OF RETURN
ON (4) BFR-TAX NET IN-FLOW (2)-(1) 46.48 PER CENT
ON (5) AFT-TAX NET IN-FLOW (4)-(3) 32.99 PER CENT

		:		•	:		•		1	•
	*** PPSA	A POWER	ANT PRO	MECT IN POLAND *** STATEMENTS					PAGE	-
	\(\bar{1}\)	NCREMENTAL	CASE	- (5/LM/d)		(USD 1000)				
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
	(ć	c	C	G	Ó	6	o
PRODUCTION CHP STEAMS	•			;	;	•	;		•	
70% BP	0.		555,	-555.	- 6555.	100 P	- 888 - 688 - 688	1000 1000 1000	1,55 1,55 1,50 1,50 1,50 1,50 1,50 1,50	ທີ່ ທີ່ກ່ວ
PURE WATER	o c		. :	יוני או או) 10 10 10 10	100 kg	- 55.55	 	- 13 KB - 1	1.05.05
	ò			1000 1000	-849	-843.	-843.	-843	1843	-843.
04 - 3 - 3 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -	ó			116.	-16.	110.	-16.	-16.	-16.	-16.
		:	0197.	-197	-197.	-197.	1.01	-197	-197.	197.
NAOH	0			-630	•	-630				10000
FOR G	0 1		Τ'	V (-13879.	13878 1486 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.00/U	11861	1 1 35 1
TO CHEAT	0 0		~ `i	- R	-25740	-25740	- 40	. 6,	-25740.	-25740.
VARIABLE COST	0		015276	-15276.	-15276.	-15276.	n	-15276.	-15276.	**
	*****					1	1			
TOOL TURKNO GUN	0			0	0	Ö	ó	o	Ö	ö
EMPLOYMENT COST	0		0	o	ō	0	o e	o (<i>.</i>	ဝ်ဖ
MAINTENANCE COST	0 (:	o c	00	<u>,</u>	o d	.		
MAINTENANCE COST					0	ō	ó	ò	ö	
OVERATION CONT.	• •			ó	ó	ó	Ö	o	o'	0
INSURANCE COST	Ó			ö	ö	o ·	ø.	o (o c	o c
LAND LEASE COST	6 (6 6	o e	o c	o c	5 0	5 6	
DIRECT FIXED COST		\$ L P)				ŀ
TORY C	ó		015276	-15276.	-15276.	-15276.	-15276.	-15276.	-15276.	-15276.
		! ! !	;	i			1			
DEPRECIABLE ASSETS	ō				213	2151	2151	2151	2151	101 c
DEPRECIABLE ASSETS	o c					323	323	-	າ -	-
TARLOTERAL LONAL EXTENSES TATERARY OF COUNTY	Ö		408	408	408	408	408	- !		
DEPRECIATION AND AMORTIZATION	0				2882.	2882.	2882.	2151	2151.	2151.
TOTAL FACTORY COST	0		012394	-1239	1239	1239	1239	131	-1312	13
UNIT FACTORY COST	0.0	0.0	-1.0913	-1.09	-1.0913	-1.0918	- 1	-1,1557	-1,1557	1001
SALES EXPENSES	0	_	0	0	• 6	ó	ø	ö	o	ö
		-	-	100		0	ó	0	Ö	0
らにいたます。 ターカンス・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	0				Ö	0	o	o	o	o
CENERAL & ADMI. EXPENSES	0			0			ò		o	0
INTEREST ON MIDDLE TERM DEBT	00		0. 2155 0. 2155	172	1293.	862.	<u>4</u> 4	00	00	00
	i C		i C		0	0	0		0	0
			.			***************************************				
OTHER NON-OPERATING EXPENSES	0		0	0	ó		0	0	0	ò
TOTAL PRODUCTION COST UNIT PRODUCTION COST	Ö	0	-10240	-10671	Τó	11532	98		-13125.	-13125.

	Sdd ***	PPSA POWER PI	POWER PLANT PROJECT IN PO	ECT IN POS	POLAND ***		
	1	PRODUCT 10	ON COST ST CASE (B)	CBP/WT/G) -	÷	(0001 asu)	·
YEAR	2007	2008	2009	2010	2011	2012	2013
PRODUCTION (HP STEAM)	6	6	ö	6	ő	ö	0
FOR BP	- 55.55 5.55 5.55	90 10 10	80. 80. 80.	ής Ω	10 10 10	-555	- 85.5 - 5.55
PURE WATER	o in	ວ ຄົ ທີ່ ທີ່ ໄ	1,000	-555	 	-555	- 65 50 50
FOR WT	1043	-843	-843	-843	-843	-843	-843.
RAW WATER	116.	2 6	. 201	0 6	-197,	-197	-197
A SACH	-630	-630.	-630	-630.	-630	009	1690
FOR G	-13879.	-13879.	13879	13879	113679	1100/0	1000
HP STEAM ELECTRICITY	-25740	-25740.	25740	25740	-25740.	-25740.	-25740.
VARIABLE COST	-15276	-15276.	15276	1070			
	•	·c		· C	G	Ó	o
EMPLOYMENT COMP		s 0	ó	o	ó	o	ó
	0 (60	60	00	öc	00	6 6
MAINTENANCE CONT		ó	.	; o	Ö	0	ó
OVERHEAD COST		ó	o.	o.	ó	o o	o o
INSURANCE COST	ö	o o	6 6	0 0	o c	ပ်င	o d
LAND LEASE COST DIRECT FIXED COST	9 6	90	ာ်ဝ	0		ю	6
CASH FACTORY COST	-15276.	-15276.	-15276.	-15276.	-15276.	-15276.	-15276.
		1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	
DEPRECIABLE ASSETS	2151.	2151.	2151.	2151.	2151.	2151.	215. 101.
DEPRECIABLE ASSETS	2151	2 18 19	2151.	2151	7151	N N	
TARTORNAL COAT RANGAGES	, ,	்	ó	0	ó	o	ó
Ö	2151.	2151.	2151,	2151.	2151.	2151.	2151.
TOTAL FACTORY COST	-13125.	-13125.	-13125.	-13125.	-13125,	-13125.	-13125
	711771111111111111111111111111111111111	777					
EXPENSES	0	ó	0	O	Ó	0	0
GENERAL & ADM. EXPENSES		6	o o	0.	o e	60	60
OTHER EXPENSES GENERAL & ADMI. EXPENSES	00	66	0	50	9 0	Ö	ii
INTEREST ON MIDDLE TERM DEBT	00	00		00	66	00	66
INTEREST ON SHORT TERM DEBT	0	0		0	9.	0	0.
						* 1	1
OTHER NON-OPERATING EXPENSES	Ó	0	0	0	0	0	ő
4 -	-13125.	-13125. -1,1557	-13125.	-13125.	-13125. -1,1557	-13125. -1,1557	-13125. -1.1557

	ANTE **	POWER PL	ANT PROJE	PPSA POWER PLANT PROJECT IN POLAND ***	AND ***				PAGE	-
	ž	WORKING CAPITAL STATEMENTS INCREMENTAL CASE (8P/WT/G) -	CASE (8P	STATEMENTS (SP/WT/G) -	3	(USD 1000)				
VEAR	1997	1998	999	2000	2001	2002	2003	2004	2005	2006
CURRENT ASSETS	o	ó	ó	o	ö	0	ó	o	0	ö
ACCOUNT RECEIVABLE	O	Ö	0		Ö	o	ò	0	o	Ö
INVENTORIES	ó	ö	ò	.	ó	0	ö	0	0	0
PRODUCT INVENTORY MATERIAL INVENTORY	00	00	0.0	00	00	00	οö	66	66	. i
	o	o l	.	0	0	ó	Ö	ő	Ö	o l
CURRENT LIABILITIES W/O DEST	0	Ö	691	-69.	-69.	69-	69-	-69	.69-	-69,
ACCOUNT PAYABLE	0	o l	.69.	9 (. 69	-69	-69.	-69.	-69.	-69.
CHEMICALS	00	ဝဝ	. o	90		. o	69-	-69	69	9
PERMANENT WORKING CAPITAL	0 1	ö	69	69	69	. 69	69	69	69.	69.
CHANGE IN WORKING CAPITAL	0	ó	69.	0	ó	9	ó	0		0

	Wda ***	PPSA POWER PLANT PROJECT IN F WORKING CAPITAL STATEMEN - INCREMENTAL CASE (BP/WT/G)	ANT PROJE	*** PPSA POWER PLANT PROJECT IN POLAND *** WORKING CAPITAL STATEMENTS - INCREMENTAL CASE (BP/WI/G) -	NA ***	(000; asn)	
YEAR	2007	2008	2009	2010	1102	2012	2013
CURRENT ASSETS	ó	o '	ó	0	o	Ö	ö
EIVABLE	o	0	ö	ò	0	Ö	0
INVENTORIES	0		0	ó	0	o	0
PRODUCT INVENTORY MATERIAL INVENTORY	00	00	00	00	00	00	00
CASH IN HAND	0	9	0	. !	0	0	0
CURRENT LIABILITIES W/O DEBT	.69	69	69-		691	.69-	691
ACCOUNT PAYABLE	.69	-69	Ø	60	- 69	-69	-69
CHEMICALS	60	.69	9 O	99 0	-69.	φ Ó	60
PERMANENT WORKING CAPITAL	69	69.	69	69.	69	69,	9 1
CHANGE IN WORKING CAPITAL	ö	ó	O	0	0	O	0
	* 1 7 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					

	∀Sdd ***	POWER PI	ANT PROUE	*** PPSA POWER PLANT PROJECT IN POLAND *** INCOME STATEMENTS		6			PAGE	
0 × 10	S 1001		1999	2000		2002	2003	2004	2005	2006
TIPAK	, 1)	}	}			•	}	
OPERATING INCOME	ં	ó	6	ó		Ö	ó	o	Ö	O
TOTAL SALES REVENUE		0.	0	0	0	0	0		0	Ġ
COST OF SALES	ó	ó	-12394.	-12394.	-12394.	-12394.	-12394.	-13125	-13125.	-13125.
VARIABLE COST DIRECT FIXED COST DEPRECIATION AND AMORTIZATION INC. IN PRODUCT INVENTORY	0000	0000	15276. 2882. 0.	-15276. 2882.	-15276. 2882. 0.	15276. 2882. 0.	-15276. 2882. 0.	-15276. 0. 2151.	-15276, 2152.	-15276. 2151. 2151.
GROSS PROFIT ON SALES	0	ó	12394.	12394.	12394.	12394.	:2394.	13125.	13125.	13125.
SALES EXPENSES GENERAL & ADMI. EXPENSES	00	00	00	00	00	00		00	00	00
OPERATING PROFIT	0	0	12394.	12394.	12394.	12394.	12394.	13125.	13125.	13125.
NON-OPERATING EXPENSES	0	0	2155	1724.	1293.	862,	431.	o .	o l	0
INTEREST ON MIDDLE TERM DEBT INTEREST ON SHORT TERM DEBT OTHER NON-OPERATING EXPENSES	000	000	2158.	1724.	1293	\$62. 0.	4831. 00.	000	806	000
NET PROFIT OR (LOSS) BEFORE TAX	ó	0	10240.	10671.	11101.	11532.	11963.	13125.	13125.	13125.
INCOME TAX	o	ö	4096	4268.	4441.	4613.	4785.	5250.	5250.	5250.
₹	Ö	Ó	6144.	6402.	6661,	6919.	7178.	7875,	7875.	7875.
DIVIDENDS	ó	ó	307.	320.	999.	346.	359.	394.	394,	394.
RETAINED EARNINGS	9	0	8837.	6082.	6325.	6573.	6819.	7481	7481.	7481.
								 	:	

	78dd ***	*** PPSA POWER PLANT PROJECT IN POLAND *** INCOME STATEMENTS - INCREMENTAL CASE (8P/#T/G) -	ER PLANT PROJECT : INCOME STATEMENTS ENTAL CASE (BP/WT)	OT IN POL	AND ***	(0001 0\$0)	
YEAR	2007	2008	2009	2010	2011	2012	2013
OPERATING INCOME	ö	o	Ö	0	0	0	o
TOTAL SALES REVENUE	0	0.	0	o o	6	0	o
COST OF SALES	-13125.	-13125.	-131.25.	-13125.	-13125.	-13125.	-13125.
VARIABLE COST	-15276.	-15276.	-15276.	-15276.	-15276.	-15276.	-15276.
DIRECT FIXED COST DEPRECIATION AND AMORTIZATION INC. IN PRODUCT INVENTORY	2151.	215 0.0	215.0	2151.	2 5 5 6	2151.	2151.
GROSS PROFIT ON SALES	13125.	13125.	13125.	13125.	13125.	13125.	13125.
SALES EXPENSES GENERAL & ADMI. EXPENSES	00	00	00	00	00	00	00
OPERATING PROFIT	13125.	13125.	13125.	13125.	13125.	13125.	13125.
NON-OPERATING EXPENSES	ö	ó	o	ò	0	o	0 1
INTEREST ON MIDDLE TERM DEBT	000	000	000	ە ق	000	000	600
OTHER NON-OPERATING EXPENSES NET PROFIT OR (LOSS) BEFORE TAX	13125.	13125.	13125.	13125.	13125.	13125.	13125.
INCOME: TAX	5250	5250.	5250.	5250.	5250.	5250.	5250.
NET PROFIT OR (LOSS) AFTER TAX	7875.	7875.	7875.	7875.	7875.	7875.	7875.
DIVIDENDS	394.	394.	394.	394.	394.	394.	394.
RETAINED EARNINGS	7481.	7481	7481	7481.	7481.	7481.	7481.
	1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1			; ; ; ;		

	C Trans	0	91 COO THA		*** 024 100				PAGE	
		FUNDS FLOW	in a	STATEMENTS SE (BP/WT/G) -		(0001 050)				
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
		-					٠			
SOURCE OF FUNDS	13790.	20685.	11161.	11008.	10836.	10663	10491.	10026.	10026.	10026.
CASH GENERATED FROM OPERATION	0	ó	11181	11008.	10836.	10663.	10491.	10026.	10026.	10026.
POOFIT AST TAX, BER INT	0	6	8298.	8126.	7954.	7781.	7609.	7875.	7875,	7875.
DEPRECIATION AND AMORTIZATION FINANCIAL RESOURCES	13790.	20685.	2882.	2882.	2882.	2582.	2882.	2151.	2151.	2151.
ALANDE CAPITAL	6895.	10342.	0	ö	ö	o	Ö		ò	0.
MIDDLE TERM DEBT	6695	10342.	0	o e	<i>i</i> (ö	o e	ö	o o	66
SHORT TERM DEBT		6	ó	6	6	o	6	ö	o	·
USES OF FUNDS	14369.	21553.	5978	\$491.	5073.	4655.	4237.	394.	394	394.
FIXED CAPITAL EXPENDITURE	14369	21553.	0.	0	0	o	0	0	0	0
	; c	0	0	6	6	0	0	.0	ó	o.
DEPRECIABLE FIXED ASSETS	13552.	20328.	600	6	66	00	o c	o 0	စ် ဝ	6 6
INTEREST DURING CONSTRUCTION		1443.	ò	ó	ó	s	÷	5	;	•
CHANGE IN WORKING CAPITAL	6	0	69	ó	0	O	0	ö	ó	
DEBT SERVICES			5602.	5171	4740.	4309.	3878.	ö	0	
REPAYMENT OF MIDOLE TERM DEBT	. 0	. 0	3447.	3447.	3447.	3447.	3447.	0.	ó	ö
REPAYMENT OF SHORT TERM DEBT	0	0	0	0	Ġ	ė	o ;	o c	o c	o c
INTEREST ON MIDDLE TERM DEBT		<i>i o</i>	, o	1724.	1283.	0 0	?	; ;	50	6
DIVIDENDS	ó	0	307.	320.	333.	346.	359.	394.	394.	394.
; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	1 † † † † 	; { { { { { { { { { { { { { { { { { { {	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1						
CASH INCREASE OR (DECREASE)	-579.	-868.	5202,	5517.	5763.	6008.	6254.	9633.	9633.	9633.
BEGINNING CASH BALANCE ENDING CASH BALANCE	-579.	-579.	3755.	3755.	9272.	15034.	21042.	27296.	36929. 46561.	46561. 56194.

			. !				
	Sold #	*** PPSA POWER PLANT PROJECT IN FUNDS FLOW STATEMENTS - INCREMENTAL CASE (BP/WT/G)	ANT PROJE	PROJECT IN POLANO *** STATEMENTS SE (BP/WT/G) -		(OSD 1000)	
YEAR	2007	2008	2009	2010	2011	2012	2013
SOURCE OF FUNDS	10026.	10026.	10026.	10026.	10026	19026,	10026.
CASH GENERATED FROM OPERATION	10026.	10026.	10026.	10026.	10026.	10026.	10026.
	7875.	7875.	7875.	7878.	7875.	7875.	7875,
DEPRECIATION AND AMORTIZATION FINANCIAL RESOURCES	23.51		(1) (0)	0	0		O
SHARE CAPITAL	0	6.		o	66	9.0	o c
MIDDLE TERM DEBT Short Term Debt		5 6			6	6	Ö,
USES OF FUNDS	394.	394	394.	400	394.	394	394.
FIXED CAPITAL EXPENDITURE	0	0	0	0	0	o	O
NON-DEPRECIABLE ASSETS DEPRECIABLE FIXED ASSETS INTEREST DURING CONSTRUCTION	000	000	000	000	000	666	666
CHANGE IN WORKING CAPITAL	. 0	ō	0	o	ö	O	O
DEST SERVICES	0	0	0		ó	ö	O
REPAYMENT OF MIDDLE TERM DEBT	é	00	00	00	00	66	0,0
ON MIDDLE	00	666	00	00	00	00	00
OTVIDENDS	994.	394.	394.	394,	496	00 00 00 00 00 00 00 00 00 00 00 00 00	400
CASH INCREASE)	66 66 66	66.00 00	9633	9633.	9633	9633.	9633
BEGINNING CASH BALANCE ENDING CASH BALANCE	56194.	65826.	75459.	85091. 94724.	94724.	104356.	113989

	VSdd ***	POWER PL	ANT PROJE	CT IN POL	POLAND ***	٠			PAGE	•
	2 1	- INCREMENTAL CASE (BP/WT/G)	ANCE SHEE CASE (BP	- (0/LM/	3	(0001 050)		. '		
YEAR	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
ASSETS	13790	34474.	36795.	39429.	42310.	45436.	48807.	56289.	63770.	71252.
CURRENT ASSETS	Ö	o	ó	ö	o .	Ö	ö	0	Ö	ó
CASH IN MAND ACCOUNT RECEIVABLE INVENTORIES	000	900	000	000	666	666	000		666	000
ACC. EXCESS CASH	.579.	-1447.	3755	9272.	15034.	21042.	27296.	36929.	46561.	56194,
NET FIXED ASSETS	14369.	35922.	33040.	30158.	27275.	24393.	21511.	19360.	17209.	15058.
Z	14369.	35922.	35922.	35922.	35922.	35922.	35922.	35922.	35922.	35922.
NON-DEPR. ASSETS DEPRECIABLE ASSETS AMORTIZATION	13552. 817.	33880. 2042.	33880. 2042.	33880. 2042.	33880. 2042.	33880, 2042,	33880. 2042.	0. 33880. 2042.	33880. 2042.	33880. 2042.
LESS: ACC. DEPRECIATION	0	ó	2882	5754.	8646.	11529	14411.	16562.	18713.	20864.
LLABILITIES	66.95	17237.	13721.	10273,	6826.	99.49	-69.	-69.	-69.	-69.
CURRENT LIABILITIES	1	4	3379.	3379.	3379.	3379.	69	5 i	61 I	. I
ACCOUNT PAYABLE CURRENT PORTION OF M/T DEST SWORT TERM DEST		3447.	3447. 0.	-69. 3447.	3447.	3447. 0.	800	900	69 O	g 0 0
FIXED LIABILITIES		13790.	10342.		3447.		6			0
MIDDLE TERM DEST BALANCE OTHER FIXED LIABILITIES		13790.	10342.	6895. 0	3447.	o o		00	66	00
STOCK HOLDERS EQUITY	6895.	17237.	23074.	29156.	35484.	42057.	48876.	56358.	63839.	71320.
SHARE CAPITAL ACC. RETAINED EARNINGS	6895	17237.	17237.	17237.	17237.	17237.	17237. 31639.	17237. 39120.	17237. 46602.	17237. 54083.
LIABILITIES & S/H EQUITY	13790.	34474.	36795.	39429.	42310,	45436.	48807.	56289.	63770.	71252.

D

	***	*** PPSA POWER PLANT PROJECT IN POLAND *** SALANCE SHEET SALANCE SHEET SALANCE SHEET	ANT PROJE ANCE SHEE	CT IN POL	*** ONA.	(000)	
YEAR	2007	2008	2009	2010	2011	2012	2013
ASSETS	78733.	86214.	93696,	101177.	105658.	116140.	123621
CURRENT ASSETS	ó		o	ö	Ð	0	Ö
		1 0	1 ((d	
CANAL IN MANUELLA PROPERTY OF CANAL PROPERTY AND CANAL PROPERTY OF	o	.	o	,		ò	Ö
NVENTORIES	; o	ó	ö	ó	6	Ó	D
ACC. EXCESS CASH	65826.	75459.	85091.	94724.	104356	113989.	123621
NET FIXED ASSETS	12907.	10756.	3604.	6453.	4302.	2151.	0
INVESTMENT	35922,	35922.	35922.	35922.	35922.	35922.	35922
014000 0000 - 1100x		c	C	d	a	Ö	0
DEPRECIABLE ASSETS AMORTIZATION	33330.	33880.	33580.	33380.	33880.	2042	33880.
LESS: ACC. DEPRECIATION	23015.	25166.	27317.	29468.	31620.	33771.	35922.
L. A. B. L. J. T. E. S.	69	9	69	69 -	-69	-69.	9
	} ! ! ! ! !	!	1 4 4 5 7 7 7 7			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
CURRENT LIABILITIES	-69	-69	169	-69	69-	-69	69-
PAYABLE	169.	-69	-69.	-69	69	-69-	69-
CURRENT PORTION OF M/T DEBT SHORT TERM DEBT	00	66	66	00	00	o o	00
FIXED LIABILITIES	· 6	0	Ó	o .	0	0	o
MIDDLE TERM DEBT BALANCE OTHER FIXED LIABILITIES	00	00	00	00	00	00	0.0
STOCK HOLDERS EQUITY	78802.	86283.	93765,	101246.	108727.	116209.	123690.
SHARE CAPITAL ACC. RETAINED EARNINGS	17237.	17237.	17237. 76527.	17237.	17237.	17237. 98972.	17237. 106453.
VI 100 1/0 % 08:11 1:80:11	78733	36214	93696.	101177.	108658.	116140.	123621.

*** PPSA POWER PLANT PROJECT IN POLAND ***
PROFITABILITY AND FINANCIAL INDICATORS
- INCREMENTAL CASE (BP/WT/G) - (USD 1000)

CASH CASH CASH CAPE P. UTIL 12E CPCT	*****
CAOO CAON CANH CANH CANH CRO CRO	*****
(9)* PROFIT B.E.P. CAPACITY UTILIZE (PCT)	***
(8) L/T DEBT -TO- S/H EQUITY	9 / 91
CTS DEBT SERVICE RATIO	**************************************
(6) 000 CK RATIO	****
CURRENT RATIO	****
44) AFT TAX PROFIT -10- S/CAPITAL (PCT)	6.60 6.00 6.00
ASPR TAX PROFIT PATON PROFIT PATON PROFIT PATON PATON PATON PROFIT SYLVESTMENT	80.6 81.7
(2) FT TAX ROF1T -TO- H EQUIT (PCT)	11.0 0.5
(1) AFT TAX A PROFIT P -TO- SALES REV S/ (PCT)	VERACOT ************************************
Y RA R	AVERAGET###

(AVERAGE1): SUM OF ANNUAL FIGURES OF PERCENTAGE AND RATIO IS DIVIDED BY NO. OF YEARS(SIMPLE AVERAGE)
(AVERAGE2): AVERAGE FIGURES ARE CALCULATED BY ACTUAL VALUES ACCUMULATED OVER THE PROJECT LIFE(WEIGHTED AVERAGE)
* NOTE FOR (9)(10)(11)
WHEN THERE ARE TWO OR WORE PRODUCTS. AND DURING THE YEARS WHEN ALL OF PRODUCTS ARE NOT PRODUCED AT THE SAME RATE
OF CAPACITY UTILIZATION, ABOVE BREAK-EVEN-POINTS CANNOT GIVE CORRECT FIGURES.

*** PPSA POWER PLANT PROJECT IN POLAND ***

YEAR

			RETURN ON INVESTMENT		MENT (IN 194 FIXED CASE (BP/WT/G) -	PR C	E) (USD 1000)	(000		
FIXED CAPITAL EXPEND.	CHANGE IN WORKING CAPITAL	(1) GROSS CAPITAL EXPENDTR	OPERATING PROFIT	DEPRECIATN (2)	(2) GROSS CASH IN-FLOW	6	NCOME TAX	(4) BFR-TAX (5) NET IN-FLOW NET (2)*(1) (4	(5) AFT-TAX NET !N-FLOW (4)-(3)	
1	C	44.0	c	c	Ó		ó	-13552,	-13552.	
10000	· «	- 0000 P	, c	ć			ö	-20328.	-20328.	
20350	į		. 2504.	2882	15276		4096.	15207.	11112.	
o e	0	n c	1000	2000	15276		4268.	15276.	11008.	
	ċ		10004	2882	15276.		444	15276.	10836.	
·	ò	•	12304	2882	15276.		4613.	15276.	10663.	
	•	, c	1000	0880	15276		4785.	15276.	10491.	
j (<i>.</i>	Š		2181	15276.		5250.	15276.	10026.	
ó c	<i>.</i>	; c	19105	100	15276		5250.	15276.	10026.	
	jc	; c	19125		15276.		5250.	15276.	10026.	
•	j	; c	19108	216	15276.		5250.	15276.	10026.	
	Š		13120	25.53	15276.		5250.	15276.	10026.	
	i	<i>,</i> c	19105	2151	15276.		5250.	15276,	10026.	
	; c	Š (15276		5250	15276	10026.	
.		<i>;</i> c	12101		15276.		5250.	15276,	10026	
5 0	÷c	jc	19.00	2151.	5276		5250.	15276,	10026	
į	9	98	13125.	2151.	15276.		5250.	15345.	10095.	
				*		•		, , , , , , , , , , , , , , , , , , , ,		
33880.	0	33880.	193223.	35922.	229145.		74704.	195265.	120561.	

ON (4) BFR-TAX NET IN-FLOW (2)-(1) 38,71 PER CENT ON (5) AFT-TAX NET IN-FLOW (4)-(3) 27,59 PER CENT INTERNAL RATE OF RETURN

ANNEX 6

ENVIRONMENTAL QUALITY STANDARDS

ANNEX 6 ENVIRONMENTAL QUALITY STANDARDS

- 6.1 Environmental Quality Standards for Air Pollutants
- 6.2 Environmental Quality Standards for Air, Water and Noise Pollution

ADDEX 6-1(1) ENVIRONMENTAL QUALITY STANDARDS FOR AIR POLLUTION (COUNTRY-WISE)

I

							1.0	3-	Н		1	Siecia G
		Japan	brazii	121;	501garıa	מנו	2010	mai aysia	Africa		To the state of th	
See (100	Annual Turney	(8.0.0)		0.014	,	0.000	0.011	,	0.028	•	0.021	
Divisor	Monthly aven		,	•	,	••	1	,	•	ı	ŀ	1
חומצומנ	When ay of 1ht	8	0.13	0 8	0.02	8.0	0.07	8	8.0	0.12	0.03	0.05
العسال	hr value	1 0	• • •	1	0.17			ម	0.2	•	1	ı
****	30 min. value		1	•	ì	•	0.21	ï	ı	•	0.26	1
	10 min. value	•	1		1	•		0.19	,	1	1	1
Nr.1 moren	Annual average	(0.02~0.03)	0.053	0.053			0.027		0.1M	ı	0.021	1
NO. [DOB]	24hr av of 1h*	0.0~0.0€	1	1	0.02	0.11	0.08	•	ଷ୍	ľ	8	1
	l hr. value	(0.1~0.2)	0.17	0.10	0.05	•	0.27	0.17	0.57	0.21	0, 16	ı
Nitrogen	Annual average		1		•	•	Ö	,	i	1	: (;
Nonoxide	24hr av. of 1h*	21	,	1	ຕາ	•		1 1		1 ;		prodj
	8 hr. value	ន	on.	on .	ı	71	1	<u>م</u>	l,	<u> </u>	•	ı
(D) (D)) hr value	1	x	ĸ	4	ង	1	ន	•	ı	•	ŧ
}	30 min. value	•	•	1		(2hr val. 1)	*	1	•	•	us.	1
:. '	15 min. value	1	1	ŀ	•		1	•	-	1	•	1
Photo-	Target subs. **		Ozone :		Ozone		Ozone	Ozone			Ozone	1
2010	Anous average			1	1		*	1	1	•	1	1
Original	Whr av of 11*	ı	,	ı	0.015	•	0.015	1	9	ŀ	0.015	1
	8 hr. value	2		•	•	0,10	t	80	0.12	1	1	1
OX [Dog]	l hr. value	ဗ	8	8	80.0	•	. 1	0.10	1	0.11	1	ı
	30 min. value	ŀ)	ŧ	•	ø.0	0.05			•	0.05	•
Suspended	10cmCut	1001	XOS	% 05		-	ı	.05			1 0000	1
Particulate	Annual average		0.05	0.05			1	8.0		١	1	1
Matter	24hr av. of live	0.1	0.15	0.15	٠	1		- 0.15	1	,	1	ŀ
SPM(mg/m³)	I hr. value	0.2	•	•	•	1	1		_	,	•	ŀ
Other			TSP. smoke:	1SP, saoke	TSP	TSP, As, Pb,	TSP	TSP. Pb.	Pb.	LSP	smoke, TSP,	Total 360
Substances			•••		:	snoke		soot &	<u></u> 8		other 25	substances
			•••					Saoke	Smoke		substances	incl. TSP.
Definitions		Destrable standards	Except for a	anuna		24 hour average	NO. is stipulat-			<u>ة</u> ,	NO. 18, Sti-	RO IS
and Remarks		for maintaining	average, no	to appearance		of hourly value	ed for 30 minute			ွှဲ	Pulated for	stipulated
		protection of human		one time		for SO, and IS?.	value for MG			-ugrs	SO BIRUTE	10r 35
		health. National	in a year.			No appearance	and annual ave-			gard	value, but	minute
		policy target.	·			more than one	rage for CO, but			<u>.</u>	described.	value, but
		Evaluation for an-				time in a year	described in a			SXICO	in a column	described
		mal average is to				for 30 minute	column of hourly			သ	of hourly	in a col-
		be made excluding				value of Q, and	value and month-				value.	io um
		highest 24 or 384				As. For As,	ly average res-					hourly
		values.		. ;		reference value.	pectively.					value.

The simpler comparison cannot be made due to the difference of methodology for projecting values Notes:

The values in the parentheses in the column of Japan do not mean the environmental quality standard, but the values on which the standards are projected.
 The values of suspended particulates by high volume air sampler are indicated as Total Suspended Particulates.
 In the case that the units are different from the units being used in Japan, they are converted to the units prevalent in Japan.
 * : 24 hour average of one hour value.

Source: World Air Pollution Standards and Risk Assessment Today and Tomorrow (1993)

(COUNTRY-WISE) ADDEX 6-1(2) ENVIRONMENTAL QUALITY STANDARDS FOR AIR POLLUTION

			0.01	1		1 4 5 11	Amorn's no	Seach
		Japan	MIN	Italy Relation	Ist Standard	2.nd Standard		
		30.0	- LIV V	0 0 0 0 0	0.020	1	,	0.021
Sulfer	Annual average	(0.018)	70.0	0.011.00.021	200.4			: 1
Dioxide	Monthly avera.	1	•	1 0	1 2	(- 100	74.	2
	24hr av. of lb*	20.0	25.	0.035~0.053	 ₹ĭ.•	(ant value+)	(Sur var. 1)	21.
[0dd]*%	I hr. value	0 1	0.12	1	1	3.5	•	: :
	30 min. value	1	į	1	•	ı	•	3
	10 min. value	•	0.17	-	ı	1	•	•
Nitrozen	Amual average	(0.02~0.03)	1	0.027	0.023	0,053		1
NO. Too	Zhr av. of lh*	0.04~0.06	80.0	0.07	1		ľ	ı
}	I hr. value	(0.1~0.2)	0.21	-			ı	•
Nitrogen	Annual average		1		1	•	1	ì
Konoxide	24hr av. of 1h*	ន	1	•	i •	•	i	• •
	8 hr. value	ន	Ö	1	ග	1	2	2 1
Chee	I hr value	1	8	1	ĸ	1	20	25
	30 min. value	1	25	1:	•••	,	1	1
	15 min, value	. 1	\$4		1	1	.1	
10,000	Target cube at		enoz()	1) auozo	Ozone		Ozone
330	obcook long	**************					1	1
2000	Other or of the	•	ŧ	•	1	1	,	0.033
UX1dant	Ohn avon me		90 0~30 0	ì	1		1	
2	o m. value	900	200 C	ı	012	0.12	0,10	. 1.
	I nr. value	911	1.5	1			1.	0.12
	SU BIE VAIUE		l Ri		EV9	SV ₀		
Suspended	10mCut	TOO!	202		- W	800 800		
Particulate	Annual average	1		1	 	S :		1
Matter	2thr av. of lh*	0.1	0.01	1	0.13	ci.o	• <u>•</u>	
[48/200]W.SS	I hr. value	0.2		1	•		789	
Other			24 substances including Cd,	SP by black snoke	2	£	NOX. LOY.	HES. NOX.
Substances			Trichloroethylene	method	***		soot and	TSP, Pb,
							STOKE	SOOT & SHOKE
Definitions		Desirable standards	The values for supplying	445	The standards:	The standards which	Maximin	As 10r
and Reparks		for maintaining	guidance or backgruond data	guidelines. NO is	which include	protect welfare of	alfowable	ozone, sche-
		protection of human	for governments which plan	stipulated as a action	Sultable sale	public people iron		Solution to Lor
		health. National	to establish the standards	of one hour value and	ty allowance	hazardous effects		place 2/2
		policy target.	of risk administration. The	98% value. The former	for protecting ;	anticipated with re-		hour value
		Evaluation for an-		is described in a col-	public health.	lation to air pol-		with 4 to 6
		nual average is to	badly affect human health.	umn of annual average		lution:		hour values.
		be made excluding	Almost of above values are	and the latter in a	Stipulated not	Stipulated not exceeding more than		
		highest 2% or 98%	projected by the office of	column of daily ave-	one time in a ye	one time in a year except the stan-		
		values		rage.	dards of annual	averages.		
	-	,	المرابع عادارات عاداتها	the properties and the	90			

2. The values in the parentheses in the column of Japan do not mean the environmental quality standard, but the values on which the standards are projected.

3. The values of suspended particulates by high volume air sampler are indicated as Total Suspended Particulates.

4. In the case that the units are different from the units being used in Japan, they are converted to the units prevalent in Japan.

5. * : 24 hour average of one hour value

6. * * : Target substances Notes: 1. The simpler comparison cannot be made due to the difference of methodology for projecting values.

(COUNTRY-WISE) Annex 6-1(3) ENVIRONMENTAL QUALITY STANDARDS FOR AIR POLLUTION

			2000001	- 	Asserted	The Markon and		Canada	
· · ·		ano-fron	Pregrandin	3	37.55.55		desirable	accoptable	tolerable
Sulfer	Annual average	(8(0.0)	~		0.020	1	0.010	0.021	-
Distigo	Monthly avera	,	1	1	. '	1		1	
ALUMANU.	24hr av of the	70 0	•	0.07	•	0.03	0.05	0, 10	0.88
[acc] (X	I hr. value	0.1	0.10		ŧ	•	0.16	0.31	i
	שנוצה מיש 30	•	ı	,	•			1	t
	10 min. value	1	1	1		•	1	•	
Nitrogen	Annual average	(0.02~0.03)	1		1	1	0.032	0.053	1 4
25 (7)	2thr av. of 1h*	0.04~0.06	ı	0.10	1		1	0, 11	91.0
	I hr. value	(0.1~0.2)			0, 16	0.04	1	0.21	0.53
Nitrogen	Annual average	1	1	1	•		ı	•	1
Monoxide	24hr av. of lh*	27	1	сò	•	1	,	•	•
5	8 hr. value	ន	ន	ı	တ	1	ហ	ដ	11
[සි <u>යි</u>] ප	1 hr value		ı	,	•	t	22	: :	•
	30 min, value	ı	1	1	•	1	•	1	1
	15 ain, value		. 1	1	. 1	1	1		a de la companya de l
10,000	"aront suhe at								
								510 0	
	Allineas average		: 1		(o c	200	1
Oxigant	CHIT SV. OI LINE		1	· ·	ı	l	27.0		1
A	8 hr. value		1	1	1	1	• !	1 4	· ·
(E.S.)	I hr. value	90.0	0-10	•	0.12	ı	و. ج	83 ••••••••••••••••••••••••••••••••••••	41.0
-	30 min. value			-	•	•			•
Suspended	10mCut	100%				1			
	Annual average	1	ı	1	1	1	1	1	1
Matter	2thr av. of 1h*	0.1	ì	•	•	•		1	ı
SPM[mc/w]	1 hr. value	0.2	,		,	1	1		
Other			TSP, NOx		Pb, TSP	Benzene	13P	TSP	TSP
Substances			IC, MI,						
			N.S. Pb	_					
Definitions	en e	Desirable standards			Long term targets	2	The long term	The standards	the standards for re-
and Remarks		for maintaining					target, on	for adequately	durring immediate ac-
		protection of human			able limits. Sti-	pulated 50, 95, 98%	which the na-	protecting soil.	tions for decreasing
		health. National			pulated not ex-	values of 24 hour	tional assemb	; water, plants,	pollutants in order to
		policy target.			ceeding one time	value as for SQ.	ly will formu-	substances,	protect ambient air from
		Evaluation for an-			in a month as for	and 50, 38% values	late environ-	animals, view	getting worse to the de-
-		nual average is to			one hour value.	of one hour value as	mental protec-	range and indi-	gree which ultimately
		be made excluding			and one time in a	for NO. The both	tion policy	; vidual confort	cause serious risks on
· :		highest 2% or 98%			year as for 8 hour	values in the table	for not pol-	and welfare.	general style of life
		values.			value.	indicate 98% values.	luted area.	• •	; and/or public hygione.
				į					

Notes: 1. The simpler comparison cannot be made due to the difference of methodology for projecting values.

2. The values in the parentheses in the column of Japan do not mean the environmental quality standard, but the values on which the standards are projected.

3. The values of suspended particulates by high volume air sampler are indicated as Total Suspended Particulates.

4. In the case that the units are different from the units being used in Japan, they are converted to the units prevalent in Japan.

5. * : 24 hour average of one hour value

6. * * : Target substances

		lanar.	Kores	Kuwait	Colombia	Saudi Arabia	Thailand	Taiwan		China	
			} }					4	Class I	Class 11 (Class 111
Sulfur	Annual average	(0.018)	0.050	0.030	0.030	0.030	0.035	 080 0	1	1	•
Dioxide	Monthly avera.	•	3		1 4	1 5	1 5		ع ا د	۰۰۰ ایرا د	- E
	24hr av. of 1h*	20.0	0.15	0.00	0.12	2.50	01.0	3 K		3 2	88
[Edd] 68	I hr. value	0.1	ı		1	5 1	,	} '	· · ·	· ·	•
	30 min. value	•	•	1	: :		1	ì		:	1
	IO min. value	- 00 00	- 22	•	0.000	0.050	-	050 0	,		1
Nitrogen	Annual average	(0.02~0.03)	0.020	1 12	nen '	25.5	,	3	8	0.05	8
NO, [ppm]	Zhr av.ol lh*	0,04~0,06	י ה	s 1		0.35	0.17	0.23	0.05	0.08	0.16
	int. value	10.1-0.2)	×	1	,	1		Ī	1	· ·	
Nitrogen	Annual average		5 1	۰		i			ო	က	ഗ
Monoxide	Zanr av.oi in*	2 8	- E	9 5	2	o	11	6	1	1	,
1	onr. value	3	3	> 100		ű	44	ĸ	တ	တ	17
8	I hr value	B	1	3		3 1	: 1	} '	. 1	ı	•
	30 min. value	•	1	,	•	i ' (1	'	<i>-</i> 1	ľ	. (
	15 min. value	ſ	1	1	<u> </u>	- V		0,000	0,000	02000	Ozone
Photo-	Target subs. **		5	Ozone		Uzone		2000	2000	2	<u> </u>
chonical language	Annual average		0.020	1	,	1	1	1 5	1	1 1	1 1
Oxidant	2thr av. of 1h*	•	1	•	ı	1	'	3	:	1	1 .
	8 hr. value	•	,	,	•	\$	1 5	1 9	1 6	1 8	1 6
XO Too	l hr. value	9.0	07.0	0.08	88	0.15	66 67	0.12	3	0.080	0.100
	30 min. value		ı	E	,	-	•	, 80	•		
Suspended	10mCut	3001	5		3	1	1	3.0			
Particulate	Annual average	,	1	1	1	1	1	8 5	ı		, 1
Matter	24hr av. of 1h*	0.1	•	1	1) :) 	0.10	ı)	
SPM mg/m	I hr. value	0.2			1				(A)	00.7	NO. 160
Other			TSP, HC	TSP, H.S. NI,	TSP	ISP. F.	<u> </u>	ž 4	XX, 13.	NOX, IN	NG. 15
Substances				CIz. NMIC, Pb				2		•••	
Definitions		Desirable standards	Stipulated	Stipulated not to		Stipulated not			Arca for	Arca	Arca for
and Remarks		for maintaining	not to ap-	appear more than		to appear nore			Sight-	ior	industries
		protection of human	pear more	one time in a year		than one time in			Secring	habita-	and train
		health. National	than 3	as for 24 hour		a year as for CO			and his-	tion	Fic con-
		policy target.	times in a	value of SO ₂ and		and ozone, and			201.03	•••	gestion
		Evaluation for an-	year ex-	TSP, and not more		not more than 2					
		nual average is to	cept annu-	than 2 times in 30		times in a month					
	-	be made excluding	al monthly	days at any place		as for has and					
		highest 2% or 98%	average	as for one hour		24 hour value of	· .				
		values.	values.	value of My.		302.					

2. The values in the parentheses in the column of Japan do not mean the environmental quality standard, but the values on which the standards are projected. 3. The values of suspended particulates by high volume air sampler are indicated as Total Suspended Particulates. . The simpler comparison cannot be made due to the difference of methodology for projecting values.

4. In the case that the units are different from the units being used in Japan, they are converted to the units prevalent in Japan. 5. * : 24 hour average of one hour value 6. * * : Target substances

(COUNTRY-WISE) Annex 6-1(5) ENVIRONMENTAL QUALITY STANDARDS FOR AIR POLLUTION

		Japan	Germany	Turkey	New Zealand	llungry	The	Finland
							rni i ippines	
Sul fur	Annual average	(0.018)	0.050	0.02!	(3mo val. ♣)	0.0%	1	0.014
Dioxide	Monthly avera.	ı	1	1	0.02	•	*	1
	2thr av.of ih*	80.0	ı	ુ. છ	2	0.05	0.13	0.01
SO, [ppm]	1 hr. value		ţ	0.16	•	1.	0.30	0.17
1	30 min, value	i	0.15	ı	,	0.17	١	
	10 min. value	•	1	1	•	•	•	1
Nitrogen	Annual average	$(0.02\sim0.03)$	0.00	1	1	0.037	•	
(S) (Spail)	24hr av. of 1h*	0.0~0.00	(30mi value4)	•	0.05	0.05	ı	0.08
	1 hr. value	(0.1~0.2)	0,11	-		0.05	0.10	0.16
Nitrogen	Annual average	1	ı	8		2		1
Monoxide	24hr av. of 1h*	01	•	တ	ı	V	,	•
	8 hr. value	ຂ	6	1	υ'n	•	ဇာ	တ
(G. [ppg]	1 hr value	ļ	প্ত	ı	ន	•	77	ន
	30 min. value	•	1	I.	•	Ø	•	ŧ
	15 min. value			ı		:	1	•
Photo-	Target subs. **		Ozone	Ozone		Ozone		
Chains!	Annual average						l,	1
Oxidant	24hr av.of lh*		1	ì		0.050		1
	8 hr. value	1	•	1	e.0	1	1	ì
S (Spa)	I hr. value	90.0	1	0.12	8.0		0.08	1
•	30 min. value					0.10	-	2
Suspended	10umCut	100%	%05	1	1	1		
Particulate	Annual average						ì	1
Matter	24hr av. of 1h*	0.1	(30mi value4)	;	ı	ı	1	1
SPA[BS/B]	I hr. value	0.2	0.2		1	1	ŧ .	•
Other			TSP, NO, Pb	snoke	snoke, TSP,	TSP, smoke	1SP	TSP, Sulfuric acid
Substances		1.			inorganic Po, F., NMHC, H.S			
Definitions		Desirable standards	One of key approval condi-			Stipulated 30 min-		Projected 24 hour
and Remarks		for maintaining	tions for installation and			ute value as for		values by 35% annual value, and one bour
		health. National	facilities. Neighboring			average value as		value by 99% 30 day
			inhabitant cannot request			for Co, which are		value except CO. As
	******************************	Evaluation for an-	prohibition of operation			described in a		for SO, separate
		nual average is to	for the once approved fa-			column of one hour	•	standards are stipu-
		be made excluding				value and monthly		lated except towns
	· ·	highest 2% or 30%	of environmental pollutan-			average value.		and big villages.
T () January	he simples compa	ricen connot be made d	The enmoter connection connection and the to the difference of methods for near restruction to line	, and op.	27 201 1001 000	3011		

Notes: 1. The simpler comparison cannot be made due to the difference of methodology for projecting values.

2. The values in the parentheses in the column of Japan do not mean the environmental quality standard, but the values on which the standards are projected.

3. The values of suspended particulates by high volume air sampler are indicated as Total Suspended Particulates.

4. In the case that the units are different from the units being used in Japan, they are converted to the units prevalent in Japan.

5. * : 24 hour average of one hour value

6. * * : Target substances

Innex 6-2 ENVIRONMENTAL QUALITY STANDARDS FOR AIR, WATER AND NOISE POLLUTION

1.1 Environmental quality standards regarding air pollution

Substance	Sulfur dioxide	Carbon monoxide	Suspended Particulate Matter	Photo-chemical oxidant
Environmental conditions	Daily average of hourly values shall be below 0.04 ppm, and one hour value shall be below 0.1 ppm.	Daily average of hourly values shall be below 10 ppm, and eight-hour mean value shall be below 20 ppm.	Daily average of hourly values shall be below 0.10 mg/m ³ , and one hour value shall be below 0.20 mg/m ³ .	Hourly value shall be below 0.06 ppm.
Measuring methods	Conductometric method	Non-dispersive infrared analyzer method	Weight concentration measuring methods based on filtration collection or light scattering method, or Piezo-electric microbalance method or β-ray attenuation method yielding values having a linear relation with the values of the above method.	Absorptiometry using neutral potassium iodide solution, or coulometry.

Notes: 1. Suspended Particulate Matter means airborne particles of 10 microns or less in diameter.

2. Photo-chemical oxidants are oxidizing substances such as ozone and peroxyacetyl nitrate produced by photo-chemical reactions (only those capable of isolating iodine from neutral potassium iodide, excluding nitrogen dioxide).

1.2 Environmental quality standard for nitrogen dioxide

- (1) The environmental quality standard for nitrogen dioxide shall be as follows:

 The daily average of hourly values shall be within or lower than the range between 0.04 ppm and 0.06 ppm.
- (2) The environmental quality standard mentioned in (1). shall be based on the measured value obtained by the absorptiometry using Saltzman reagent at a place where it is considered to be able to ascertain accurately the state of air pollution by nitrogen dioxide.
- (3) The environmental quality standard mentioned in (1). shall not apply to exclusive industrial districts, roads or other regions or places where the general public do not usually live.

2.1 Environmental quality standards regarding water pollution

2.1.1 Environmental quality standards regarding the protection of the human health (The Environment Agency Notification No. 16, 1993)

Item	Standard value
Cadmium	0.01 mg/l or less
Total cyanide	Not detectable
Lead	0.01 mg/l or less
Chromium (hexavalent)	0.05 mg/l or less
Arsenic	0.01 mg/l or less
Total mercury	0.0005 mg/l or less
Alkyl mercury	Not detectable
PCB	Not detectable
Trichloroethylene	0.03 mg/l or less
Tetrachloroethylene	0.01 mg/i or less
Carbon tetrachloride	0.002 mg/l or less
Dichloromethane.	0.02 mg/l or less
1, 2-Dichloroethane	0.004 mg/l or less
1, 1, 1-Trichloroethane	1 mg/l or less
1, 1, 2-Trichloroethane	0.006 mg/l or less
1, 1-Dichloroethylene	0.02 mg/l or less
cis-1, 2-Dichtoroethylene	0.04 mg/l or less
1, 3-Dichloropropene (D-D)	0.002 mg/l or less
Thiram (TMTD)	0.006 mg/l or less
(bis (dimethylthiocarbamoyl) disulfide)	÷
Simazine (CAT)	0.003 mg/l or less
(2-chloro-4, 6 bis (ethylamino)-1, 3, 5-triazine)	
Thiobencarb	0.02 mg/l or less
(S-p-chlorobenzyl diethylthiocarbamate)	
Benzene	0.01 mg/l or less
Selenium	0.01 mg/l or less

Environmental quality standards (the Environment Agency Notification No. 59, 1971) was amended by the notification No. 16 on March 8, 1993 which will be followed by the establishment of waste effluent standards soon to be revised.

2.1.2 Environmental quality standards regarding the protection of the human health (The Environment Agency Notification No. 59, 1971)

Item	Standard value ¹⁾
Cadmium	0.01 mg/l or less
Cyanide	Not detectable
Organic phosphorus ²⁾	Not detectable
Lead	0.1 mg/l or less
Chromium (hexavalent)	0.05 mg/l or less
Arsenic	0.05 mg/l or less
Total mercury	0.0005 mg/l or less
Alkyl mercury	Not detectable
PCB	Not détéctable

- Maximum values. But with regard to Total mercury, standard value is based on the yearly average value.
- Organic phoshorus includes Parathion, Methyl Parathion, Methyl Demeton and EPN.
- "Not detectable" means that the substance is below the level detectable by the specified method.
- 4. The standard for Total mercury is 0.001 mg/l or less in case it is obvious that pollution in rivers is caused by natural factors.

2.2 Environmental quality standards regarding the prevention of the living environ-

2.2.1 Rivers (excluding lakes)

	Item	Ī .		Standard vali	Jes ¹	at the second
Category	Purposes of water use	рН	Biochemical Oxygen Demand (BOD)	Suspended Solids (SS)	Dissolved Oxygen (DO)	Number of Coliform Groups
AA	Water supply class 1, conservation of natural environment and uses listed in A-E.	6.5 - 8.5	I mg/I or less	25 mg/l or less	7.5 mg/l or more	50 MPN/100ml or less
A	Water supply class 2, Fishery class 1, bathing and uses listed in B-E.	6.5 - 8.5	2 mg/l or less	25 mg/l or less	7.5 mg/l or more	1.000 MPN/100ml or less
В	Water supply class 3, Fishery class 2, and uses listed in C-B.	6.5 - 8.5	3 mg/l or less	25 mg/l or less	5 mg/l or more	5,000 MPN/100ml or less
С	Fishery class 3, Industrial water class 1, and uses listed in D.E.	6.5 - 8.5	5 mg/l or less	50 mg/l or less	5 mg/l or more	
D	Industrial water class 2, Agricultural water, and uses listed in E.	6.0 - 8.5	8 mgA or less	100 mg/l or less	2 mg/l or more	
E	Industrial water class 3, Agricultural water, conservation of the environment.	6.0 - 8.5	10 mg/l or less	Floating matter such as garbage should not be observed.	2 mg/l or more	

Notes: 1. The standard value is based on the daily average value. The same applies to the standard values of lakes and coastal waters.

2. At the intake for agriculture, pil shall be between 6.0 and 7.5, and dissolved oxygen shall not be less than 5 ppm. The same applies to the standard values of takes.

3. Conservation of natural environment: Conservation of scenic spots and other natural resources.

4. Water supply class 1:

Water supply class 2: Water supply class 3:

5. Fishery class 1:

Fishery class 2:

Fishery class 3:

6. Industrial water class 1:

Industrial water class 2: Industrial water class 3:

7. Conservation of the environment:

Water treated by simple cleaning operation, such as filteration.

Water treated by normal cleaning operation, such as sedimentation and filteration. Water treated through a highly sophisticated cleaning operation including pretreatment.

For aquatic life, such as Yamame (Oncorhynchus masou) and Japanese char (Salvetinus pluvius) inhabiting oligosaprobic water, and those of Fishery class 2 and 3.

For aquatic life, such as fish of the salmon family (Salmonidae) and sweetfish (Plecoglossus

altivelis) inhabiting oligosaprobic water, and those of the Fishery class 3. For aquatic life, such as carp (Cyponus carpio) and crucian carp (Carassius auratus)

inhabiting, B-mesosaprobic water. Water given normal cleaning treatment, such as sedimentation.

Water given sophisticated treatment by chemicals. Water given special cleaning treatment.

Up to the limits at which no unpleasantness is caused to people in their daily life including a

walk by the riverside, etc.

2.2.2 Lakes (natural lakes, reservoirs, marshes and artificial lakes with more than 10 million cubic meters of water)

i)

	ltem			Standard valu	ics ¹	
Category	Purposes of water use	pΗ	Chemical Oxygen Demand (COD)	Suspended Solids (SS)	Dissolved Oxygen (DO)	Number of Coliform Groups
AA	Water supply class 1, Fishery class 1, conservation of natural environment and uses listed in A-C.	6.5 - 8.5	1 mgA or less	1 mg/l or less	7.5 mg/l or more	50 MPN/100ml or less
A	Water supply class 2 and 3, Fishery class 2, bathing and uses listed in B - C.	6.5 - 8.5	3 mg/l or less	5 mg/t or less	7.5 mg/l or more	1,000 MPN/100ml or less
В	Fishery class 3, Industrial water class 1, Agricultural water and uses listed in C.	6.5 - 8.5	5 mg/l or less	15 mg∕t or less	5 mg/l or more	
С	Industrial water class 3, conservation of the environment.	6.0 - 8.5	8 mg/l or less	Floating matter such as garbage should not be observed.	2 mg/l or more	

Notes: 1. With regard to Fishery class 1, 2, and 3, the standard value for Suspended Solids shall not be applied for the time being.

2. See notes for rivers.

3. Fishery class 1:

For aquatic life, such as kokanee salmon (Oncorhynchus nerka) inhabiting oligosaprobic lake

type waters, and for those of fishery class 2 and 3.

Fishery class 2:

For aquatic life, such as fish of the salmon group (Salmonidae) and sweetfish (Plecoglossus altivelis) inhabiting oligosaprobic lake type waters, and for those of the Fishery class 3. For those aquatic lives, such as carp (Cyprinus carpio) and crucian carp (Carassius auratus)

Fishery class 3:

inhabiting eutrophic lake type waters.

4. Industrial water class 1: Industrial water class 2:

Water given normal treatment such as sedimentation.
Water given sophisticated treatment such as chemical injection or special treatment.

5. Conservation of the environment:

Up to the limit at which no unpleasantness is caused to the people in their daily lives including

a walk along the shore.

ii)

	hem	Standa	d values
Category	Purposes of water use	Total nitrogen ²⁰	Total phosphorus ¹⁹
	Conservation of natural environment and uses listed in II-V.	0.1 mg/l or less	0.005 mg/l or less
13 .	Water supply classes 1, 2 and 3 (excluding special types) Fishery class 1, bathing and uses listed in III-V.	0.2 mg/l or less	0.01 mg/l or less
111	Water supply class 3 (special types), and uses listed in III-V.	0.4 mg/l or less	0.03 mg/lorless
ΙV	Fishery class 2, and uses listed in V.	0.6 mg/l or less	0.05 mg/l or less
V	Fishery class 3, Industrial water, Agricultural water, conservation of the living environment.	1 mg/l or less	0.1 mg/l or less

Notes: 1. Standard values are set in terms of annual averages.

2. Standard values for Total nitrogen are applicable to lakes and reservoirs where nitrogen is a causal factor of the growth of phytoplankton.

3. Standard values for Total phosphorus are not applicable to agricultural water uses.

4. Conservation of natural environment: Conservation of scenic points and other natural resources.

5. Water supply class 1: Water supply class 2: Water supply class 3: Water treated by simple cleaning operation, such as filteration.

Water treated by normal cleaning operation, such as sedimentation and filteration.

Water treated through a highly sophisticated cleaning operation including pretreatment.

("special types" mean water treatments by special cleaning operation in which removal of

smelling substances is possible).

For aquatic life, such as fish of the salmon group (Salmonidae) and sweetlish (Plecoglossus

altivelis), and for those of Fishery class 2 and 3.

6. Fishery class 1: Fishery class 2: Fishery class 3:

7. Conservation of the environment:

For aquatic life, such as smelt and those of Fishery class 3.

For aquatic life, such as carp (Cypninus carpio) and crucian carp (Carassius auratus). Up to the limits at which no unpleasantness is caused to the people in their daily lives

including a walk along the shore.

2.2.3 Coastal waters

	liem	Standard values!				
Category	Purposes of water use	Hq	Chemical Oxygen Demand (COD)	Dissolved Oxygen (DO)	Number of Coliform Groups	N-hexane extracts
A	Fishery class 1, bathing, conservation of natural environment, and uses listed in B-C.	7.8 - 8.3	2 mg/l or less	7.5 mg/l or more	1,000 NPN/100ml or less	Not detectable
В	Fishery class 2, Industrial water and uses listed in C.	7.8 - 8.3	3 mg/l or less	5 mg/l or more		Not detectable
, C	Conservation of the environment	7.0 - 8.3	8 mg/l or less	2 mg/l or more	•	•

Notes: 1. With regard to the water quality of fishery, class 1 for cultivation of cysters, number of coliform groups shall be less than 70 MPN/100ml.

2. Conservation of natural environment: Conservation of scenic points and other natural resources.

For aquatic life, such as red sea bream (Chrysophrys major), yellow tail (Seriola 3. Fishery class 1:

quinqueradiata), seaweed (Undaria pinnatifida) and for those of Fishery class 2.

For aquatic life, such as gray mullet (Mugil cephalus), faver (Porphyra tenera), etc. Fishery class 2: Up to the limits at which no unpleasantness is caused to the people in their daily lives 4. Conservation of the environment:

including a walk along the shore.

3.1 Environmental quality standards for noise

Environmental quality standard values for each type of area and time category shall be as listed in the following table.

Area	Time category			Apolicable areas
ιγρε	Day time	Moming, evening	Night time	representa mens
AA A	45 dB(A) 50 dB(A)	40 dB(A) 45 dB(A)	35 dB(A) 40 dB(A)	Areas designated for each classification of land areas by a prefectural governor based on the provision of Article 2 of the Cabinet Order relating to the Delegation of Authority to
В	60 dB(A)	55 dB(A)	50 dB(A)	Designated Water and Land Areas for Environmental Quality Standards (Cabinet Order No. 159, 1971).

Notes: 1. Areas coming within the AA category are areas where quiet is specially required such as where there is a concentration of convalescent facilities.

2. Areas coming within the A category areas which are used mainly for residential purpose.

3. Areas coming within the B category are areas where are used considerably for residential purposes and which are also used for commercial and industrial purposes.

However, with regard to environmental quality standards for the areas of the following table (hereinafter referred to as "areas facing roads") the values hereinbelow shall be applied instead of the values in the table above.

Ann astanta		Time category		
Area category	Day time	Moming, evening	Night time	
"A" areas facing roads with 2 lanes.	55 dB(A)	50 dB(A)	45 dB(A)	
"A" areas facing roads with more than 2 lanes.	60 dB(A)	55 dB(A)	50 dB(A)	
"B" areas facing roads with not more than 2 lanes.	65 dB(A)	60 dB(A)	55 dB(A)	
"B" areas facing roads with more than 2 lanes.	65 dB(A)	65 dB(A)	60 dB(A)	

Notes: "Lane" refers to a longitudinal strip of road with uniform width requisite to allow a single line of cars to travel there along safely and without hindrance.

ANNEX 7

BOILER FEED WATER TREATMENT SYSTEM

ANNEX 7 BOILER FEED WATER TREATMENT SYSTEM

1. GENERAL

In this Annex, the description is made for the boiler feed water treatment systems (hereinafter called as deminineralizing system) which are designed by the modern technology and able to expect very high water production and regeneration efficiency.

2. DOUBLE FLUIDIZED BED TYPE DEMINERALIZING SYSTEM

The description of this system is based on the technical document of vendor concerned. It is therefore advised that the proper techniques of said vendor are included in this description. In order to readily understand this system, the description is divided into two(2) sections as follow:

- 2.1 Fluidized Bed Type Demineralizing System
- 2.2 Double Fluidized Bed Type Demineralizing System
- 2.1 Fluidized Bed Type Demineralizing System

2.1.1 Outline of system

This system is 2-bed 1-degasifier demineralizing system consisting of a cation exchanging unit, a degasifier (decarbonator), and an anion exchange unit. Raw water flows through the three units in the stated sequence, and in the process is converted to highly demineralized water as shown in Figure 1. Regeneration and washing operations are carried out in a downward flow through fixed beds, while in the demineralizing process, the flow is upward, with the lower 25 to 75% of the resin in a fluidized state and the rest forming a compact bed at the top of resin bed as shown in Figure 2.

Figure 1 FLOW SHEET OF FLUIDIZED DEMINERALIZING SYSTEM

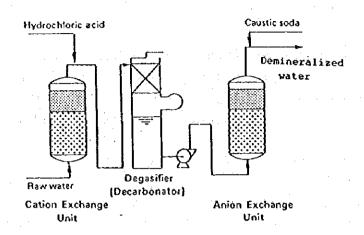
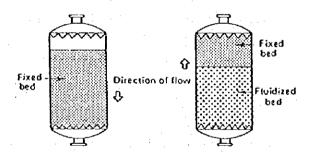


Figure 2 PRINCIPLE OF FLUIDIZED DEMINERALIZING SYSTEM



Regeneration Process Demineralizing Process

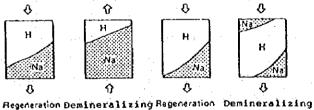
2.1.2 Functions and features of system

(1) produces high-purity demineralized water

In conventional systems with co-current regeneration, if a low level of regeneration is employed, the resin remains unregenerated in the lower portion of the bed. When the next demineralizing cycle is started, a few hydrogen ions are released in the upper portion of the bed and are exchanged for the residual ions at the bottom of the bed, thus causing some leakage. This leakage is usually sodium, since this ion is most easily exchanged for hydrogen ions. If the free mineral acidity generated

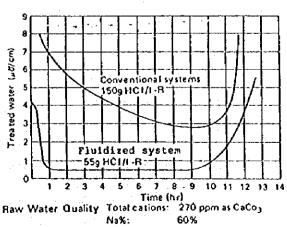
by ion exchange is high enough, magnesium and even calcium Therefore, conventional may also leak from the unit. systems require a high level of regeneration in order that the entire volume of resin may be completely regenerated. This system uses countercurrent regeneration, viz., regeneration is performed with a downflow and demineralization with an upflow. This means that, at the start of upflow service, there is virtually no leakage of cations because all of the exchange occurs at the inlet rather than the outlet end of the unit. Thus, treated water of high purity is continuously produced. This system can operate at a relatively low level of regeneration and its performance is not affected by the ion concentration or composition of the raw water.

Figure 3 STATES OF RESIN BED IN REGENERATION AND DEMINERALIZING PROCESS



Fluidized System Conventional System (Countercurrent regeneration) (Co-current regeneration)

Figure 4 PURITY TREATED WATER



HCO₃%: 16

(2) Large savings in regenerant

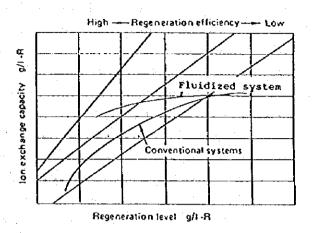
1) Low level or regeneration
Since countercurrent regeneration is used, high-purity
treated water is obtained at a relatively low level of
regeneration. Therefore, regeneration efficiency is
greatly enhanced.

Figure 5 shows the relationship between regeneration level and the capacity at the breakthrough point of an ion exchange resin. It can be seen that exchange capacity does not increase much even though the regeneration level is raised. In other words, the lower the regeneration level, the higher is the ratio of exchange capacity to a given weight of regenerant, which means the higher the regeneration efficiency.

2) Countercurrent regeneration

The state of a cation exchange resin bed at the break-through point of the demineralization is illustrated in Figure 6. It can be seen that ions are adsorbed by the resin in the order of greater selectivity, i.c., starting from the bottom, first calcium, then sodium, and finally hydrogen, there by forming an adsorption zone. During regeneration, i.e., from the top, the hydrogen ion displaces the sodium ion, which in its turn displaces the calcium ion, in what is known as a hookup effect. This hookup effect gives a more complete regeneration and helps boost regeneration efficiency. This is obvious from Figure 7.

REGENERATION LEVEL VS. ION EXCHANGE CAPACITY Figure 5



STATE OF RESIN BED ADSORPTION ZONE AT Figure 6 DEMINERALIZING AND REGENERATION

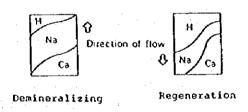
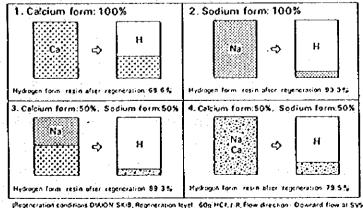
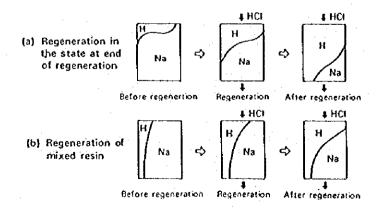


Figure 7 COMPOSITION OF DIAION SKIB RESIN AND UTILIZATION OF REGENERANT



3) Thorough utilization of resin In conventional systems, in which both service and regeneration flow are downward, a considerable amount of resin remains unused in the lower portion of the bed at completion of the demineralizing cycle. In the regeneration step, the unused resin is contaminated with downwardly displaced regenerant wastes. Since this system uses an upward service flow, the unused resin remains in the upper portion as shown in Figure And because the regenerant flows downward and passes through the unused resin zone without regenerating, the regenerant power is concentrated fully on the exhausted resin. This means the effective regeneration level is raised relative to the conventional systems. In this system, the entire resin bed is pushed against the upper distributor during service flow. The freeboard space in the resin bed is limited so as not to cause a mixture of exhausted and unused resin during settling resin. This physical set-up does not allow in-place washing, so backwashing to remove accumulated matters on the resin is done in a separate tank. Since the unused resin becomes mixed with the exhausted resin, the amount of regenerant required is twice that used in the normal regeneration steps.

Figure 8 ADSORPTION ZONE IN REGENERATION PROCESS



However, this external backwashing of the resin is required at a frequency of only once every 30 to 40 cycles for the cation exchange unit and once every year or so for the anion exchange unit. This permits us to take good advantage of the economical operation resulting from the countercurrent regeneration steps.

(3) Small pressure drop in demineralizing process

Pressure drop during the demineralizing process is minimal because about 25 to 75% of the ion exchange resin is in a fluidized state.

(4) Little water needed for washing

Whereas conventional systems require wash water in an amount equivalent to 8 to 12 times the volume of resin, this system uses only 2 or 3 times as much as the resin volume.

(5) Quick regeneration

Regeneration is completed in about an hour, compared to approximately four hours for conventional systems.

(6) Simple and compact equipment

Regeneration, as in conventional systems, is performed in a downward flow. Therefore, no special device is required for preventing fluidization in the demineralizing process. This simplifies the equipment. Moreover, since it comes in a compact 2-bed 1-degasifier arrangement, this system takes a very small space for installation.

Figure 9 FLOW RATE VS. PRESSURE DROP IN CATION EXCHANGE RESIN

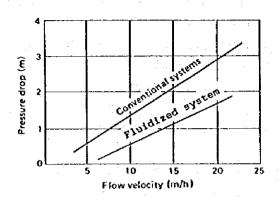
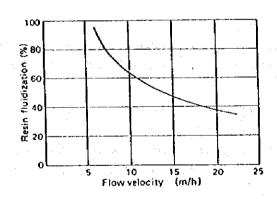
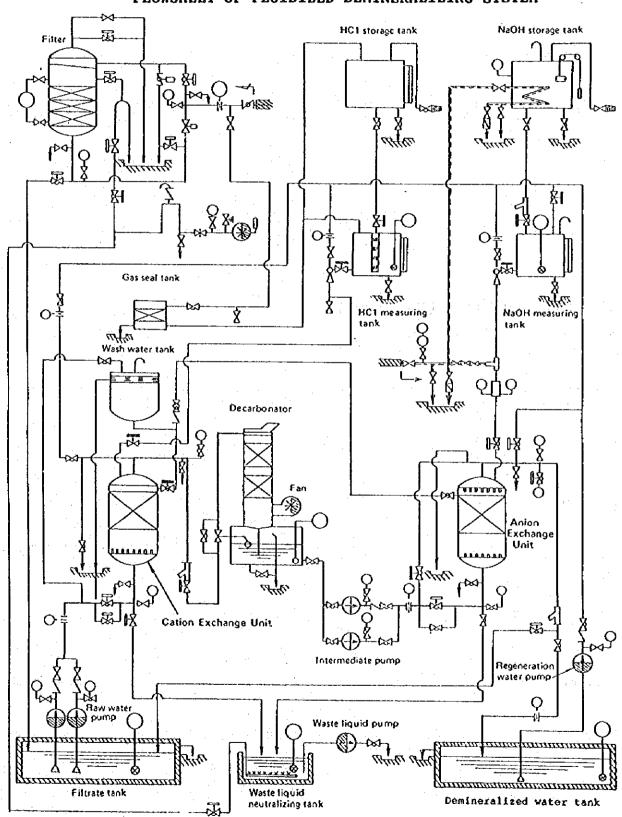


Figure 10 FLOW RATE VS. RESIN FLUIDIZATION RATE IN CATION EXCHANGE RESIN



FLOWSHEET OF FLUIDIZED DEMINERALIZING SYSTEM



EXAMPLE OF PRACTICAL USE OF FLUIDIZED BED TYPE DEMINERALIZING SYSTEM

Table 1 presents the performances of two commercial units in operation, with regard to raw water analysis and treated water quality:

	Example 1	Example 2
Raw water	Total cations 326ppm as CaCO3 Ca + Mg 220ppm as CaCO3 Na + K 100ppm as CaCO3 HCO3 230ppm as CaCO3 SO4 70ppm as CaCO3 C1 26ppm as CaCO3 SiO2 17ppm as CaCO3	Total cations 113ppm as CaCO ₃ Ca + Mg 90ppm as CaCO ₃ Na + K 23ppm as CaCO ₃ HCO ₃ 50ppm as CaCO ₃ C1 + SO ₄ 63ppm as CaCO ₃ SiO ₂ 10ppm as CaCO ₃
Treted water	Breakthrough point conductivity Below 5µU/cm Mean conductivity Below 1µU/cm Silica Below 0.02ppm as SiO ₂	Breakthrough point

Table 1 Analyses of Treated Water and Raw Water

COMPARISONS OF ECONOMICS

Example 1

• Design Standards

Total cation in raw water		275ppm	as CaCO3
Treatment capacity		500m ³ /	cycle
Quality of treated water	: Conductivity	Below	5µԾ/cm
	Silica	Below	0.1 ppm

• Economic Comparisons

	Conventional 2-bed	1-degasifier systems	Fluidized system	
Treated water quality	Below 15µU/cm	Below 0.1ppm as SiO ₂	Below 5µU/ćm	Below 0.1ppm as SiO ₂
Regenerant requirements	35% HC1 1,350kg/C	45% NaOH 780kg/C	35% HC1 440kg/C	45% NaOH 380kg/C
Approximate capital cost	¥30,0	00,000	¥33,	000,000
Running cost	¥63/m³ tr	eated water	¥23.6/m³	treated water

Example 2

Design Standards

T DOUISIT CLASSIC			
Total cation in raw water		83ppm	as CaCO3
Treatment capacity		4,000m	3/day
Quality of treated water	Conductivity	Below	3μ ປ /c m
•	Silica	Relow	ð 1 nám

• Regenerant Requirements

	Conventional 2-bed 1-degasifier systems	Fluidized system
35% HCI	2,170kg/day	1,090kg/day
45%NaOH	1,250kg/day	690kg/day

2.2 Double Fluidized Bed Type Demineralizing System

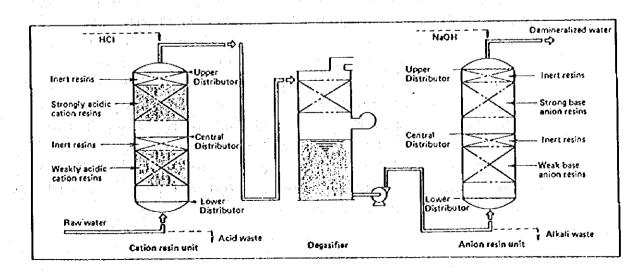
2.2.1 General

Lately, the application technology of ion exchange resins is making a rapid development. However, the demineralizing system exhibiting a higher regeneration efficiency has long been desired when viewed from the point of resource-saving and pollution control. The double fluidized bed type demineralizing system well meet such requirements, and offer 100 percent regeneration efficiency which has not been accomplished with a conventional demineralizing system.

2.2.2 Outline of system

This system is, as illustrated in the diagram, of 2-bed 1-degasifier type demineralizing system consisting of a cation exchange unit, a degasifier and an anion exchange unit. Raw water flows through the three units in the stated sequence; the cation exchange unit, the degasifier and the anion exchange unit. A distinctive feature of the system is that each exchange unit contains two kinds of ion exchange resins-one strong, the other weak. The cation exchange unit is filled with strongly acidic and weakly acidic cation resins, and with strong base and weak base anion exchange resins in the anion exchange unit. The resins are divided by a central distributor placed between the two compartments.

FLOW DIAGRAM OF FLUIDIZED BED TYPE DEMINERALIZING SYSTEM



2.2.3 Service run and regeneration

(1) Cation exchange unit

Raw water flows from the bottom of the cation exchange unit and contacts first with the weakly acidic resin layer located in the lower compartment, in which the hard composition combined with bicarbonate radical (temporary hardness) will be effectively exchanged while the parmanent hardness and monovalent ions like sodium are exchanged by the strongly acidic exchange resins in the upper compartment. The water flows from the top of the exchange unit.

(2) Anion exchange unit

Acidic water degasified through degasifier flows from the bottom of the anion exchange unit, in which a mineral acidity will be exchanged through the contact with the weak base resins. Residual carbonate and silica will react with the strong base resins and the removal can be accomplished. The demineralized effluent flows the top of the exchange unit.

2.2.4 Regeneration

(1) Regeneration for cation resin unit

Hydrochloric acid (or sulfuric acid) introduced from the top of the cation resin unit is used first for regeneration of the strongly acidic exchange resins in the upper compartment and the regeneration waste water containing still effective hydrochloric acid is used again for the regeneration of the weakly acidic exchange resins in the lower compartment. As stated, the regeneration waste water from the regeneration of the strongly acidic exchange resins is used for the regeneration of the weakly acidic exchange resins. Thus, almost none of the acid may remain in the regeneration waste water.

(2) Regeneration for anion exchange unit

Sodium hydroxide fed from the top of the anion resin unit will be used for regeneration of the strong base resins in the upper compartment, then be used for regeneration of the weak base resins in the lower compartment. Therefore, the regeneration efficiency and the regeneration waste water characteristics could be similer to that of the cation resin unit.

2.2.5 Feature of system

(1) High regeneration efficiency and lower running cost

Nearly 100 percent regeneration efficiency shall be established since the regeneration waste water from the regeneration step of the strongly acidic exchange resins and the strong base exchange resins are used again for the regeneration of the weakly acidic exchange resins and the weak base exchange resins, respectively. As a result, the running cost can be reduced to a half or a quarter when compared with that of 2-bed 1-degasifier demineralizer.

(2) Easy treatment of regeneration waste water

Since the regenerant is used up almost completely in the regeneration step of the ion exchange resins, the regeneration waste water contains almost none of free acid and alkaline. Thus, the regeneration waste water can be treated very easily.

(3) High-purity water production

Since the effluent is finally polished by the completely regenerated ion exchange resins contained in each upper layer of anion and cation resins, the highly purified water can be obtained.

(4) No pressure loss during service run

Pressure loss will be minimal because each ion exchange resin bed is in a fluidized state during the service run.

(5) Little water needed for washing

The water needed for washing is as little as a third or a quarter when compared with that of 2-bed 1-degasifier system.

(6) Shorter outage time for regeneration

Only one hour and a half will be required for regeneration.

2.2.6 Operating results of double fluidized

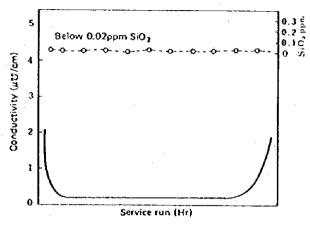
Bed type demineralizing system

*Capacity: 1000m³/day (2-cycle/day)

*Influent

	нсо3	160ppm as $CaCO_3$
	C1+SO4	160ppm as $CaCO_3$
Ca+Mg 140ppm as CaCO3	sio_2	5ppm as $CaCO_3$
Na+K 180ppm as CaCO3	co ₂	5ppm as $CaCP_3$
T.C. 320ppm as $CaCO_3$	T.A.	$330 \mathrm{ppm}$ as CaCO_3
Na+K%	56%	
нсо3%	5 0 %	





Regeneration

Step	Regenerant injection	Slow rinse	Rinse	Regeneration time
Hour	20 min.	50 min.	15 min.	85 min.

Regeneration efficiency

Cation exchanger

Regenerant 35%HCI

427kg/cycle (4.09keq/cycle)

Deionization 320ppm x 640m³/c

205kgCaCO,/cycle (4.1keq/cycle)

100%

Regeneration efficiency

Anion exchanger

Regenerant 45%NaOH

327kg/cycle

(3.68keq/cycle)

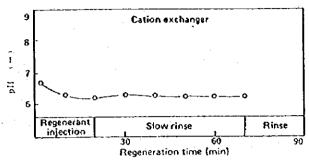
Deionization 330ppm x 640m³/c

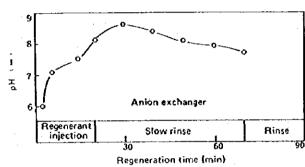
211kgCaCO,/cycle

(4.22keq/cycle) 114.7%

Regeneration efficiency

pH value in the regeneration waste water





2.2.7 Comparisons of chemical requirements

Comparisons of chemical requirements

Design standard

Influent T.C. D.T.A.

Na% MTO-Alkalinity 133ppm as CaCO, 140ppm as CaCO, 25%

42%

Operating Capacity
Effluent: Conductivity
SiO₁

2000m³/day 5⊭**U/**cm 0,1ppm

Chemical requirements

	Unit price	2-bed 1-degasi	ier demineralizer	Double Fluidize	d Demineralized
Regenerant 35%HCI 45%NaOH Neutralizing 35%HCI	¥20/kg ¥45/kg ¥20/kg	1740kg/cycle 1780kg/cycle 496kg/cycle	¥34,800/cycle ¥80,100/cycle ¥ 9,900/cycle	555kg/cycle 498kg/cycle –	¥11,100/cycle ¥22,410/cycle —
Per one cycle			¥124,820/cycle		¥33,510/cycle
Annual outlay			¥41,191,00/year		¥11,059,000/year

Basis: 330 days of operation a year.

