Date: November 19, 94

Run No. 8

Total Operation Time: 64 hr.

Time: 04:00

Variables	Brine Heater			Evaporator Stages			
		*	*	e *	**	₩ ₩	•
Flowrate (kg/h)	0059	0059	9200	0059	9200	18500	18500
Specific Heat (K)/kg/K)	3.961	3.939	3.924	3.909	3.897	3.965	3.963
inlet Temp. (deg. C.	68	75.3	603	46.9	33.5	27.8	23.5
Outlet Temp. (deg. C)	112	83	75.3	6.09	46.9	32	27.8
Temp. Rise (deg. C)	23	13.7	14.4	14	13.4	4.2	4.3
Flashing Temp. (deg. C)	116.5	92.7	81.5	67.6	53.6	37.7	31.7
Heat Transfer Rate (KJ/S)	164.495	97.437	102.016	98.823	94.286	85.578	87.565
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	12.706	8.849	11.993	12.411	12.197	7.608	5.786
U (KW/Sq.m/l0	2.771	5.684	4.392	4.111	3.991	2.270	3.054
Clean-U Value (kW/sq.m/o	6.	9.9	5	5.1	55.	7.3	YS.
f (sq.m K/kM)	0.1045	0.0244	0.0316	0.0472	0.0545	0.2445	0.1314

Run No. 8	Date: November 19, 94		Time: 08:00		Total Operation Time: 68 hr.	Time: 68 hr.	
	Brine Heater			Evaporator Stages	Stages		
		**	#3	C *		10	*
Flowrate (kg/h)	0059	0059	0059	0059	6500	18500	18500
Specific Heat (KJ/Kg/K)	3.960	3.938	3.924	3.910	3.897	3.965	3.963
inlet Temp. (deg. C)	87	75.6	61.2	47.1	33.6	27.6	24
Outlet Temp. (deg. C)	112	87	75.6	61.2	47.1	32	27.6
Temp. Rise (deg. C)	25	11.4	14.4	14.1	13.5	4.4	3.6
Flashing Temp. (deg. C)	117.5	93.1	81.5	8.79	53.9	37.6	31.6
Heat Transfer Rate (K/S)	178.743	81.059	102.024	99.535	94.993	89.652	73.311
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. lo	14.594	10.817	11.654	12.335	12.343	7.589	5.609
U (kw/sq.m/lo	2.621	3.869	4.520	4.166	3.973	2.384	2.638
Clean-U Value (kW/sq.m/lo	3.9	9:9	5.1	5.1	5.1	rų.	5.1
f sq.m K/kw	0.1251	0.1070	0.0252	0.0440	0.0556	0.2234	0.1831

ALL NO. 08	Date: November (8, 94		. 14.00		Otal opera	Otal Operation lime, /z in.	
Variables	Brine Heater			Evaporator Stages	506		
		#	Z#	e **	**	10 **	•
Flowrate (kg/h)	0059	9200	9059	6500	0059	18500	18500
Specific Heat (kj/kg/K)	3.960	3.938	3.924	3.910	3.898	3.965	3.963
inlet Temp. (deg. C)	87.5	75.7	61.3	47.4	34.2	28.1	24
Outlet Temp. (deg. C)	112	87.5	75.7	61.3	47.4	32	28.1
Temp. Rise (deg. C)	24.5	11.8	14.4	13.9	13.2	3.9	4
Flashing Temp. (deg. C)	117.5	93.2	84.7	89	54.1	82	32.1
Heat Transfer Rate (KJ/S)	175.182	83.911	102.027	98.128	92.891	79.467	83.496
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. K)	14.442	10.519	11.767	12.376	12.126	7.788	5.811
U (kw/sq.m/k)	2.596	4.118	4.476	4.094	3.955	2.059	2.900
Clean-U Value (kW/sq.m/l0	6.8	9.9	E. 83	5.7			
fisq.m K/kW	0.1288	0.0913	0.0273	0.0482	0.0568	0.2896	0.1488

Run No. 8	Date: November 19, 94		Time: 16:00		Total Operation Time: 76 hr.	s: 76 hr.	
Variables	Brine Hester			Evaporator Stages			
		**	# 2	(n) #±	**	۲0. #	*
Flowrate (kg/h)	0059	0059	9200	0059	0059	18500	18500
Specific Heat (KJ/Kg/K)	3.960	3.938	3.924	3.910	3.897	3.965	3.963
Inlet Temp. (deg. C)	4 8	75.6	61.3	47.4	34.1	28.2	
Outlet Temp. (deg. C)	112	87	75.6	61.3	47.4	32.5	
Temp. Rise (deg. C)	25	11.4	14.3	13.9	13.3	4.3	
Flashing Temp. (deg. C)	116.5	93.2	81.7	83	54.1	88	
Heat Transfer Rate (kj/S)	178.743	81.059	101.317	98.128	93.594	87.621	65.173
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1,937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	13.296	10.926	11.845	12.376	12.161	7.444	5.444
U (KW/sq.m/lo	2.877	3.830	4.416	4.094	3.973	2.375	2.416
Clean-U Value (KW/sq.m/k)	9.9	6.6	V.	5.1	5.1	5.1	•
f (sq.m K/kW)	0.0911	0.1096	0.0304	0.0482	0.0556	0.2249	0.2179

Date: November 19, 94

Run No. 8

Time: 20:00

Variabise	Brine Heater			Evaporator Stages			
		T	*	**	*	100 300	9 1
Flowrate (kg/h)	0059	6500	9200	6500	0059	18500	18500
Specific Heat (Kj/Kg/K)	3.960	3.939	3.924	3.910	3.898	3.965	3.963
Inlet Temp. (deg. C)	87.5	75.9	5.73	47.6	34.3	28.4	25
Outlet Temp. (deg. C)	112	87.5	75.9	61.5	47.6	33	28.4
Temp. Rise (deg. C)	24.5	11.6	14.4	13.9	13.3	4.6	3.4
Flashing Temp. (deg. C)	118	93.4	84.7	8	54.3	38.3	32.4
Heat Transfer Rate (kJ/S)	175.182	82.491	102.032	98.133	93.598	93.739	69.247
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	15.068	10.669	11.540	12.153	12.161	7.362	5.527
U (kw/sq.m/to	2.488	3.992	4.565	4.169	3.973	2.569	2.528
Clean-U Value (KW/Sq.m/N	3.9	9.6	5.1	2.4	\$4	V.9	F. 35
f sq.m.K/kw)	0.1455	0.0990	0.0230	0.0438	0.0556	0.1931	0.1994
		-					

Run No. 8	Date: November 20, 94			Time: 00:00	8		Total Operation Time: 84 hr.	Time: 84 h
Variables	Brine Heater					Evaporator Stages		
		•	*	# 2		#3	**	#2
Flowrate (kg/h)	9200		6500	6500		6500	0059	18500
Specific Heat (KJ/Kg/K)	3.961		3.939	3.924		3.910	3.898	3.965
Inlet Temp. (deg. C)	68	:	75.9	61.5		47.6	34.4	28.4
Outlet Temp. (deg. C)	112		68	75.9		61.5	47.6	33
Temp. Rise (deg. C)	23		13.1	14.4		13.9	13.2	4.6
Flashing Temp. (deg. C)	117.8		92.8	81.5		67.9	54.3	38.2
Heat Transfer Rate (KJ/S)	164,495	o ,	93.178	102.032		98.133	92.895	93.739
Heat Transfer Area (Sq.m)	4.6723		1.937	1.937	i i	1.937	1.937	4.9556
L.M.T.D. (deg. K)	14.352	* #	8.778	11.312		12.042	12.126	7.259
U (KW/sq.m/k)	2.453		5.480	4.657		4.207	3.955	2.606
Clean-U Value (kW/sq.m/k)	9.9	· :	9.9	5.1		1.0	5.1	5.7
f (sam K/kW)	0.1513		0.0310	0.0187		0.0416	0.0568	0.1877

Date: November 20, 94

Run No. 8

Total Operation Time: 88 hr.

Time: 04:00

1	Rrine Mester			Evaporator Stages	***		
		*	**	10) Th	7#	to %	*
Flowrate (kg/h)	0299	6500	9200	6500	0059	18500	18500
Specific Heat (kJ/kg/K)	3.961	3.939	3.924	3.910	3.897	3.965	3.963
inlet Temp. (deg. C)	88.5	75.8	61.5		34.1	28.3	24.5
Outlet Temp. (deg. C)	112	88.5	75.8	61.5	47.4	32.5	28.3
Temp. Rise (deg. C)	23.5	12.7	14.3		13.3	4.2	3.8
Flashing Temp. (deg. C)	117	92.4	81.4		54.1	**	32.2
Heat Transfer Rate (KJ/S)	168.058	90.325	101.323		93.594	85.584	77.390
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937		1.937	4.9556	4.9556
L.M.T.D. (deg. 10	13.502	8.768	11.278		12.161	7.402	5.586
U (kw/sq:m/ko	2.664	5.318	4.638		3.973	2.333	2.796
Clean-U Value (kW/sq.m/lo	3.9	9.9		5.1	5.4	5.	53
f (sq.m K/kW)	0.1190	0.0365	0.0195	0.0396	9250	0.2326	0.1616

Run Wo. 8	Date: November 20, 94	3er 20, 94		Time: 06:00	e		Total Operatk	Total Operation Time: 92 hr.	
You was	Prine Heater	1			Evaporator Stages	or Stages			
		1	***	7	77 **		*	# 3	*
Flowrate (kg/h)		6500	0059	0059	0059	0	0059	18500	18500
Specific Heat (KJ/Kg/N)		3.961	3.939	3.924	3.910	0	3.898	3.966	3.964
inlet Temp. (deg. C)		8	75.9	61.6	47.7	7	34.5	28.5	
Outlet Temp. (deg. C)		112	68	75.9	61.6	9	47.7	34	
Temp. Rise (deg. C)		23	13.1	14.3	13.9	.	13.2	5.5	
Flashing Temp. (deg. C)	:	118	92.6	81.6	68.2	7	54.4	38.3	
Heat Transfer Rate (KJ/S)		164.495	93.178	101.325	98.135	10	92.898	112.088	50.921
Heat Transfer Area (Sq.m)		4.6723	1.937	1.937	1.937	7	1.937	4.9556	4.9556
L.M.T.D. (deg. 10		14.598	8.537	11.392	12.264	4	12.126	6.677	5.047
U (kW/sq.m/lo		2.412	5.635	4.592	4.131	<u>~</u>	3.955	3.388	2.036
Clean-U Value (KW/sq.m/K)		9. 8.	9.9	5.1	7.7	-	5.7	£.80	
f Isa m K/kW)		0.1582	0.0260	0.0217	0.0460	Q	0.0568	0.0991	0.2951

Date: November 20, 94

Run No. 8

Time: 12:00

Variables	Brine Heater			Evaporator Stages	80		
		*	# 5	m **	*	to th	**
Flowrate (kg/h)	0059	029	0059	0059	0059	18500	18500
Specific Heat (kj/kg/K)	3.961	3.940	3.924	3.911	3.898	3.966	3.964
Inlet Temp. (deg. C)	89.5	75.8	61.9	48.1	35.1	82	26
Outlet Temp. (deg. C)	112	89.5	75.8	61.9	48.1	34	29
Temp. Rise (deg. C)	22.5	13.7	13.9	13.8	13	ທຸ	m
Flashing Temp. (deg. C)	118	93.3	81.9	68.3	54.8	38.8	23
Heat Transfer Rate (K)/S)	160.932	97.451	98.494	97.437	91.500	104.904	61.107
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. lo	14.440	8.971	11.706	12.006	12.054	7.005	5.361
U (fow/sq.m/ro	2.385	5.608	4.344	4.190	3.919	2.935	2.300
Clean-U Value (KW/sq.m/X)	3.9	6.6	.	5.1	.	5.4	2.
f (sq.m x/kW)	0.1628	0.0268	0.0341	0.0426	0.0591	0.1446	0.2387

Rum No. 8	Date: November 20, 94		THE STATE OF THE S	Time: 16:00		F	Total Operation Time: 100 hr.	ne: 100 hr.	
Vertibles	Rrine Heater				Evaporator Stages	zages			
		*		#2	#3		*	5 00 卷	*
Flowrate (kg/h)	0299	0059		0059	929	•	9200	18500	18500
Specific Heat (KJ/Kg/IO	3.961	3.939		3.924	3.910		3.898	3.966	3.964
Injet Temp. (deg. C)	8	75.8		61.7	84		35	29.2	56
Outlet Temp. (deg. C)	112	8		75.8	61.7		48	33	29.2
Temp. Rise (deg. C)	23	13.2		14.1	13.7		ĸ	3.8	3.2
Flashing Temp. (deg. C)	118	93.1		81.9	68.2		54.7	38.9	33.1
Heat Transfer Rate (KJ/S)	164.495	93.888	0)	806.66	96.728		91.498	77.441	65.181
Heat Transfer Area (Sq.m)	4.6723	1.937		1.937	1.937		1.937	4.9556	4.9556
L.M.T.D. (deg. 10	14.598	9.168		11.776	12.082	-	12.054	7.643	5.341
U (kw/sq.m/k)	2.412	5.287		4.380	4.133		3.919	2.045	2.463
Clean-U Value (kW/sq.m/lo	3.9	9.9		5.1	5.1		5.1	, ,	5.1
f (sq.m K/kw)	0.1582	0.0376	0	0.0322	0.0459		0.0591	0.2930	0.2100

un No. 8	Date: November 20, 94		Time: 20:00		Total operation Time: 104 hr.	Time: 104 hr.	
Variables	Brine Heater			Evaporator Stages			
		#1	#2	£.	*	in H	•
Flowrate (kg/h)	0059	9200	9200	0059	6500	18500	18500
Specific Heat (kj/kg/K)	3.961	3.940	3.924	3.910	3.896	3.966	3.964
Inlet Temp. (deg. C)	89.5	75.8	61.6	47.8	34.7	29	25.5
Outlet Temp. (deg. C)	112	89.5	75.8	61.6	47.8	33	82
Temp. Rise (deg. C)	22.5	13.7	14.2	13.8	13.1	4	3.5
Hashing Temp. (deg. C)	118	92.6	81.6	6.79	54.6	38.8	32.9
Heat Transfer Rate (kJ/S)	160.932	97.451	100.615	97.430	92.197	81.515	71.289
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. X)	14.440	8.107	11.471	11.895	12.200	7.626	5.464
U (KW/sq.m/la	2.385	6.206	4.528	4.229	3.902	2.157	2.633
Clean-U Value (kW/sq.m/k)	6.5	9.9	Σ _i	5.1	5.7	5	. 8.1
F (Sq.m K/kW)	0.1628	9600.0	0.0248	0.0404	0.0602	0.2675	0.1838

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

Date: November 21, 94

Run No. 8

(Kg/h) 6500 6500 6500 6500 6500 6500 6500 1850 teat (k/kg/h) 3,961 3,961 3,962 3,910 3,898 3,966 tp. (deg. C) 89.5 76 61.9 48 35 29 mp. (deg. C) 112 89.5 76 61.9 48 35.5 se (deg. C) 22.5 13.5 14.1 13.9 48 33.5 remp. (deg. C) 118 93.3 82 68.3 54.8 33.5 remp. (deg. C) 118 93.31 82 68.3 54.8 37.08 refer Area (d.y.s) 160.932 96.031 99.913 98.142 91.496 91.708 refer Area (d.y.s) 14.440 8.907 11.663 12.042 12.164 7.424 m/o 2.385 5.566 4.423 4.208 3.835 2.493 relue (w.w.y.g.m./r) 0.1628 0.0281 0.0300 0.0416 0.0614	Vertables	Brine Heater			Evaporator Stages	765		
Kg/No 6500 6500 6500 6500 18500 CG 89.5 3.925 3.910 3.898 3.966 CG 89.5 76 61.9 48 3.5 29 SG-C 112 89.5 76 61.9 48 33.5 29 G-C 22.5 13.5 14.1 13.9 13 48 33.5 Geg-Co 118 93.3 82 68.3 54.8 38.9 Ate (kj/s) 160.932 96.031 99.913 98.142 91.498 91.708 ea (Sq.m) 4.6723 1.937 1.937 1.937 4.9556 Aksq.m/ro 3.385 5.566 4.4208 3.883 2.493 Aksq.m/ro 3.1 5.1 5.1 5.1 5.1 Aksq.m/ro 3.285 5.566 5.1 5.1 5.1 5.1 Aksq.m/ro 3.00 0.0281 0.0350 0.0416 0.0614 0.0614			*	*	65 #4	*	粉盤	10
Kig/NO 3.961 3.946 3.925 3.910 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.986 3.896 <t< td=""><td>Flowrate (kg/h)</td><td>0059</td><td>0059</td><td>9059</td><td>0059</td><td>9200</td><td>18500</td><td>18500</td></t<>	Flowrate (kg/h)	0059	0059	9059	0059	9200	18500	18500
CD 89.5 76 61.9 48 35 29 GC 112 89.5 76 61.9 48 33.5 29 CO 22.5 13.5 14.1 13.9 13 4.5 4.5 CO 22.5 13.5 14.1 13.9 14.8 38.9 38.9 CE (MyS) 4.6723 96.031 99.913 98.142 91.498 91.708 Rea (Sq.m) 4.6723 1.937 1.937 1.937 4.9556 Assay 8.907 11.663 12.042 7.424 7.424 Assay 5.56 4.423 4.208 3.883 2.493 Assay 6.6 5.1 5.1 5.1 5.1 Assay 0.0281 0.0350 0.0416 0.0614 0.0651	Specific Heat (kJ/kg/K)	3.961	3.940	3.925	3.910	3.898	3.966	3.963
GC 112 89.5 76 61.3 48 33.5 CC 22.5 13.5 14.1 13.9 13.9 4.5 4.5 deg, C) 118 93.3 82 68.3 54.8 58.9 58.9 tic (MJS) 160.932 96.031 99.913 98.142 91.498 91.708 ea (Sq.m) 4,6723 1.937 1.937 1.937 1.937 4.9556 ea (Sq.m) 8,907 11.663 12.042 12.164 7.424 N/Sq.m/N 5.56 4.423 4.208 3.883 2.493 N/Sq.m/N 3.9 6.6 5.1 5.1 5.1 5.1 O.1628 0.0281 0.0350 0.0416 0.0614 0.0261	inlet Temp. (deg. C)	89.5	76	61.9	84	35	29	25
CD 22.5 13.5 14.1 13.9 13.9 13.9 4.5 deg, CD 118 93.3 82 68.3 54.8 38.9 te (kl/s) 160.932 96.031 99.913 98.142 91.498 91.708 ea (sq.m) 4.6723 1.937 1.937 1.937 4.9556 7.424 ea (sq.m) 4.440 8.907 11.663 12.042 12.164 7.424 Av/sq.m/N 5.566 4.423 4.208 3.883 2.493 Av/sq.m/N 5.1 5.1 5.1 5.1 Av/sq.m/N 5.0 5.0 6.6 5.1 5.1 5.1 5.1 Av/sq.m/N 5.1 5.1 5.1 5.1 5.1	Outlet Temp. (deg. C)	112	89.5	9/	67.9	48	33.5	29
deg. C) 118 93.3 82 68.3 54.8 38.9 te (k//s) 160.932 96.031 99.913 98.142 91.498 91.708 ea (5q.m) 4.6723 1.937 1.937 1.937 4.9556 4.9556 ea (5q.m) 8.907 11.663 12.042 12.164 7.424 7.424 w/sq.m/N 3.9 6.6 5.1 5.1 5.1 5.1 m/sq.m/N 3.9 6.6 5.1 5.1 5.1 5.1 m/sq.m/N 0.1628 0.0281 0.0300 0.0416 0.0614 0.0614 0.0261	Temp. Rise (deg. C)	22.5	13.5	14.1	13.9	13	4.5	4
te (t/JS) 160.932 96.031 99.913 98.142 91.498 91.708 ea (Sq.m) 4.6723 1.937 1.937 1.937 4.9556 ea (Sq.m) 14.440 8.907 11.663 12.042 12.164 7.424 N/Sq.m/O 3.98 5.566 4.423 4.208 3.883 2.493 N/Sq.m/O 3.9 6.6 5.1 5.1 5.1 0.1628 0.0281 0.0300 0.0416 0.0614 0.2051	Flashing Temp. (deg. C)	118	93.3	82	68.3	54.8	38.9	33
ea (5q.m) 4,6723 1.937 1.937 1.937 4.9556 14,440 8.907 11.663 12.042 12.164 7.424 2.385 5.566 4.423 4.208 3.883 2.493 M/Sq.m/N 6.6 5.1 5.1 5.1 5.1 0.1628 0.0281 0.0300 0.0416 0.0614 0.2051	Heat Transfer Rate (KJ/S)	160.932	96.031	99.913	98.142	91.498	94.708	81.470
14,440 8.907 11,663 12.042 12.164 7.424 2.385 5.56 4.423 4.208 3.883 2.493 W/sq.m/l0 5.9 6.6 5.1 5.1 5.1 5.1 0.1628 0.0281 0.0300 0.0416 0.0614 0.2051 0	Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
2.385 5.566 4.423 4.208 3.883 2.493 .3.9 6.6 5.1 5.1 5.1 5.1 0.1628 0.0281 0.0300 0.0416 0.0614 0.2051 0	L.M.T.D. (deg. 10	14.440	8.907	11.663	12.042	12.164	7.424	5.771
3.9 6.6 5.1 5.1 5.1 5.1 0.1628 0.0281 0.0300 0.0416 0.0614 0.2051 0	U (KW/sq.m/K)	2.385	5.566	4.423	4.208	3.883	2.493	2.849
0.1628 0.0281 0.0300 0.0416 0.0614 0.2051	Clean-U Value (kW/sq.m/f0	3.9	9.9	5.7	5.1	5.1	5.1	5.7
	f (sq.m K/KW)	0.1628	0.0281	0.0300	0.0416	0.0614	0.2051	0.1549

Date: November 21, 94

Run No. 8

Total Operation 11me: 112 hr.

Variables	Brine Heater			Evaporator Stages			
		# 7	#2	#3	*	10 #	4
Flowrate (kg/h)	029	0059	9200	6500	9200	18500	18500
Specific Heat (kj/kg/N)	3.967	3.939	3.924	3.910	3.898	3.966	3.963
Inlet Temp. (deg. C)	68	75.9	61.8	47.9	34.7	58	25
Outlet Temp. (deg. C)	112	68	75.9	61.8	47.9	EE	29
Temp. Rise (deg. C)	23	13.1	14.1	13.9	13.2	4	4
Flashing Temp. (deg. C)	118	92.6	81.6	68.2	54.7	38.7	32.7
Heat Transfer Rate (kj/5)	164.495	93.178	99.911	98.140	92.902	81.515	81.470
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. l)	14.598	8.537	11.323	12.042	12.236	7.524	5.458
U (kW/sq.m/l0	2.412	5.635	4.555	4.208	3.920	2.186	3.012
Clean-U Value (kW/sq.m/k)	3.9	9:9	5.7	5.1	5.3	, c	75
f.sq.m K/kW)	0.1582	0.0260	0.0235	0.0416	0.0590	0.2613	0.1359

5 7 5	92.4 92.468 1.937 8.262 5.778 6.6	13 92.4 92.468 1.937 8.262 5.778 6.6
4.459	5.778 4.459 4.131 6.6 5.1 5.1	5.778 4.459 4.131 6.6 5.1 5.1
82 101.328 99 1.937 11.732 11 4.459	92.468 101.328 1.937 1.937 8.262 11.732 5.778 4.459	92.468 101.328 1.937 1.937 8.262 11.732 5.778 4.459
	92.4 92.468 1.937 8.262 5.778 6.6	92.4 92.468 1.937 8.262 5.778 6.6
13 92.4 92.468 1.937 8.262 5.778 6.6		
	18.5 .495 5723 .206 .315	23 118.5 164.495 4.6723 15.206 2.315

Date: November 21, 94

Run No. 8

Total Operation Time: 120 hr.

Variables	Brine Heater			Evaporator Stages	7 0 85		
		*	#5	#3	**	in **	*
Flowrate (kg/h)	0059	6500	0059	9200	0059	18800	18800
Specific Heat (kj/kg/k)	3.961	3.940	3.925	3.911	3.899	3.966	3.964
inlet Temp. (deg. C)	68	76.3	62.4	48.5	35.4	29.3	22
Outlet Temp. (deg. C)	112	68	76.3	62.4	48.5	35	29.3
Temp. Rise (deg. C)	23	12.7	13.9	13.9	13.1	5.7	2.3
Flashing Temp. (deg. C)	119	92.9	82.1	68.8	55.3	39.1	32.9
Heat Transfer Rate (kJ/S)	164.495	90.338	98.507	98.154	92.211	118.063	47.612
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	15.804	8.768	11.368	12.042	12.200	6.541	4.656
U (kW/sq.m/k)	2.228	5.319	4.474	4.208	3.902	3.642	2.064
Clean-U Value (KW/sq.m/K)	o: M	9.9	5.3	2.7	2.4	.	5.1
f (sq.m K/kW)	0.1925	0.0365	0.0275	0.0416	0.0602	0.0785	0.2885

Run No. 8	Date: November 21, 94		Time: 16:00		Total Operation Time: 124 hr.	Тіте: 124 hr.	
Viriables	Brine Heater			Evaporator Stages			
		*	*	C)	**	#3	# 0
Flowrate (kg/h)	9200	9200	9290	9200	0059	18500	18500
Specific Heat (KJ/kg/IO	3.960	3.939	3.924	3.910	3.898	3.966	3.964
Inlet Temp. (deg. C)	88	75.9	61.8	48.1	S	29.5	26
Outlet Temp. (deg. C)	112	88	75.9	61.8	48.1	34	29.5
Temp. Rise (deg. C)	24	12.1	14.1	13.7	13.1	4.5	3.5
Flashing Temp. (deg. C)	119	93.3	82.2	68.5	S	39.3	33.1
Heat Transfer Rate (kj/S)	171.620	86.053	99.911	96.730	92.203	91.715	71.294
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	16.128	10.179	12.000	12.304	12.310	7.321	5.153
U (KW/sq.m/i0	2.277	4.365	4.298	4.059	3.867	2.528	2.792
Clean-U Value (kW/sq.m/k)	3.9	6.6	5.7	5.7	5.1	5.1	5.1
f (sq.m K/KM)	0.1827	0.0776	0.0366	0.0503	0.0625	0.1995	0.1621

Run No. 8	Date: November 21, 94		Time: 20:00		Total Operation Time: 128 hr.	1 Time: 128 hr.	
Variables	Brine Heater			Evaporator Stages			
		*	#	67 推	*	10 14	**
Flowrate (kg/h)	0059	9200	0059	9200	9200	18500	18500
Specific Heat (kJ/kg/10	3.961	3,939	3.924	3.910	3.898	3.966	3.964
Inlet Temp. (deg. C)	68	75.9	61.7	47.8	34.6	29.3	3 6
Outlet Temp. (deg. C)	112	68	75.9	61.7	47.8	34	29.3
Temp. Rise (deg. C)	23	13.1	14.2	13.9	13.2	4.7	3.3
Fiashing Temp. (deg. C)	118.5	92.6	81.8	68.1	54.7	39	32.8
Heat Transfer Rate (KJ/S)	164.495	93.178	100.618	98.137	92.900	95.789	67.219
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	15.206	8.537	11.585	12.042	12.346	7.092	4.969
U (KW/sq.m/l0	2.315	5.635	4.484	4.207	3.885	2.725	2.730
Clean-U Value (KW/sq.m/k)	3.9	6.6	5.7	5.1	ŗ,	5.7	5.1
f (sq.m. K/KW)	0.1755	0.0260	0.0269	0.0416	0.0613	0.1708	0.1702

tun No. 8	Date: November 22, 94		Time: 00:00		Total Operation Time: 132 hr.	1 Time: 132 hr.	
Variables	Brine Hester			Evaporator Stages			
		**	*3	£#	**	¥6.	*
Flowrate (kg/h)	029	0059	0059	6500	9200	18500	18500
Specific Heat (KJ/kg/K)	3.961	3,939	3.925	3.910	3.898	3.966	3.964
Inlet Temp. (deg. C)	68	76	61.8	47.9	34.7	29.4	25.8
Outlet Temp. (deg. C)	112	68	76	61.8	47.9	33.8	29.4
Temp. Rise (deg. C)	23	13	14.2	13.9	13.2	4.4	3.6
Flashing Temp. (deg. C)	119	92.7	81.9	68.1	54.7	39	32.9
Heat Transfer Rate (K)/5)	164.495	92.468	100.621	98.140	92.902	89.675	73.329
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	15.804	8.626	11.585	11.930	12.236	7.177	5.090
U (KW/sq.m/ko	2.228	5.534	4.484	4.247	3.920	2.521	2.907
Clean-U Value (kW/sq.m/k)	3.9	6.6	5.1	5.1	5.7 2.4	5.7	5.7
f (sq.m K/kw)	0.1925	0.0292	0.0269	0.0394	0.0590	0.2005	0.1479

Date: November 22, 94

Run No. 8

Time: 04:00

Variables	Brine Heater	AND THE PROPERTY OF THE PROPER		Evaporator Stages	or Stages			
		*	#5	#3		**	**	*
Flowrate (kg/h)	0059	0059	0059	0059	C	9059	18500	18500
Specific Heat (kj/kg/K)	3.961	3.939	3.924	3.910		3.898	3.966	3.964
Iniet Temp. (deg. C)	68	75.7	61.7	47.8	.	34.8	29.3	25.5
Outlet Temp. (deg. C)	112	68	75.7	61.7	_	47.8	33.5	29.3
Temp. Rise (deg. C)	23	13.3	14	13.9	•	13	4.2	3.8
Flashing Temp. (deg. C)	119.5	92.9	82.2	.89		54.7	Б	32.9
Heat Transfer Rate (KJ/S)	164.495	94.598	99.198	98.13		91.494	85.596	77.401
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	_	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	16.396	8.963	12.189	12.26		12.273	7.402	5.274
U (KW/sq.m/lo	2.147	5.449	4.202	4,131	: :	3.849	2.333	2.962
Clean-U Value (kW/sq.m//0	3.9	9.9	ν. Σ	Š		5.1	5.7	5.7
f tsq.m K/KM)	0.2093	0.0320	0.0419	0.046		0.0638	0.2325	0.1416

Variables Flowrate (kg/h) Specific Heat (kj/kg/lo inlet Temp. (deg. C) Outlet Temp. (deg. C) Temp. Rise (deg. C)	6500 3.961 89	6500 3.939 75.9	#2 6500 3.924 61.7	#3 #3 6500 3.910	######################################	# 5 18500 3.966 293	18500
2 6		6500 3.939 75.9	#2 6500 3.924 61.7	#3 6500 3.910 47.8	**4 6500 3.898 34.6		# 6 1850
Flowrate (kg/h) Specific Heat (kj/kg/lo inlet Temp. (deg. C) Outlet Temp. (deg. C) Temp. Rise (deg. C)	6500 3.961 89	6500 3.939 75.9	6500 3.924 61.7	6500 3.910 47.8	6500 3.898 34.6		1850 3.96
Specific Heat (Kj/Kg/N) inlet Temp. (deg. C) Outlet Temp. (deg. C) Temp. Rise (deg. C)	3.961 89	3.939 75.9	3.924 61.7	3.910	3.898 34.6		3.96
inlet Temp. (deg. C) Outlet Temp. (deg. C) Temp. Rise (deg. C)	22	75.9	64.7	47.8	34.6		
Outlet Temp. (deg. C) Temp. Rise (deg. C)							
Temp. Rise (deg. C)	112	8	75.9	61.7	47.8	34	29.3
	23	13.1	14.2	13.9	13.2	4.7	3.3
Flashing Temp. (deg. C)	120	92.3	82	68.4	54.6	38.9	32.8
Heat Transfer Rate (kJ/S)	164.495	93.178	100.618	98.137	92.900	95.789	67.219
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg:)0	16.980	8.170	11.810	12.376	12.256	6.989	4.969
U (KW/sq.m/k)	2.073	5.888	4.398	4.094	3.920	2.766	2.730
Clean-U Value (KW/sq.m/K)	9.5	9.6	, S	5.4	5.1	5.1	5.1
f (sq.m Kikw)	0.2259	0.0183	0.0313	0.0482	0.0590	0.1655	0.1702

Date: November 22, 94

Run No. 8

Total Operation Time: 144 hr.

Time: 12:00

Variables	Brine Heater			Evaporator Stages			
		4	7	en #	*	10 16	•
Flowrate (kg/h)	0290	6500	6500	6500	9200	18500	18500
Specific Heat (kj/kg/K)	3.961	3.940	3.925	3.911	3.898	3.966	3.964
Inlet Temp. (deg. C)	68	76.1	62.1	48.3	35.3	29.6	27
Outlet Temp. (deg. C)	112	68	76.1	62.1	48.3	35	29.6
Temp. Rise (deg. C)	23	12.9	14	13.8	13	5.4	2.6
Flashing Temp. (deg. C)	119.5	92	81.9	68.1	55	39.3	33.2
Heat Transfer Rate (KJ/S)	164.495	91.758	99.209	97.442	91.504	110.066	52.965
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	16.396	7.735	11.402	11.559	12.054	6.638	4.783
U (WW/sq.m/lo	2.147	6.124	4.492	4.352	3.919	3.346	2.235
Clean-U Value (kW/sq.m/k)	6. ž.	9 .6	Ř.	5.7	5.3	5.1	5.1
f (sq.m K/kw)	0.2093	0.0118	0.0265	0.0337	0.0591	0.1028	0.2514

Rum No. 8	Date: November 22, 94		Time: 16:00		Total Operation Time: 148 hr.	me: 148 hr.	
Verifylan	Britos Haster			Evaporator Stages			
		*	*		*	10 #1	9#
Flowrate (kg/h)	0059	0059	0059	029	9200	18500	18500
Specific Heat (kJ/kg/k)	3.961	3.939	3.924	3.911	3.898	3.966	3.964
Inlet Temp. (deg. C)	68	75.9	61.8	48.2	35.2	29.3	
Outlet Temp. (deg. C)	112	88	75.9	61.8	48.2	34	29.3
Temp. Rise (deg. C)	23	13.1	14.1	13.6	13	4.7	3.3
Flashing Temp. (deg. C)	119.5	93	81.6	68.5	55	39.4	33.3
Heat Transfer Rate (KJ/S)	164.495	93.178	99.911	96.025	91.502	95.789	67.219
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	16.396	9.017	11.323	12.269	12.164	7.506	5.486
U (KW/sq.m/lo	2.147	5.335	4.555	4.041	3.884	2.575	2.473
Clean-U Value (kW/sq.m/K)	5:8	9.9	5.3	r.	5.1	5.1	5.7
C 400 m V 7040	200C C	0.0359	32000	0.0514	0.0644	7000	0.2083

Date: November 25, 94

Run No. 8

Total Operation Time: 156 hr.

Time: 00:00

Variables	Brine Heater			Evaporator Stages			
		*	#2	£#	*	**	9#
Flowrate (kg/h)	0059	6500	9200	6500	029	18500	18500
Specific Heat (kj/kg/lo	3.961	3.940	3.925	3.911	3.898	3.966	3.964
inlet Temp. (deg. C)	88	76.1	61.9	48.1	34.9	29.7	25.5
outlet Temp. (deg. C)	112	88	76.1	67.9	48.1	34	29.7
Temp. Rise (deg. C)	23	12.9	14.2	13.8	13.2	4.3	4.2
Flashing Temp. (deg. C)	120	92.6	81.4	68.3	54.9	39.2	33.2
Heat Transfer Rate (KJ/S)	164.495	91.758	100.623	97.437	92.906	87.640	85.551
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	16.980	8.473	10.900	12.006	12.236	7.135	5.327
U (KW/sq.m/lo	2.073	5.591	4.766	4.190	3.920	2.479	3.241
Clean-U Value (kW/sq.m/lo	3.9	6.6	5.1	5.1	5.1	5.1	£.
f (sq.m.K/kw)	0.2259	0.0274	0.0138	0.0426	0.0590	0.2074	0.1125

					Total Operation Time: 160 hr.	lme: 160 hr.	
	Brine Heater			Evaporator Stages			
Flowrate (kg/h) Specific Heat (kj/kg/l0 Inlet Temp. (deg. C)		*	2	(7) Th	*	in N	te te
Specific Heat (kj/kg/l0 inlet Temp. (deg. C)	6500	9200	6500	9200	9200	18500	18500
inlet Temp. (deg. C)	3.961	3.940	3.925	3.911	3.898	3.966	3.964
	68	76.2	62	48.2	35.1	29.5	25
Outlet Temp. (deg. C)	112	8	76.2	62	48.2	34	29.5
Temp. Rise (deg. C)	23	12.8	14.2	13.8	13.1	4.5	4.5
Flashing Temp. (deg. C)	120	93.3	81.6	68.5	55.2	39.3	33.4
Heat Transfer Rate (KJ/S)	164.495	91.048	100.626	97.440	92.205	91.715	91,657
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LART.D. (deg. lo	16.980	9.272	11.015	12.118	12.419	7.321	5.865
U (kw/sq.m/k)	2.073	5.069	4.716	4.151	3.833	2.528	3.154
Clean-U Value (kW/sq.m/lo	6 K	6.6	5.7	5.3	5.3	5.1	5.1
f (sq.m K/kw)	0.2259	0.0457	0.0160	0.0448	0.0648	0.1995	0.1210

Date: November 23, 94

Run No. 8

Time: 08:00

Verlables	Brine Heeter			Evaporator Stages			
		#1	# 2	£	***	6	**
Flowrate (kg/h)	6500	0059	9200	6500	0059	18500	18500
Specific Heat (KJ/Kg/N)	3.961	3.940	3.925	3.911	3.898	3.966	
inlet Temp. (deg. C)	88	76.2	62	48.1	35	29.6	5 8
Outlet Temp. (deg. C)	112	8	76.2	29	48.1	34.5	
Temp. Rise (deg. C)	23	12.8	14.2	13.9	13.1	4.9	3.6
Flashing Temp. (deg. C)	120	92.7	80.8	68.2	54.9	39.2	33.3
Heat Transfer Rate (kj/S)	164.495	94.048	100.626	98.145	92.203	99.871	73.331
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	16.980	8.562	10.087	11.818	12.200	6.861	5.298
U (kw/sq.m/lo	2.073	5.490	5.150	4.287	3.902	2.937	
Clean-U Value (kW/sq.m/k)	3:0	9.9	5.1	Ç,	5.	5.1	
f Gq.m Kikw	0.2259	0.0306	0.0019	0.0372	0.0602	0.1444	0.1619

Rum No. 8	Date: November 23, 94		Time: 12:00		Total Operation Time: 168 hr.	1 Time: 168 hr.	
Veriables	Brine Heater			Evaporator Stages			
		*	Z #±	#3	*	10 #k	**
Flowrate (kg/h)	029	0059	0059	0059	0059	18500	18500
Specific Heat (kj/kg/lo	3.961	3.940	3.925	3.911	3.899	3.967	3.964
Inlet Temp. (deg. C)	88	76.5	62.4	48.7	35.9	30.2	27
Outlet Temp. (deg. C)	112	88	76.5	62.4	48.7	59'5'89'	30.2
Temp. Rise (deg. C)	23	12.5	14.1	13.7	12.8	5.3	3.2
Flashing Temp. (deg. C)	120.5	93	81.4	68.6	55.6	39.9	33.8
Heat Transfer Rate (KJ/S)	164.495	88.918	99.927	96.744	90.107	108.037	65.190
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	17.558	8.821	10.404	11.748	12.201	6.704	5.032
U (kw/sq.m/to	2.005	5.204	4.958	4.254	3.813	3.252	2.614
Clean-U Value (KW/sq.m/l0	3.9	9.6	5.1	5.3	5.7	1.1	5.7
f (sq.m K/kW)	0.2423	0.0406	0.0056	0.0391	0.0662	0.1115	0.1864

Date: November 25, 94

Run No. 8

Total Operation Time: 172 hr.

Time: 16:00

Flowrate (kg/h) 6500 6500 6500 6500 6500 6500 6500 6500 18500 Specific Heart (kl/kg/h) 3.961 3.939 3.925 3.911 3.899 3.966 Iniet Temp. (deg. C) 88.5 76.4 62.2 48.4 35.5 30 Outlet Temp. (deg. C) 112 88.5 76.4 62.2 48.4 35.5 30 Temp. Rise (deg. C) 23.5 12.1 14.2 12.8 5.5 39.7 Heat Transfer Rate (kl/s) 168.058 86.065 100.632 97.445 90.804 101.916 LM.T.D. (deg. IC) 17.727 9.953 1.0570 1.937 1.937 4.9556 Clear-U Value (kW/sq. m/k) 2.029 4.464 4.869 4.229 3.797 2.980 Clear-U Value (kW/sq. m/k) 0.0256 0.0083 0.00404 0.0673 0.0439	Variables	Brine Heater			Evaporator Stages			
6500 6500 6500 6500 6500 6500 6500 7. 3.961 3.939 3.925 3.911 3.899 88.5 76.4 62.2 48.4 35.5 7. 112 88.5 76.4 62.2 48.4 23.5 12.1 14.2 13.8 12.9 (c) 120.5 93.6 81.5 68.5 55.4 (vis) 168.058 86.065 10.670 11.895 12.347 17.727 9.953 10.670 11.895 3.797 11.070 3.9 6.6 5.1 5.1 5.1 5.1			*	# 5	£ #	*	9 **	•
3.961 3.935 3.925 3.911 3.899 88.5 76.4 62.2 48.4 35.5 112 88.5 76.4 62.2 48.4 23.5 12.1 14.2 13.8 12.9 120.5 93.6 81.5 68.5 55.4 168.058 86.065 100.632 97.445 90.804 4.6723 1.937 1.937 1.937 1.937 2.029 4.464 4.869 4.229 3.797 3.9 6.6 5.1 5.1 5.1 6.2264 5.1 5.1 5.1 5.3 6.0673 0.0404 0.0673	Flowrate (kg/h)	029	0059	0059	9200	9200	18500	18500
88.5 76.4 62.2 48.4 35.5 112 88.5 76.4 62.2 48.4 23.5 12.1 14.2 13.8 12.9 120.5 93.6 81.5 68.5 55.4 168.058 86.065 100.632 97.445 90.804 4,6723 1.937 1.937 1.937 1.937 17.727 9.953 10.670 11.895 12.347 2,029 4,464 4,869 4,229 3.797 3.9 6.6 5.1 5.1 5.1 6,22 4,869 0,00725 0,0093 0,0404 0,0673	Specific Heat (kj/kg/K)	3.961	3.939	3.925	3.911	3.899	3.966	3.964
23.5 76.4 62.2 48.4 23.5 12.1 14.2 13.8 12.9 120.5 93.6 81.5 68.5 55.4 168.058 86.065 100.632 97.445 90.804 4.6723 1.937 1.937 1.937 1.937 17.727 9.953 10.670 11.895 12.347 2.029 4.464 4.869 4.229 3.797 3.9 6.6 5.1 5.1 5.1 0.2364 0.0725 0.0093 0.0404 0.0673	Inlet Temp. (deg. C)	88.5	76.4	62.2	48.4	ж ж ж	30	72
23.5 12.1 14.2 13.8 12.9 120.5 93.6 81.5 68.5 55.4 168.058 86.065 100.632 97.445 90.804 4.6723 1.937 1.937 1.937 1.937 17.727 9.953 10.670 11.895 12.347 2.029 4.464 4.869 4.229 3.797 3.9 6.6 5.1 5.1 5.1 0.2364 0.0725 0.0093 0.0404 0.0673	Outlet Temp. (deg. C)	112	88.5	76.4	62.2	48.4	35	e F
120.5 93.6 81.5 68.5 55.4 168.058 86.065 100.632 97.445 90.804 4.6723 1.937 1.937 1.937 1.937 17.727 9.953 10.670 11.895 12.347 2.029 4.464 4.869 4.229 3.797 3.9 6.6 5.1 5.1 5.1 0.2364 0.0725 0.0093 0.0404 0.0673	Temp. Rise (deg. C)	23.5	12.1	14.2	13.8	12.9	LO.	w
168.058 86.065 100.632 97.445 90.804 4.6723 1.937 1.937 1.937 1.937 17.727 9.953 10.670 11.895 12.347 2.029 4.464 4.869 4.229 3.797 3.9 6.6 5.1 5.1 5.1 0.2364 0.0725 0.0093 0.0404 0.0673	Flashing Temp. (deg. C)	120.5	93.6	81.5	68.5	55.4	39.7	33.6
4.6723 1.937 1.937 1.937 17.727 9.953 10.670 11.895 12.347 2.029 4.464 4.869 4.229 3.797 3.9 6.6 5.1 5.1 5.1 0.2364 0.0725 0.0093 0.0404 0.0673	Heat Transfer Rate (KJ/S)	168.058	86.065	100.632	97.445	90.804	101.916	61.115
17.727 9.953 10.670 11.895 12.347 2.029 4.464 4.869 4.229 3.797 3.9 6.6 5.1 5.1 5.1 6.2364 0.0725 0.0093 0.0404 0.0673	Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
2.029 4.464 4.869 4.229 3.797 3.9 6.6 5.1 5.1 5.1 0.2364 0.0725 0.0093 0.0404 0.0673	L.M.T.D. (deg. 10	17.727	9.953	10.670	11.895	12.347	6.901	4.949
3.9 6.6 5.1 5.1 5.1 0.2364 0.0725 0.0093 0.0404 0.0673	U (KW/sq.m/l0	2.029	4.464	4.869	4.229	3.797	2.980	2.492
0.2364 0.0725 0.0093 0.0404 0.0673	Clean-U Value (KW/sq.m/K)	3.9	9.9	5.7	រីន	5.1	5.1	5.1
	f (sq.m K/KW)	0.2364	0.0725	0.0093	0.0404	0.0673	0.1395	0.2052

Run No. 8	Date: November 23, 94		Time: 20:00		Total operation Time: 176 hr.	ne: 176 nr.	
	Brine Haster			Evaporator Stages			
		*	2	en Ma	*	£\$	9#
Flowrate (kg/h)	6500	6500	0059	0059	0059	18300	18300
Specific Heat (KJ/Kg/K)	3.961	3.940	3.925	3.911	3.899	3.966	3.964
Inlet Temp. (deg. C)	68	76.3	62	48.2	36.2	29.9	56
Outlet Temp. (deg. C)	112	6 8	76.3	62	48.2	34	29.9
Temp. Rise (deg. C)	23	12.7	14.3	13.8	12	4.1	3.9
Flashing Temp. (deg. C)	121	93.7	81.5	68.4	55.3	39.6	33.5
Heat Transfer Rate (KJ/S)	164.495	90.338	101.336	97.440	84.473	82.661	78.585
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	18.131	9.703	10.819	12.006	12.126	7.463	5.314
U (KW/sq.m/ld	1.942	4.807	4.836	4.190	3.596	2.235	2.984
Clean-U Value (KW/sq.m/K)	3.9	9.9	5.3	5.1	5.7	5.1	5.1
f (sq.m K/kw)	0.2586	0.0565	0.0107	0.0426	0.0820	0.2513	0.1390

Date: November 24, 94

Run No. 8

Total Operation Time: 180 hr.

Time: 00:00

Variables	Brine Hester	·		Evaporator Stages				
		*	#2	£	*		£ 2	to **
Flowrate (kg/h)	0290	9200	9200	6500	6500	0	18500	18500
Specific Heat (kj/kg/k)	3.961	3.940	3.925	3.911	3.898		3.966	3.964
inlet Temp. (deg. C)	68	76.3	62.1	48.2	35.	8	29.9	5 6
Outlet Temp. (deg. C)	112	68	76.3	62.1	48.2	2	34	29.9
Temp. Rise (deg. C)	23	12.7	14.2	13.9	13	ю	4.1	3.9
Flashing Temp. (deg. C)	121	93.4	81.5	68.5	55.3	N)	39.5	33.5
Heat Transfer Rate (KJ/S)	164.495	90.338	100.629	98.147	91.50	8	83.565	79.444
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.93		4.9556	4.9556
C.M.T.D. (deg. lo	18.131	9.356	10.785	12.042	12.49	8	7.361	5.314
U (kw/sq.m/io	1.942	4.985	4.817	4.208	3.781		2.291	3.017
Clean-U Value (kW/sq.m/k)	3.9	6.6	7.3	5.2	S		5.7	5.1
f. (sq. m K/KW)	0.2586	0.0491	0.0115	0.0416	0.0684	8	0.2404	0.1354

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

Run No. 8	Date: November 24, 94		Time: 04:00		Total Operation Time: 184 hr.	me: 184 hr.	
	Rrino Heater			Evaporator Stages			
		*	₹	ey #	**	10 7h	*
Flowrate (kg/h)	6500	6500	9200	6500	9290	18300	18300
Specific Heat (KJ/Kg/K)	3.960	3.939	3.925	3.911	3.898	3.966	3.964
Inlet Temp. (deg. C)	88	76.3	62	48.1	35	29.7	26
Outlet Temp. (deg. C)	112	88	76.3	62	48.1	34	29.7
Temp. Rise (deg. C)	24	11.7	14.3	13.9	13.1	5,3	3.7
Flashing Temp. (deg. C)	121	93.7	81.8	68.8	55.2	39.4	33.3
Heat Transfer Rate (KJ/S)	171.620	83.213	101.336	98.145	92.203	86.692	74.554
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	18.472	10.484	11.164	12.486	12.529	7.341	5.234
U (KW/sq.m/lo	1.989	4.098	4.686	4.058	3.799	2.383	2.874
Clean-U Value (kW/sq.m/k)	3.9	9.9	5.1	5.1	5.1	7.	5.1
f (sa.m K/kW)	0.2465	0.0925	0.0173	0.0504	0.0671	0.2236	0.1518

Date: November 24, 94

Run No. 8

Time: 08:00

Variables	Brine Heater			Evaporator Stages			
		#1	#2	6#	*	lo th	*
Flowrate (kg/h)	6500	9200	0059	0059	0029	18300	18300
Specific Heat (kj/kg/k)	3.961	3,940	3.925	3.911	3.898	3.966	3.964
Inlet Temp. (deg. C)	88	76.2	62.1	48.2	35.1	29.6	26
Outlet Temp. (deg. C)	112	83	76.2	62.1	48.2	34.5	29.6
Temp. Rise (deg. C)	23	12.8	14.1	13.9	13.1	4.9	3.6
Flashing Temp. (deg. C)	727	93.6	8.18	68.8	55.3	39.5	33.3
Heat Transfer Rate (kj/S)	164.495	91.048	99.919	98.147	92.205	98.792	72.538
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. lo	18.131	9.621	11.210	12.376	12.529	7.173	5.298
U (KW/sq.m/lo	1.942	4.886	4.602	4.094	3.799	2.779	2.763
Clean-U Value (kW/sq.m/k)	8.8 8.8	9.9	5.1	5.1	2.1	ŗ,	5.1
f (sq.rn K/kW)	0.2586	0.0532	0.0212	0.0482	0.0671	0.1637	0.1658
	The second secon	the second of th					

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

20. 20. 30. 30. 30. 30. 30. 30. 30. 30. 30. 3	Date: November 24, 94		13HE: 12:00		otal operation sine: 184 m.	116. 164 till.	
Variables	Brine Heater			Evaporator Stages			
		*	#	*	*	1 5	*
Flowrate (kg/h)	6500	6500	0059	6500	0059	18500	18500
Specific Heat (KJ/Kg/K)	3.961	3.940	3.925	3.911	3.899	3.966	3.964
inlet Temp. (deg. C)	68	76.5	62.4	48.6	35.7	29.8	26.5
Outlet Temp. (deg. C)	112	88	76.5	62.4	48.6	35	29.8
Temp. Rise (deg. C)	23	12.5	14.1	13.8	12.9	5.2	ĸ.
Flashing Temp. (deg. C)	121	93.3	81.3	68.7	55.6	39.8	33.5
Heat Transfer Rate (KJ/S)	164.495	88.918	99.927	97.449	90.808	105.991	67.223
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. l0	18.131	9.173	10.288	11.895	12.347	7.085	5.176
U (kw/sq.m/k)	1.942	5.005	5.014	4.230	3.797	3.019	2.621
Clean-U Value (kW/sq.m/K)	6.2	9.9	5.1	<u>7.</u>	5.1	5.7	5.1
f (sq.m. K/kW)	0.2586	0.0483	0.0033	0.0404	0.0673	0.1352	0.1855

Date: November 24, 94

Run No. 8

Total Operation Time: 196 hr.

Tlme: 16:00

Variables	Brine Heater			Evaporator Stages	tages				
		**	Z #	€**	•	7 #		lo.	*
Flowrate (kg/h)	0059	0059	0059	0059		6500		18500	18500
Specific Heat (KJ/Kg/NO	3.960	3.939	3.925	3.911		3.898	8	3.966	3.964
inlet Temp. (deg. C)	88	76.2	62.1	48.3		35.4		29.7	27
Outlet Temp. (deg. C)	112	88	76.2	62.1		48.3		35	29.7
Temp. Rise (deg. C)	24	11.8	14.1	13.8		12.9		5.3	2.7
Flashing Temp. (deg. C)	121	93.4	81.7	68.6		55.4		39.6	33.5
Heat Transfer Rate (kj/S)	171.620	83.923	99.919	97.442		90.801		108.029	55.002
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937		1.937		4,9556	4.9556
L.M.T.D. (deg. 10	18.472	10.185	11.096	12.118		12.456		6.915	5.030
U (KW/sq.m/K)	1.989	4.254	4.649	4.151	**	3.763		3.153	2.207
Clean-U Value (kW/sq.m/l0	3.9	6.6	5.7	5.7		5.1		5.1	5.1
f (sq.m K/kw)	0.2465	0.0836	0.0190	0.0448		9690.0		0.1211	0.2571

Run No. 8	Date: November 24, 94		Time: 20:00		Total Operation Time: 200 hr.	Time: 200 hr.	
Variables	Brine Heater			Evaporator Stages			
		**	*	es **	*	\$G	*
Flowrate (kg/h)	9200	6500	6500	6500	9200	18500	18500
Specific Heat (K)/kg/K0	3.960	3.939	3.924	3.910	3.898	3.966	3.964
Inlet Temp. (deg. C)	88	92	61.7	47.9	34.8	29.4	26.5
Outlet Temp. (deg. C)	112	88	9/	61.7	47.9	34.5	29.4
Temp. Rise (deg. C)	24	12	14.3	13.8	13.1	7.7	2.9
Flashing Temp. (deg. C)	122	93.5	81.6	68.4	55.1	39.3	53.1
Heat Transfer Rate (Kj/S)	171.620	85.343	101.328	97.433	92.199	103.946	59.073
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. K)	19.611	10.368	11.278	12.340	12.638	7.045	5.011
U (KW/sq.m/io	1.873	4.250	4.638	4.076	3.766	2.977	2.379
Clean-U Value (KW/sq.m/K)	6.5	6.6	5.1	ř.	5.1	5.1	5.1
f (sq m k/k/M)	0.2775	0.0838	0.0195	0.0492	0.0694	0.1398	0.2243

Date: November 25, 94

Run No. 8

Total Operation Time: 204 hr.

Time: 00:00

Variables	Brine Heater			Evaporator Stages			
	į	*	£ #	#	*	10 **	*
Flowrate (kg/h)	6500	0059	6500	9200	6500	18500	18500
Specific Heat (kJ/kg/K)	3.960	3.939	3.925	3.911	3.898	3.966	3.964
Inlet Temp. (deg. C)	88	76.1	619	48.1	34.9	29.7	26
Outlet Temp. (deg. C)	112	88	76.1	61.9	48.1	34	29.7
Temp. Rise (deg. C)	24	11.9	14.2	13.8	13.2	4.3	3.7
Flashing Temp. (deg. C)	121.5	93.6	81.7	68.6	55.2	39.4	33.4
Heat Transfer Rate (kj/S)	171.620	84.633	100.623	97.437	92.906	87.640	75.368
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. lO	19.044	10.444	11.244	12.340	12.565	7.341	5.338
U.(KW/sq.m/lo	1.929	4.184	4.620	4.076	3.817	2.409	2.849
Clean-U Value (kw/sq.m/lo	3.9	6.6	ra L	2.	2.7	7.	
f (sq.m K/kW)	0.2621	0.0875	0.0204	0.0492	0.0659	0.2190	0.1549

Run No. 8	Date: November 25, 94		Time: 04:00		Total opera	Total Operation Time: 206 hr.	
Variables	Brine Heater			Evaporator Stages			
		*	#5	#3	*	# 5	*
Flowrate (kg/h)	0059	6500	0059	0059	0059	18300	18300
Specific Heat (kj/kg/lo	3.960	3.939	3.925	3.910	3.898	3.966	3.964
inlet Temp. (deg. C)	88	76.2	61.9	48	34.8	29.6	26
Outlet Temp. (deg. C)	112	88	76.2	6.19	48	34	29.6
Temp. Rise (deg. C)	24	11.8	14.3	13.9	13.2	4.4	3.6
Flashing Temp. (deg. C)	121.5	93.4	81.6	68.6	55.1	39.3	33.3
Heat Transfer Rate (kj/5)	171,620	83.923	101.333	98.142	92.904	88.708	72.538
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	19.044	10.185	11.049	12.376	12.565	7.280	5.298
U (KW/sq.m/i0	1.929	4.254	4.735	4.094	3.817	2.459	2.763
Clean-U Value (kW/sq.m/K)	5 7.	9.9	ř.	5.1	ν,	5.7	5.1
f (sq.m K/kw)	0.2621	0.0836	0.0151	0.0482	0.0659	0.2106	0.1658

Run No. 8	Date: November 25, 94		Time: 08:00		Total Operation Time: 212 hr.	212 hr.	
Variables	Brine Heater			Evaporator Stages			
		本	**	(n)		10 *	60
Flowrate (kg/h)	0029	0200	6500	6500	6500	18500	18500
Specific Heat (kj/kg/k)	3.961	3.939	3.925	3.911	3.898	3.966	3.964
inlet Temp. (deg. C)	88.5	76	62	48	35	29.5	26.5
Outlet Temp. (deg. C)	112	88.5	92	62	84	34.5	29.5
Temp. Rise (deg. C)	23.5	12.5	14	14	13	ın	m
Flashing Temp. (deg. C)	121.5	92.8	&	68.3	55.2	39.4	33.2
Heat Transfer Rate (KJ/S)	168.058	88.905	99.206	98.850	91.498 10	101.909	61.111
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937		4.9556	4.9556
L.M.T.D. (deg. K)	18.872	9.173	10.487	11.965	12.602	7.109	5.052
U (KW/sq.m/lo	1.906	5.004	4.884	4.265	3.748	2.893	2.441
Clean-U Value (kW/sq.m/l0	3.9	9.9	Ž,	£.2	ř.	5.1	5.7
f (sq.m K/KW)	0.2683	0.0483	0.0087	0.0384		0.1496	0.2136

	Run No. 8	Date: November 25, 1	lber 25, 94			F	Tlme: 12:00			2	Total Operation Time: 216 hr.	tion Time:	216 hr.		4
Programa.	Vertibles	Brine Heater	ate.					E	Evaporator Stages	ges					
					*		#2		۲		**		*5		*
· 10	Flowrate (kg/h)		6500		6500		0059		6500		9200		18500		18500
100	Specific Heat (KJ/kg/K)		3.961		3.939		3.925		3.911	•	3.899		3.966		3.964
7 19 17	Inlet Temp. (deg. C)		88.5		76.2		62.2		48.4		35.5		29.8		27
	Outlet Temp. (deg. C)		112		88.5		76.2	. *	62.2		48.4		32	-	29.8
	Temp. Rise (deg. C)		23.5		12.3		14		13.8		12.9		5.2		2.8
	Flashing Temp. (deg. C.	•	121.5	••	92.6		80.8		68.2		55.4	,	39.6		33.5
	Heat Transfer Rate (kJ/S)		168.058		87.485		99.212	** *.	97.445		90.804	•	105.991	; ;	57.040
	Heat Transfer Area (Sq.m)		4.6723		1.937	:.	1.937		1.937		1.937		4.9556		4.9556
	L.M.T.D. (deg. to		18.872		8.873		10.021		11.559		12.347		6.875		4.969
100	U (kw/sq.m/ld		1.906		2.090		5.111		4.352		3.797	٠.	5.111		2.316
	Clean-U Value (kW/sq.m/k)		3.9		9.9		5.7		5.1	:	5.1		5.1		5.1
	f (sq.m K/KW)		0.2683		0.0449		0.0004		0.0337		0.0673		0.1254		0.2356
												1			

Date: November 25, 94

Run No. 8

Total Operation Time: 220 hr.

Time: 16:00

4/kg/k0 99. C) deg. C) g. C) c. (deg. C) Rate (kj/S) Area (5q. m) 5 Mw/sq. m//0		Brine Heater	•		÷	•	Evaporator Stages	tages				:	
41 6500 73 76.5 62.4 48.6 35.7 48.6 48.6 35.7 48.6 48.	Variatives		*	-	#2		en ₩		*		ic #		*
Ql/kg/l0 3.961 3.939 3.925 3.911 3.899 3 9. C. 88.5 76.5 62.4 48.6 35.7 169. C. 112 88.5 76.5 62.4 48.6 35.7 169. C. 23.5 12 76.5 62.4 48.6 35.7 16. G. 23.5 12 14.1 13.8 12.9 10.9 16. G. 121.5 93.3 81.6 68.8 55.7 41.0 Arrea (sq.m) 4.6723 1.937 <	Flowrate (kg/h)	0029		9200	6500).	6500		9200		18500		18500
9. C) 88.5 76.5 62.4 48.6 35.7 Jeg. C) 112 88.5 76.5 62.4 48.6 35.7 g. C) 23.5 12 14.1 13.8 12.9 48.6 g. C) 23.5 93.5 81.6 68.8 55.7 10.1 atce (t/J/S) 168.058 85.355 99.927 97.449 90.808 10 area (sq.m) 4.6723 1.937 1.937 1.937 1.937 1.937 1.937 4.196 7.456 7 b 1.906 4.600 4.850 4.190 3.764 2 2 kW/sq.m/k) 3.9 6.6 5.1	Specific Heat (KJ/Kg/K)	3.961	•	3.939	3.92		3.911		3.899		3.966		3.964
deg. C) 23.5 12 76.5 62.4 48.6 g. C) 23.5 12 14.1 13.8 12.9 ideg. C) 23.5 93.3 81.6 68.8 55.7 sate (kj/s) 168.058 85.355 99.927 97.449 90.808 Area (sq. m) 4.6723 1.937 1.937 1.937 1.937 Area (sq. m) 4.607 9.579 10.636 12.006 12.456 Arysq. m/kq 3.9 6.6 5.1 5.1 5.1 KWysq. m/kq 0.2683 0.0659 0.00101 0.0426 0.0696	Inlet Temp. (deg. C)	88.5		76.5	.29	et.	48.6		35.7		30		27
g. Cl 23.5 12 14.1 13.8 12.9 .(deg. Cl 12.1.5 93.3 81.6 68.8 55.7 sate (kl/s) 168.058 85.355 99.927 97.449 90.808 Area (sq.m) 4.6723 1.937 1.937 1.937 1.937 1.937 Area (sq.m) 18.872 9.579 10.636 12.006 12.456 1.906 4.600 4.850 4.190 3.764 KW/sq.m/kQ 3.9 6.6 5.1 5.1 5.1 0.2683 0.0659 0.0101 0.0426 0.0696	Outlet Temp. (deg. C)	112		88.5	76.	Į o	62.4		9.87		35		8
(deg, C) 121.5 93.3 81.6 68.8 55.7 sate (kl/s) 168.038 85.355 99.927 97.449 90.808 sate (kl/s) 4.6723 1.937 1.937 1.937 1.937 n 18.872 9.579 10.636 12.006 12.456 n 1.906 4.600 4.850 4.190 3.764 kW/sq.m/k) 3.9 6.6 5.1 5.1 5.1 0.2683 0.0659 0.0101 0.0426 0.0696	Temp. Rise (deg. C)	23.5	:	12	14.		13.8		12.9		ហ		M
Rate (kj/s) 168.058 85.355 99.927 97.449 90.808 Area (sq.m) 4.6723 1.937 1.937 1.937 1.937 1.937 1 18.872 9.579 10.636 12.006 12.456 1 4.600 4.600 4.850 4.190 3.764 KW/sq.m/k0 3.9 6.6 5.1 5.1 5.1 0.2683 0.0659 0.0101 0.0426 0.0696	Flashing Temp. (deg. C)	121.5		93.3	81.1	S	8.89		55.7		39.9		33.7
Area (Sq.m) 4.6723 1.937 1.937 1.937 1.937 3 18.872 9.579 10.636 12.006 12.456 1.906 4.600 4.850 4.190 3.764 KW/Sq.m/KO 3.9 6.6 5.1 5.1 5.1 0.2683 0.0659 0.0101 0.0426 0.0696	Heat Transfer Rate (kj/S)	168.058	80	5.355	99.92	2	97.449		90.808		101.916		61.115
12.456 12.006 12.456 12.006 12.456 12.006 12.456 12.006 12.456 12	Heat Transfer Area (Sq.m)	4.6723		1.937	1.93		1.937		1.937		4.9556		4.9556
KW/sq.m/ro 0.2683 0.0659 0.0101 0.0426 0.0696	L.M.T.D. (deg. 10	18.872		9.579	10.63		12.006		12.456	* . *	7.109		5.052
KW/sq.m/k0 3.9 6.6 5.1 5.1 5.1 5.1 0.0696	U (kW/sq.m/k)	1.906		4.600	4.85		4.190		3.764	:	2.893		2.441
0.2683 0.0659 0.0101 0.0426 0.0696	Clean-U Value (KW/sq.m/K)	6. Ki		6.6	Ċ.		5.1				5.7		25
	f (sq.m. K/KW)	0.2683	O	.0659	0.010		0.0426		9690.0		0.1496		0.2136

8 om wo. 8	Date: November 25, 94		Time: 20:00		Total Operation Time: 224 hr.	ıe: 224 hr.	
Viritables	Brine Heater			Evaporator Stages			
		**	#2	#3	*	in *	9
Flowrate (kg/h)	0059	0059	029	6500	9200	18500	18500
Specific Heat (kj/kg/k)	3.960	3.939	3.924	3.910	3.898	3.966	3.964
Injet Temp. (deg. C)	88	75.5	61.4	47.7	34.6	29.3	26.5
Outlet Temp. (deg. C)	112	88	75.5	61.4	47.7	33	29.3
Temp. Rise (deg. C)	24	12.5	14.1	13.7	13.1	3.7	2.8
Flashing Temp. (deg. C)	121.5	92.6	80.8	89	55	39.1	33
Heat Transfer Rate (kj/S)	171.620	88.892	006.66	96.721	92.195	75.403	57.036
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	19.044	9.520	10.866	12.193	12.747	7.804	4.969
U (KW/sq.m/lo	1.929	4.821	4.746	4.095	3.734	1.950	2.316
Clean-U Value (KW/sq.m/K)	3.9	9.9	5.1	ro T	5:1	5.1	5.7
f (sq.m K/KM)	0.2621	0.0559	0.0146	0.0481	0.0717	0.3168	0.2357

Variables Emporator Singes Emporator Singes Frequentor Singes Fre	Run No. 8	Date: November 26, 94		Time: 00:00		Total Operati	Total Operation Time: 228 hr.	
6500 6500 6500 6500 6500 6500 6500 18500 3.961 3.924 3.910 3.897 3.965 3.961 5.939 3.924 3.910 3.897 3.965 3.962 5.939 3.924 3.910 3.897 3.965 412 61 47.2 3.2 3.2 23.5 13.3 14.2 13.8 13.2 3.2 122 92.6 81.4 68.4 54.7 38.7 38.7 168.058 94.584 100.539 97.416 92.897 65.207 4.9556 19.438 9.201 11.923 13.111 13.002 8.196 1.605 1.850 5.307 4.356 3.836 3.688 1.605 5.1 3.9 6.6 5.1 5.1 5.1 5.1 5.1 3.8 6.6 5.1 5.1 5.1 5.1 5.1 6.2840 0.0355 0.	Variables	Brine Heater			Evaporator Stage	2		
6500 6500 6500 6500 6500 18500 3.961 3.939 3.924 3.910 3.897 3.965 88.5 75.2 61 47.2 34 28.8 112 88.5 75.2 61 47.2 32 23.5 13.3 14.2 13.8 3.2 122 92.6 81.4 68.4 54.7 38.7 168.058 94.584 100.599 97.416 92.897 65.207 4.6723 1.937 1.937 1.937 4.9556 19.436 9.201 1.937 1.937 1.937 4.9556 1.850 5.307 4.356 3.836 3.688 1.605 3.9 6.6 5.1 5.1 5.1 5.1 0.2840 0.0369 0.0335 0.0646 0.0751 0.4268			*	CV ##	£	*	40	9 **
3.961 3.939 3.924 3.910 3.865 3.965 88.5 75.2 61 47.2 32 112 88.5 75.2 61 47.2 32 23.5 13.3 14.2 13.8 13.2 3.2 122 92.6 81.4 68.4 54.7 38.7 168.058 94.584 100.599 97.416 92.887 65.207 4.6723 1.937 1.937 1.937 4.9556 19.438 9.201 11.923 13.111 13.002 8.196 1.850 5.307 4.356 3.836 3.688 1.605 3.9 6.6 5.1 5.1 5.1 5.1 0.2840 0.0359 0.0355 0.0646 0.0751 0.4268	Flowrate (kg/h)	0059	0059	0059	9200	9200	18500	18500
88.5 75.2 61 47.2 34 28.8 112 88.5 75.2 61 47.2 32 23.5 13.3 14.2 13.8 32 122 92.6 81.4 68.4 54.7 38.7 168.058 94.584 100.559 97.416 92.887 65.207 4.6723 1.937 1.937 1.937 4.9556 19.438 9.201 11.923 13.111 13.002 8.196 1.850 5.307 4.356 3.688 1.605 3.9 6.6 5.1 5.1 5.1 3.9 6.6 5.1 5.1 5.1 3.9 6.6 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1	Specific Heat (kj/kg/k)	3.961	3.939	3.924	3.910	3.897	3.965	3.963
23.5 13.3 75.2 61 47.2 32 12.2 92.6 81.4 68.4 54.7 38.7 168.058 94.584 100.599 97.416 92.887 65.207 4.6723 1.937 1.937 1.937 4.9556 19.438 9.201 11.923 13.111 13.002 8.196 1.850 5.307 4.356 3.836 3.688 1.605 3.9 6.6 5.1 5.1 5.1 5.1 0.2840 0.0359 0.0335 0.0646 0.0751 0.4268	inlet Temp. (deg. C)	88.5	75.2	2	47.2	34	28.8	23
23.5 13.3 14.2 13.8 13.2 3.2 122 92.6 81.4 68.4 54.7 38.7 168.058 94.584 100.599 97.416 92.887 65.207 4.6723 1.937 1.937 1.937 4.9556 19.438 9.201 11.923 13.111 13.002 8.196 1.850 5.307 4.356 3.836 3.688 1.605 3.9 6.6 5.1 5.1 5.1 5.1 5.2840 0.0369 0.0335 0.0646 0.0751 0.04268	Outlet Temp. (deg. C)	112	88.5	75.2	6	47.2	32	28.8
122 92.6 81.4 68.4 54.7 38.7 168.058 94.584 100.599 97.416 92.887 65.207 4.6723 1.937 1.937 1.937 4.9556 19.438 9.201 11.923 13.111 13.002 8.196 1.850 5.307 4.356 3.836 3.688 1.605 3.9 6.6 5.1 5.1 5.1 5.1 0.2840 0.0369 0.0335 0.0646 0.0751 0.4268	Temp. Rise (deg. C)	23.5	13.3	14.2	13.8	13.2	3.2	89
168.058 94.584 100.599 97.416 92.887 65.207 4.6723 1.937 1.937 1.937 4.9556 19.438 9.201 11.923 13.111 13.002 8.196 1.850 5.307 4.356 3.686 1.605 3.9 6.6 5.1 5.1 5.1 5.1 3.9 6.6 5.1 5.1 5.1 5.1 0.2840 0.0369 0.0335 0.0646 0.0751 0.4268	Flashing Temp. (deg. C)	122	92.6	81.4	68.4	54.7	38.7	32.7
4.6723 1.937 1.937 1.937 4.9556 19.438 9.201 11.923 13.111 13.002 8.196 1.850 5.307 4.356 3.836 3.688 1.605 3.9 6.6 5.1 5.1 5.1 5.1 0.2840 0.0369 0.0335 0.0646 0.0751 0.4268	Heat Transfer Rate (KJ/S)	168.058	94.584	100.599	97.416	92.887	65.207	77.396
19,438 9,201 11,923 13,111 13,002 8,196 1.850 5,307 4,356 3,836 3,688 1,605 3.9 6,6 5,1 5,1 5,1 5,1 0,2840 0,0369 0,0335 0,0646 0,0751 0,4268	Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1:937	4.9556	4.9556
1.850 5.307 4.356 3.836 3.686 1.605 3.9 6.6 5.1 5.1 5.1 5.1 0.2840 0.0369 0.0335 0.0646 0.0751 0.4268	L.M.T.D. (deg. K)	19.438	9.201	11.923	13.111	13.002	8.196	5.586
3.9 6.6 5.1 5.1 5.1 0.2840 0.0359 0.0335 0.0646 0.0751 0.4268	U (KW/sq.m/K)	1.850	5.307	4.356	3.836	3.688	1.605	2.796
0.2840 0.0359 0.0335 0.0646 0.0751 0.4268	Clean-U Value (kW/sq.m/k)	3.9	9.9	V 5	5.7	5.1	5.1	5.1
	f (sq.m.K/k/W)	0.2840	0.0369	0.0335	0.0646	0.0751	0.4268	0.1616

Run No. 8	Date: November 26, 94		Time: 04:00		Total Operation Time: 252 hr.	ie: 252 hr.	
	Brine Heater			Evaporator Stages			
Variables		# ************************************	# 5	₩.	*	10 **	*
Flowrate (kg/h)	0200	6500	9200	9200	029	18500	
Specific Heat (kj/kg/l0	3.960	3.938	3.924	3.910	3.897	3.965	
inlet Temp. (deg. C)	88	75.1	8.09	47.2	34	28.8	
Outlet Temp. (deg. C)	112	88	75.1	8.09	47.2	32	· ·
Temp. Rise (deg. C)	24	12.9	14.3	13.6	13.2	3.2	
Flashing Temp. (deg. C)	123	92.8	81.3	68.5	50.4	38.3	
Heat Transfer Rate (k)/S)	171.620	91.731	101.304	96.002	92.887	65.207	87.576
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	20.735	9.885	11.958	13.366	12.675	7.791	
U (KW/sq.m/K)	1,77,1	4.791	4.374	3.708	3.783	1.689	
Clean-U Value (KW/sq.m/K)	6.6	6.6	7.7	1.	rų C	5.7	
f (sq.m K/kW)	0.3081	0.0572	0.0326	0.0736	0.0682	0.3960	0.0956

Date: November 26, 94

Run No. 8

Total Operation Time: 258 hr.

Time: 08:00

Variables	Brine Heater			Evaporator Stages			
	•	*	#2	€ #	*	10 7	**
Flowrate (kg/h)	0059	9200	0059	9200	9200	18500	18500
Specific Heat (kj/kg/k)	3.960	3.938	3.923	3.909	3.897	3.965	3.963
Inlet Temp. (deg. C)	88	7.5	60.8	46.7	33.3 5.33.3	88	25
Outlet Temp. (deg. C)	112	88	75	8.09	46.7	32	58
Temp. Rise (deg. C)	24	13	14.2	14.1	13.4	4	ю
Hashing Temp. (deg. C)	123.8	92.1	80.4	68.1	54	37.9	31.8
Heat Transfer Rate (KJ/S)	171.620	92.441	100.594	99.525	94.282	81.504	61.098
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	21.625	9.103	11.015	13.110	12.857	7.728	5.155
U (KW/sq.m/lo	1.699	5.243	4.715	3.919	3.786	2.128	2.392
Clean-U Value (KW/sq.m/lo	Ø.	9.9	5.1	r.	5.1	2.	5.1
f isq.m K/KM).	0.3323	0.0392	0.0160	0.0597	0.0681	0.2738	0.2221

Run No. 8	Date: November 26, 94		Time: 12:00		Total Operation Time: 240 hr.	n Time: 240 hr.	
Variables	Brine Heater		And	Evaporator Stages			
		**	2 *	es #	**	粉	**
Flowrate (kg/h)	0200	9200	0059	9200	9200	18500	18500
Specific Heat (KJ/kg/K)	3.961	3.938	3.924	3.909	3.897	3.965	3.963
Inlet Temp. (deg. C)	88.2	75.1	60.9	46.9	33.6	27.9	
Outlet Temp. (deg. C)	112	88.2	75.1	6.09	46.9	32	
Temp. Rise (deg. C)	23.8	13.1	14.2	14	13.3	4.1	
Flashing Temp. (deg. C)	123	93.6	81.8	68.4	54.7	38.3	
Heat Transfer Rate (KJ/S)	170.195	93.156	100.596	98.823	93.584	83.541	79.422
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	20.665	10.639	12.482	13.293	13.365	8.179	5.734
U (KW/sq.m/K)	1.763	4.521	4.161	3.838	3.615	2.061	2.797
Clean-U Value (kW/sq.m/l0	3.9	9.9	5.1	5.7	5.7	70 2	2.5
f (sq.m K/KW)	0.3109	0.0697	0.0443	0.0645	0.0805	0.2891	0.1615

Date: November 26, 94

Run No. 8

Variables	Brine Heater			Evaporator Stages			
		华	# 2	8	*	IO #	*
Flowrate (kg/h)	6500	0059	029	9059	0059	18500	18500
Specific Heat (k)/kg/k)	3.960	3.938	3.923	3.909	3.897	3.965	3.963
Inlet Temp. (deg. C)	88	74.9	9.09	46.6	33.2	7.72	23
Outlet Temp. (deg. C)	112	88	74.9	9:09	46.6	31	27.7
Temp. Rise (deg. C)	24	13.1	14.3	14	13.4	3.3	4.7
Flashing Temp. (deg. C)	124	93.6	81.8	68.1	54.5	38.1	31.7
Heat Transfer Rate (kJ/S)	171.620	93.151	101.298	98.816	94.280	67.234	92.706
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. X)	21.846	10.865	12.740	13.293	13.510	8.645	6.049
U (KW/sq.m/ld	1.681	4.426	4.105	3.838	3.603	1.569	3.193
Clean-U Value (KNV/sq.m/K)	3.9	9.9	ŗ,	70	5.	5	K
f (sq.m K/kw)	0.3383	0.0744	0.0475	0.0645	0.0815	0.4411	0.1171

Vurtables # # # # # # # # # # # # # # # # # # #	Run No. 8	Date: November 26, 94			Time: 20:00		F	Total Operation Time: 248 hr.	ion Time	: 248 hr.		
6500 73.965 3.965 3.965 3.965 3.965 3.965 3.965 3.965 3.965 3.965 3.965 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 4.9556 3.75 3.80 3.574 3.80 3.574 3.80 3.574 3.80 3.574 3.574 3.574 3.574 3.574 3.577 3.577 3.577 3.577 3.577	Verienties	Brine Heater				Evaporator S	tages					
6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 6500 77.3 77.3 77.3 77.3 77.4 77.4 77.4 77.4 77.4 77.4 77.4 77.4 77.4 77.4 77.3 <th< th=""><th></th><th></th><th>#</th><th></th><th># 2</th><th>es #</th><th></th><th>**</th><th></th><th>#5</th><th>*</th><th>. </th></th<>			#		# 2	es #		**		#5	*	.
3.966 3.938 3.923 3.897 3.965 88 74.9 60.6 46.4 33 27.3 112 88 74.9 60.6 46.4 37 27 0 124 13.1 14.3 13.4 3.7 3.7 0.5 124 92.9 81.4 68.2 54.4 3.7 0,5 17.620 93.151 101.298 100.225 94.276 75.382 0,mml 4.6723 10.968 12.294 13.476 13.619 8.415 m/NO 3.9 6.6 5.1 5.1 5.1 5.1 0.0350 0.0350 0.0644 0.0837 0.05571 9.3574 9.3571	Flowrate (kg/h)	029	65	00	6500	0059		6500		18500	Ŧ	8500
A.9 60.6 46.4 33 27.3 112 88 74.9 60.6 46.4 31 24 13.1 14.3 13.4 3.7 C) 124 13.4 3.7 3.7 JS) 81.4 68.2 54.4 3.7 JS) 17.6 19.2 54.4 37.7 JS) 1.937 1.937 4.9556 A.9556 12.294 13.476 13.619 8.415 A.MO 3.9 6.6 5.1 5.1 5.1 A.MO 3.383 0.0578 0.0579 0.0589 0.0644 0.0887 0.3571	Specific Heat (kJ/kg/K)	3.960	3.9	138	3.923	3.909		3.897		3.965	M	362
CJ 13.1 14.2 60.6 46.4 31 CJ 13.1 14.3 14.2 13.4 3.7 CJ 12.4 92.9 81.4 68.2 54.4 3.7 (S) 17.1 620 93.151 107.298 100.225 94.276 75.382 q.m) 4.6723 1.337 1.937 1.937 4.9556 q.m) 21.846 10.068 12.294 13.476 13.619 8.415 m/NO 3.9 6.6 5.1 5.1 5.1 5.1 5.1 m/NO 3.383 0.0578 0.0389 0.0644 0.0837 0.35571	inlet Temp. (deg. C)	88	7	4.9	9.09	46.4		33		27.3		23
24 13.1 14.3 14.2 13.4 3.7 124 92.9 81.4 68.2 54.4 37.7 171 620 93.151 101.298 100.225 94.276 75.382 n) 4.6723 1.937 1.937 1.937 4.9556 21.846 10.068 12.294 13.476 13.619 8.415 n) 1.681 4.776 4.254 3.840 3.574 1.808 n) 3.9 6.6 5.1 5.1 5.1 5.1 5.1 n) 0.33383 0.0578 0.0599 0.0644 0.0837 0.3571	Outlet Temp. (deg. C)	112		. 88	74.9	9.09		46.4		. 25		27.3
124 92.9 81.4 68.2 54.4 37.7 171.620 93.151 101.298 100.225 94.276 75.382 n) 4.6723 1.937 1.937 4.9556 21.846 10.068 12.294 13.476 13.619 8.415 NO 3.9 6.6 5.1 5.1 5.1 5.1 NO 3.383 0.0578 0.0390 0.0644 0.0837 0.3571	Temp. Rise (deg. C)	24	**	3.1	14.3	14.2	-	13.4	•	3.7		4.3
171.620 93.151 101.298 100.225 94.276 75.382 n) 4.6723 1.937 1.937 4.9556 21.846 10.068 12.294 13.476 13.619 8.415 n0 4.776 4.254 3.840 3.574 1.808 n0 3.9 6.6 5.1 5.1 5.1 5.1 n0 5.383 0.0578 0.05390 0.0644 0.0837 0.3571	Flashing Temp. (deg. C)	124	òñ.	2.9	81.4	68.2	٠.	54.4		37.7		31.3
4.6723 1.937 1.937 1.937 4.9556 21.846 10.068 12.294 13.476 13.619 8.415 1.681 4.776 4.254 3.840 3.574 1.808 3.9 6.6 5.1 5.1 5.1 5.1 0.3383 0.0578 0.0390 0.0644 0.0837 0.3571	Heat Transfer Rate (kj/S)	171.620	93.1	51	101.298	100.225		94.276		75.382	87	.559
21.846 10.068 12.294 13.476 13.619 8.415 1.681 4.776 4.254 3.840 3.574 1.808 3.9 6.6 5.1 5.1 5.1 5.1 0.3383 0.0578 0.0390 0.0644 0.0837 0.3571	Heat Transfer Area (Sq.m)	4.6723	1.9	137	1.937	1.937		1.937		4.9556	4	9226
1.681 4.776 4.254 3.840 3.574 1.808 3.9 6.6 5.1 5.1 5.1 5.1 0.3383 0.0578 0.0390 0.0644 0.0837 0.3571	L.M.T.D. (deg. 10	21.846	10.0	89	12.294	13.476		13.619		8.415	un.	89
5.1 5.1 5.1 5.1 5.1 0.3383 0.0578 0.0390 0.0644 0.0837 0.3571	U (KW/sq.m/k)	1.681	4.7	7.6	4.254	3.840		3.574		1.808		666
0.3383 0.0578 0.0390 0.0644 0.0837 0.3571	Clean-U Value (kW/sq.m/ld	3.9		9.9	5.1	5.1		5.7		5.1		1
	f (sq.m K/kW)	0.3383	0.05	378	0.0390	0.0644		0.0837	-	0.3571	Ö	1373

Date: November 27, 94

Run No. 8

Time: 00:00

Variables	Brine Heater			Evaporator Stages	Byes		
		#1	#2	65 ##	**	50	•
Flowrate (kg/n)	0029	0059	6500	9200	9200	18500	18500
Specific Heat (kj/kg/k)	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Iniet Temp. (deg. C)	88	74.8	60.3	45.9	32.3	26.7	23
Outlet Temp. (deg. C)	112	88	74.8	60.3	45.9	30	26.7
Temp. Rise (deg. C)	24	13.2	14.5	14.4	13.6	8 .8	3.7
Flashing Temp. (deg. C)	124	26	81.3	89	53.9	37.1	30.7
Heat Transfer Rate (K)/S)	171.620	93.861	102.709	101.627	95.670	67.225	75.338
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. K)	21.846	10.217	12.364	13.658	13.692	8.645	5.649
U (KW/sq.m/lo	1.681	4.743	4.289	3.842	3.607	1.569	2.691
Clean-U Value (kW/sq.m/l0	3.9	9.9	5.7	26	5.3	5.7	, S
f (sq.m KVKW)	0.3383	0.0593	0.0371	0.0642	0.0811	0.4412	0.1755

2 10 10 10	Date: November 27	7, 94		Time: 04:00	Fvacorator States		Total Operation Time: 256 hr.	ne: 256 hr.	
Variables	Brine Heater		*	*	7) P		***	lr) 78:	
Flowrate (kg/h)	G G	200	6500	0059	0009		9200	18500	
Specific Heat (KJ/Kg/N)	ĸ	3.960	3.938	3.923	3.909		3.896	3.964	
inlet Temp. (deg. C)		88	74.8	60.3	45.9		32.3	26.7	
Outlet Temp. (deg. C)		112	88	74.8	60.3		45.9	8	
Temp. Rise (deg. C)		54	13.2	14.5	14.4		13.6	3.3	
Flashing Temp. (deg. C)		124	26	81.3	89		53.9	37.1	
Heat Transfer Rate (k(/5)	171.620	620	93.861	102.709	101.627	Ö	95.670	67.225	
Heat Transfer Area (Sq.m)	4.6	4.6723	1.937	1.937	1.937		1.937	4.9556	
L.M.T.D. (deg. 10	23.	21.846	10.217	12.364	13.658	₹	13.692	8.645	
U (low/sq.m/lo		681	4.743	4.289	3.842		3.607	1.569	٠.
Clean-U Value (kW/sq.m/lo		3.9	9.9	5.1	5.1	5	5.7	5.1	
f (sa.m K/MM)	0.3	0.3383	0.0593	0.0371	0.0642	Ö	0.0811	0.4412	

Date: November 27, 94

Run No. 8

Time: 08:00

Flowrate (kg/h) Specific Heat (kj/kg/k)	0039							
Flowrate (kg/h) Specific Heat (kj/kg/k)	920		*	#5	**	*	69	*
Specific Heat (kj/kg/K)	1	8	6500	0059	9200	6500	18500	18500
Injet Temp (dea C)	3.960	Q	3.938	3.923	3.909	3.896	3.964	3.962
ance temp, weg. c.	•	88	74.8	60.3	45.9	32.3	26.7	83
Outlet Temp. (deg. C)	÷	112	88	74.8	60.3	45.9	30	26.7
Temp. Rise (deg. C)		24	13.2	14.5	14.4	13.6	3,3	3.7
Flashing Temp. (deg. C)	72	124	93	81.3	89	53.9	57.1	30.7
Heat Transfer Rate (KJ/S)	171.620	2	93.861	102.709	101.627	95.670	67.225	75.338
Heat Transfer Area (Sq.m)	4.6723	10	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	21.846	92	10.217	12.364	13.658	13.692	8.645	5.649
U (KW/sq.m/sq	1.681	Σ	4.743	4.289	3.842	3.607	1.569	2.691
Clean-U Value (KW/Sq.m/K)	3.9	o	9.9	5	ភ្	.	5.3	5.3
f (sq.m K/kw)	0.3383	22	0.0593	0.0371	0.0642	0.0811	0.4412	0.1755

Run No. 8	Date: November 27, 94		Time: 12:00		Total Operation Time: 264 hr.	me: 264 hr.	
	Brine Heater			Evaporator Stages			
		**	# 2	#3	*	5#	9#
Howrate (kg/h)	0059	6500	6500	0059	9200	18500	18500
Specific Heat (kj/kg/lo	3.960	3.938	3.923	3.909	3.896	3.964	3.962
inlet Temp. (deg. C)	**	74.8	60.3	45.9	32.3	26.7	23
Outlet Temp. (deg. C)	112	88	74.8	60.3	45.9	30	26.7
Temp, Rise (deg. C)	72	13.2	14.5	14.4	13.6	3.3	3.7
Flashing Temp. (deg. C)	124	56	81.3	89	53.9	37.1	30.7
Heat Transfer Rate (kJ/S)	171.620	93.861	102.709	101.627	95.670	67.225	75.338
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	21.846	10.217	12.364	13.658	13.692	8.645	5.649
U (KW/sq.m/lo	1.681	4.743	4.289	3.842	3.607	1.569	2.691
Clean-U Value (kW/sq.m/k)	3.9	6.6	5.1	5.1	• 2.	5.1	5.1
f 15a.m K/kW)	0.3383	0.0593	0.0371	0.0642	0.0811	0.4412	0.1755

Date: November 27, 94

Run No. 8

Total Operation Time: 268 hr.

Time: 16:00

77.77	Brine Heater			Evaporator Stages	5		
Vallables		*	* 2	17) Th	*	**	*
Flowrate (kg/h)	0029	6500	9200	9200	0059	18500	18500
Specific Heat (kj/kg/l0	3.960	3.938	3.924	3.909	3.897	3.965	3.962
Inlet Temp. (deg. C)	88	75.2	8.09	46.5	33.1	27.1	23
Outlet Temp. (deg. C)	112	88	75.2	8.09	46.5	31.5	27.1
Temp. Rise (deg. C)	24	12.8	14.4	14.3	13.4	4.4	41
Flashing Temp. (deg. C)	124.5	94.1	82.3	68.3	54.2	37.9	31.2
Heat Transfer Rate (kj/S)	171.620	91.022	102.013	100.934	94.278	89.645	83.485
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. 10	22.397	11.319	12.997	13.402	13.293	8.409	5.915
U (KW/sq.m/d	1.640	4.152	4.052	3.888	3.661	2.151	2.848
Clean-U Value (kW/sq.m/k)	6.2	9.6	1. 1.	V	5.1	5.1	FS
f (sq.m K/kM)	0.3533	0.0894	0.0507	0.0611	0.0770	0.2688	0.1550
						2002	

Run No. 8	Date: November 27, 94		Time: 20:00		Total Operatio	Total Operation Time: 272 hr.	
	Brine Heath			Evaporator Stages			
		**	# 2	#3	*	*C	*
Flowrate (kg/h)	0059	6500	9290	6500	0059	18500	18500
Specific Heat (KJ/Kg/K)	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Inlet Temp. (deg. C)	***	74.7	60.1	45.7	32.2	26.6	22
Outlet Temp. (deg. C)	112	88	74.7	60.1	45.7	31	26.6
Temp. Rise (deg. C)	24	13.3	14.6	14.4	13.5	4.4	4.6
Flashing Temp. (deg. C)	125.5	93.8	81.6	2.79	53.6	36.9	30.6
Heat Transfer Rate (KJ/S)	171.620	94.570	103.414	101.622	94.964	89.639	93.657
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. fo	23.491	11.159	12.846	13.548	13,547	7.897	6.009
U (kw/sq.m/lo	1.564	4.375	4.156	3.872	3.619	2.291	3.145
Clean-U Value (kW/sq.m/K)	3.9	9.9	5.1	5.1	5.3	5.1	5.1
f (sq.m K/kw)	0.3831	0.0771	0.0445	0.0622	0.0802	0.2405	0.1219

Date: November 28, 94

Run 36.8

Total Operation Time: 276 hr.

Time: 00:00

Variables	Brine Heater			Evaporator Stages			
		#1	**	£#3	*	to %	*
Flowrate (kg/h)	0200	9200	6500	6500	0059	18000	18000
Specific Heat (kj/kg/k)	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Inlet Temp. (deg. C)	88	75.1	2.09	46.3	52.8	26.8	23
Outlet Temp. (deg. C)	112	88	75.1	60.7	46.3	×	26.8
Temp. Rise (deg. C)	24	12.9	14.4	14.4	13.5	4.2	3.
Flashing Temp. (deg. C)	125.5	93.6	81.7	68.1	22	57.4	30.9
Heat Transfer Rate (kj/S)	171.620	91.731	102.011	101.637	94.976	83.253	75.284
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg: Ko	23.491	10.795	12.441	13.328	13.330	8.324	5.794
U (kW/sq.m/ia	1.564	4.387	4.233	3.937	3.678	2.018	2.622
Clean-U Value (kW/sq.m/k)	Ø.	9.9	5.1	5.1	\$	5.3	Ş
fisq.m K/kw	0.3831	0.0764	0.0402	0.0579	0.0758	0.2994	0.1853

Ruh 70. 8	Date: November 28, 94		Time: 04:00		Total Operation Time: 280 hr.	ne: 280 hr.	
Variables	Brine Heater			Evaporator Stages			
		*	#2	es #	*	#5	65
Flowrate (kg/h)	6500	0059	0059	0059	0059	18200	18200
Specific Heat (kj/kg/N)	3.960	3.938	3.924	3.909	3.896	3.964	3.962
iniet Temp. (deg. C)	&	75.2	60.7	46.3	32.8	26.8	22
Outlet Temp. (deg. C)	112	88	75.2	60.7	46.3	31	26.8
Temp. Rise (deg. C)	24	12.8	14.5	14.4	13.5	4.2	8.4
Flashing Temp. (deg. C)	125	93.9	81.9	68.3	54.1	37.4	30.8
Heat Transfer Rate (kJ/S)	171.620	91.022	102.720	101.637	94.976	84.178	96.146
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. to	22.945	11.096	12.588	13.548	13.438	8.324	6.088
U (KW/sq.m/ko	1.604	4.235	4.213	5.873	3.649	2.041	3.187
Clean-U Value (KW/sq.m/K)	6,6	6.6	5.1	5.1	5.1	5.7	5.1
f (sq.m K/k/M)	0.3683	0.0846	0.0413	0.0621	0.0780	0.2940	0.1177

Run No. 8	Date: November 28, 94		Time: 08:00		Total Operati	Total Operation Time: 284 m.	
Variables	Brine Heater			Evaporator Stages			
		# 1	# 2	£#	**	in N	•
Flowrate (kg/h)	0059	9200	0059	0059	9200	18300	18300
Specific Heat (kJ/kg/K)	3.961	3.939	3.924	3.909	3.896	3.965	3.963
Inlet Temp. (deg. C)	68	75.3	60.7	46.2	32	78	24
Outlet Temp. (deg. C)	112	88	75.3	2.09	46.2	32.5	28
Temp. Rise (deg. C)	23	13.7	14.6	14.5	14.2	4.5	* 4
Flashing Temp. (deg. C)	115	92.3	81.3	67.1	23	36.8	30.4
Heat Transfer Rate (KJ/S)	164.495	97,437	103.430	102.341	99.891	90.704	80.579
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	10.651	8.357	11.836	12.252	12.593	6.284	4.078
U (kW/sq.m/k)	3.306	6.019	4.511	4.312	4.095	2.913	3.987
Clean-U Value (kW/sq.m/k)	3.9	6.6	5.1	5.4	5.7	5.1	5.4
f.(sq.m.k/kw)	0.0461	0.0146	0.0256	0.0358	0.0481	0.1472	0.0547
	The second secon						

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

Rum No. 8	Date: November 28, 94		Time: 12:00		Total Operation Time: 288 hr.	rline: 288 hr.	
	Brine Heater			Evaporator Stages			
		***	#2	65	*	10 14	*
Flowrate (kg/h)	6500	9200	9200	0059	9200	18200	18200
Specific Heat (KJ/Kg/K)	3.961	3.939	3.924	3.909	3.897	3.965	3.963
inlet Temp. (deg. C)	89.5	75.4	6003	46.6	33.2	27.2	24
Outlet Temp. (deg. C)	112	89.5	75.4	6.09	46.6	32.5	27.2
Temp. Rise (deg. C)	22.5	14.1	14.5	14.3	13.4		3.2
Flashing Temp. (deg. C)	115	92	80.9	6.99	53.2	37.2	30.9
Heat Transfer Rate (KJ/S)	160.932	100.291	102.726	100.937	94.280	106.239	64.107
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. K)	10.514	7.448	11.232	11.732	12.087	7.020	5.135
u (kw/sq.m/io	3.276	6.952	4.722	4.442	4.027	3.054	2.519
clean-U Value (KW/sq.m/k)	3.9	9.6	5.1	5.1	5.1	5.7 1.3	5.1
f (sq.m K/kW)	0.0488	-0.0077	0.0157	0.0291	0.0522	0.1314	0.2009

Date: November 28, 94

Rum No. 8

Total Operation Time: 292 hr.

Time: 16:00

Variation	Brine Heater			Evaporator Stages			
		#	# 2	£#	**	5#	*
Flowrate (kg/h)	6500	6500	0059	6500	0059	18500	18500
Specific Heat (kj/kg/k)	3.961	3.939	3.923	3.909	3.897	3.965	3.963
Inlet Temp. (deg. C)	6 8	75	60.5	46.4	33	27.4	24
Outlet Temp. (deg. C)	112	88	75	60.5	46.4	32	27.4
Temp. Rise (deg. C)	23	14	14.5	14.1	13.4	4.6	3.4
Flashing Temp. (deg. C)	116	92.2	2.2	67.2	53.1	57.3	31
Heat Transfer Rate (KJ/S)	164.495	29.567	102.715	99.518	94.276	93.725	69.238
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	12.045	8.325	11.915	12.447	12.197	7.362	5.113
U (KW/sq.m/i0	2.923	6.175	4.451	4.128	3.990	2.569	2.733
Clean-U Value (KW/sq.m/k)	3.9	6.6	5.3	5.1	5.7	Σ̈́	r.
f.isq.m.K/kW	0.0857	0.0104	0.0286	0.0462	0.0545	0.1932	0.1699
					and the production of the contract of the cont		

CALCULATIONS OF OVERALL HEAT TRANSFER COFFFICIENT AND FOULING FACTOR

Run 180. 8	Date: November 28, 94			Time: 20:00		Total Operation Time:296 hr.	Time:296 hr.	
	Ridne Heater				Evaporator Stages			
		*		# 2	E ##	*	10 #	•
Flowrate (kg/h)	0209	ğ	9059	6500	0059	0059	18500	18500
Specific Heat (kj/kg/kg	3.961	ĸ	3.939	3.923	3.909	3.896	3.965	3.963
Inlet Temp. (deg. C)	88.5		75	60.5	46.2	32.7	27.1	23.5
Outlet Temp. (deg. C)	112	ω	88.5	75	60.5	46.2	31.8	27.1
Temp. Rise (deg. C)	23.5	•	13.5	14.5	14.3	13.5	4.7	3.6
Flashing Temp. (deg. C)	116	0 1	91.9	80.7	8.99	52.9	36.9	30.8
Heat Transfer Rate (kl/S)	168.058	36	96.004	102.715	100.927	94.974	95.759	73.307
Heat Transfer Area (Sq.m)	4.6723	•	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. 10	12.189	κờ	8.419	11.460	12.070	12.233	7.196	5.298
U (kW/sq.m/id	2.951	in in	5.887	4.627	4.317	4.008	2.685	2.792
Clean-U Value (kw/sq.m/k)	3.9		9.9	5.1	5.7	5.1	5.1	5.1
f (sq.m K/kW)	0.0825	0.0	0.0183	0.0200	0.0356	0.0534	0.1763	0.1621
		:						

Date: November 29, 94

Run No. 8

Total Operation Time: 500 lyr.

Time: 00:00

Variables	Brine Heater			Evaporator Stages			
		*	# 3	5° ##	*	ic W	9#
Flowrate (kg/h)	6500	9290	0059	9200	9200	18500	18500
Specific Heat (KJ/Kg/N)	3.961	3.939	3.923	3.909	3.896	3.965	3.963
Inlet Temp. (deg. C)	8.88	75.1	60.5	46	32.5	27.1	23.5
Outlet Temp. (deg. C)	112	88.8	75.1	60.5	46	31.5	27.1
Temp. Rise (deg. C)	23.2	13.7	14.6	14.5	13.5	4.4	3.6
Flashing Temp. (deg. C)	116	91.9	80.7	66.7	52.8	36.8	30.8
Heat Transfer Rate (kJ/S)	165.921	97.432	103.425	102.336	94.970	89.645	73.307
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	12.103	8.107	11.380	12.027	12.343	7.280	5.298
U-(kw/sq.m/ko	2.934	6.205	4.692	4.393	3.972	2.485	2.792
Clean-U Value (KW/sq.m/i0	3.9	9.9	5.7	5.4	5.4	5.1	5.3
f (sq.m.K/kW)	0.0844	9600.0	0.0171	0.0316	0.0557	0.2063	0.1621
					36 m		

Run 160. 8	Date: November 29,	ber 29, 94		Time: 04:00		Total Operati	Total Operation Time: 504 hr.	
Variables	Brine Heater	rter			Evaporator Stages	9		
			# #	#2	£#	*	₩0 **	*
Flowrate (kg/h)		6500	9200	9029	6500	0059	18200	18200
Specific Heat 00/kg/10		3.961	3.939	3.923	3.909	3.896	3.964	3.962
Iniet Temp. (deg. C)		68	75.1	60.5	46.1	32.4	22	
Outlet Temp. (deg. C)	-	112	68	75.1	60.5	46.1	31	
Temp. Rise (deg. C)		23	13.9	14.6	14.4	13.7	4	
Flashing Temp. (deg. C)		116	85	80.9		52.8	36.9	30.7
Heat Transfer Rate (KJ/S)		164.495	98.857	103.425	101.632	96.377	80.171	80.128
Heat Transfer Area (Sq.m)		4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. lo		12.045	8.041	11.609	12.329	12.304	7.728	5.458
U (kw/sq.m/ko		2.923	6.347	4.600	4.256	4.044	2.093	2.963
Clean-U Value (KW/sq.m/lo		3.9	6.6	5.1	5.1	5.1	5.4	5.1
A 450 TO 10 A 50 A		12000	03000	X1000	08200	0.0512	4,000	0.1415

Date: November 29, 94

Run No. 8

Total Operation Time: 506 hr.

Time: 08:00

Variables	Brine Heater			Evaporator Stages			
		#	#2	en ##	*	lo W	9
Flowrate (kg/h)	6500	0059	6500	9059	9200	18500	18500
Specific Heat (kj/kg/k)	3.961	3.939	3.924	3.909	3.897	3.965	3.963
Inlet Temp. (deg. C)	88	75.4	6.09	46.7	33.2	27.4	24
Outlet Temp. (deg. C)	112	88	75.4	6.09	46.7	32	27.4
Temp. Rise (deg. C)	23	13.6	14.5	14.2	13.5	4.6	3.4
Flashing Temp. (deg. C)	116	92.7	81.4	67.5	53.4	37.6	31.1
Heat Transfer Rate (kJ/S)	164.495	96.727	102.726	100.232	94.985	93.725	69.238
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	12.045	8.818	11.801	12.371	12.233	7.672	5.217
U (KW/sq.m/kg	2.923	5.663	4.494	4.183	4.009	2.465	2.678
Clean-U Value (kW/sq.m/l0	O. M.	9.9	5.1	5.1	<u>5.</u>	5.1	5.7
f.sq.m K/kw)	0.0857	0.0251	0.0264	0.0430	0.9534	0.2095	0.1773

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR Run No. 8 Date: November 29, 94

Total Operation Time: 512 hr.

Rine Heath				Evaporator Stages			
		1	#2	₩ *	*	₩.	*
Flowrate (kg/h)	0059	9200	6500	0059	0059	18500	18500
Specific Heat (KJ/Kg/10	3.961	3.940	3.924	3.910	3.897	3.965	3.963
Inlet Temp. (deg. C)	89.5	75.6	5.13	47	33.8	27.7	24.5
Outlet Temp. (deg. C)	112	89.5	75.6	61.3	47	33	27.7
Temp. Rise (deg. C)	22.5	13.9	14.	14.3	13.2	5.3	3.2
Flashing Temp. (deg. C)	117	92.8	81.5	67.5	53.7	37.7	31.4
Heat Transfer Rate (KJ/S)	160.932	98.871	101.317	100.947	92.883	107.998	65.168
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	13.198	8.419	11.619	11.958	12.126	7.020	5.135
U (KW/Sq.m/K)	2.610	6.063	4.502	4.358	3.955	3.105	2.561
Clean-U Value (KW/sq.m/N)	9.5	6.6	5.7	r.	5.1	5.1	.
f (sq.m K/kw)	0.1268	0.0134	0.0261	0.0334	0.0568	0.1260	0.1944

Date: November 29, 94

Run No. 8

Total Operation 11me: 316 hr.

Time: 16:00

	Brine Heater			Evaporator Stages			
		*	#2	e) **	2	10	*
Flowrate (kg/h)	6500	6500	6500	9200	9200	18500	18500
Specific Heat (kj/kg/l0	3.961	3.939	3.924	3.910	3.897	3.965	3.963
Inlet Temp. (deg. C)	68	75.7	61.2	47.2	33.9	28.2	. 23
Outlet Temp. (deg. C)	112	68	75.7	61.2	47.2	88	28.2
Temp. Rise (deg. C)	23	13.3	14.5	14	13.3	4.8	3.2
Flashing Temp. (deg. C)	116.5	93.5	6.18	67.8	25	38.2	37.9
Heat Transfer Rate (KJ/S)	164,495	94.598	102.734	98.830	93.590	97.813	65.173
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	12.706	9.672	12.027	12.300	12.272	7.340	5.135
U (KW/sq.m/k)	2.774	5.049	4.410	4.148	3.937	2.689	2.561
Clean-U Value (kW/sq.m/l0	6.8	9.9	5.2	25	2.5	5.1	5.1
f (sq.m K/kw)	0.1045	0.0465	0.0307	0.0450	0.0579	0.1758	0.1944

Ru 76. 8	Date: November 29, 94		Time: 20:00		Total Operation	Total Operation Time: 320 hr.	
Variables	Brine Heater			Evaporator Stages	2		
		*	2 #*	#3	**	ko #k	*
Flowrate (kg/h)	9200	9200	0059	0059	0059	18500	18500
Specific Heat (kl/kg/K)	3.961	3.939	3.924	3.909	3.897	3.965	3.963
inlet Temp. (deg. C)	6 8	75.3	6.09	46.8	33.5	28	24.5
Outlet Temp. (deg. C)	112	68	75.3	6.09	46.8	52.8	
Temp. Rise (deg. C)	23	13.7	14.4	14.1	13.3	4.8	
Flashing Temp. (deg. C)	117	92.8	81.5	67.3	53.6	37.8	31.7
Heat Transfer Rate (KVS)	164.495	97.437	102.016	99.528	93.582	97.810	71.279
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	13.351	8.971	11.993	12.112	12.272	7.133	5.257
U (KW/sq.m/l0	2.637	2.608	4.392	4.242	3.937	2.767	2.736
Clean-U Value (kW/sq.m/ld	6.5		5.7	5.1	5.1	5.7	5.1
€ feer on K/ROM	0.1228	0.0268	0.0316	0.0396	0.0579	0.1653	0.1694

Date: November 30, 94

Kun No. 8

Total Operation Time: 324 hr.

Time: 00:00

Variables	Brine Heater			Evaporator Stages			
		# 1	#2	£#		5	*
Flowrate (kg/h)	0059	0059	0059	6500	0059	18500	18500
Specific Heat (KJ/Kg/N)	3.961	3.939	3.924	3.909	3.897	3.965	3.963
inlet Temp. (deg. C)	68	75.4	2	46.8	33.3	27.9	24
outlet Temp. (deg. C)	112	88	75.4	9	46.8	32	27.9
Temp. Rise (deg. C)	23	13.6	14.4	14.2	13.5	4.1	3.9
Flashing Temp. (deg. C)	118.5	92.7	87.3	67.1	53.5	37.7	31.6
Heat Transfer Rate (KJ/S)	164.495	96.727	102.019	100.235	94.987	83.541	79.422
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LMTD. (deg: 10	15.206	8.818	11.654	11.810	12.233	7.566	5.418
U (KW/sq.m/X)	2.315	5.663	4.519	4.382	4.009	2.228	2.958
Clean-U Value (KW/sq.m/l0	6.20	9.9	5.1	7	2.3	5.1	Σ.
f (sq.m K/kw)	0.1755	0.0251	0.0252	0.0322	0.0534	0.2527	0.1420

Date: November 30, 94

Run No. 8

Total Operation Time: 532 hr.

Time: 08:00

						-	
Variables	Brins Heater			Evaporator Stages			
		#1	*5	O #	*	io **	•
Flowrate (kg/h)	0059	0059	0299	0059	0059	18500	18500
Specific Heat (kj/kg/k)	3.961	3.939	3.924	3.909	3.897	3.965	3.963
Inlet Temp. (deg. C)	68	75.5	2.7	46.7	53.1	7.72	24
Outlet Temp. (deg. C)	112	68	75.5	61.1	46.7	32	27.7
Temp. Rise (deg. C)	23	13.5	14.4	14.4	13.6	4.3	3.7
Flashing Temp. (deg. C)	117	97.8	81	67.5	53.4	37.6	31.3
Heat Transfer Rate (KUS)	164.495	96.018	102.022	101.646	789.26	87.615	75.348
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	13.351	7.664	11.198	12.217	12.269	7.547	5.234
U (KW/sq.m/lo	2.637	6.468	4.704	4.295	4.026	2.343	2.905
Clean-U Value (kW/sq.m/ld	6 .2	9.9	5.1	2.4		2.1	5.
f.sq.m k/kw)	0.1228	0.0031	0.0165	0.0367	0.0523	0.2308	0.1481

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	Refre Heater				Evaporator Stages	r Stages			
		l	*	**	77		7#	to M	
Flowrate (kg/h)		929	6500	0059	0059	_	6500	18500	
Specific Heat (KJ/Kg/K)		3.961	3.939	3.924	3.910		3.898	3.966	- 1
Injet Temp. (deg. C)		88	75.9	61.5	47.5		34.3	28.2	
Outlet Temp. (deg. C)		112	68	75.9	64.5		47.5	34	
Temp. Rise (deg. C)		23	13.1	14.4	41		13.2	5.8	=
Flashing Temp. (deg. C)		118	92.7	81.6	<i>C13</i>		54.2	38.3	
Heat Transfer Rate (kj/S)		164.495	93.178	102.032	98.837	1	92.893	118.199	
Heat Transfer Area (Sq.m)	٠.	4.6723	1.937	1.937	1.937		1.937	4.9556	
L.M.T.D. (deg. 10		14.598	8.658	11.426	11.853	•	12.126	6.792	
U (KW/sq.m/k)		2.412	5.556	4.610	4.305	10	3.955	3.512	
Clean-U Value (KW/sq.m/lo	-	3.9	9.9	5.1	25.		5.7	5.1	
f (so m K/kW)		0.1582	0.0285	0.0208	0.0362		0.0568	0.0887	

Date: November 30, 94

Run No. 8

Total Operation Time: 340 hr.

Time: 16:00

Variables	Brine Hoster			Evaporator Stages			
		# 5	#2	#3	**	in A	• • • • • • • • • • • • • • • • • • •
Flowrate (kg/h)	0059	9059	6500	6500	6500	18500	18500
Specific Heat (kj/kg/k)	3.961	3.939	3.924	3.910	3.898	3.966	3.963
iniet Temp. (deg. C)	68	75.9	61.6	47.5	34.4	28.2	25
Outlet Temp. (deg. C)	112	68	75.9	61.6	47.5	34	28.2
Temp. Rise (deg. C)	23	13.1	14.3	14.1	13.1	5.8	3.2
Flashing Temp. (deg. C)	117	93.2	82	67.9	54.2	38.5	32
Heat Transfer Rate (kj/5)	164.495	93.178	101.325	99.545	92.191	118.199	65.173
Heat Transfer Area (Sq.m)	4.6723	1.957	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	13.351	9.254	11.845	12.000	12.090	7.004	5.238
U (KW/sq.m/lo	2.637	5.198	4.416	4.283	3.937	3.405	2.511
Clean-U Value (KW/sq.m/K)	8 .20	6.6	5.1	<u> </u>	5.4	ŗ,	5.1
f sq.m K/kw	0.1228	0.0409	0.0304	0.0374		0.0976	0.2022

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Aum 70. 8	Date: November 30, 94		Time: 20:00		Total Operation	Total Operation Time: 344 hr.	
Verleblee	Brine Heater			Evaporator Stages			
		*	# 2	#3	##	£#	***
Flowrate (kg/h)	029	6500	9200	0059	0059	18400	18400
Specific Heat (KJ/Kg/K)	3.961	3.939	3.924	3.909	3.897	3.965	3.963
Inlet Temp. (deg. C)	88	75.5	&	46.8	33.5	27.9	52
Outlet Temp. (deg. C)	112	68	75.5	26	46.8	10	27.9
Temp. Rise (deg. C)	K 2	13.5	14.5	14.2	13.3	5.7	2.9
Flashing Temp. (deg. C)	118	92.7	81.3	67.1	53.6	37.8	34.7
Heat Transfer Rate (k)/5)	164.495	96.018	102.729	100.235	93.582	103.362	58.742
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. 10	14.598	8.786	11.574	11.810	12.272	7.045	5.114
U (KW/sq.m/ko	2.412	5.642	4.582	4.382	3.937	2.961	2.318
Clean-U Value (KW/sq.m/K)	3.9	9.9	5.1	5.1	5.7	5.7	5.7
f (sq.m K/kw)	0.1582	0.0257	0.0222	0.0322	0.0579	0.1417	0.2353

Date: December 01, 94

Run No. 8

Total Operation Time: 548 hr.

Time: 00:00

Variables	Brine Heater				Ą	Evaporator Stages	ages				
			* 77	#2		6		*4		k;	1 0
Flowrate (kg/h)		9200	6500	0059		9200		0059		18500	18500
Specific Heat (kj/kg/K)		3.961	3.939	3.924		3.910		3.897		3.965	3.963
Inlet Temp. (deg. C)		%	75.5	 61		46.9		33.5		27.8	24.5
Outlet Temp. (deg. C)		112	88	75.5		63		46.9		32.5	27.8
Temp. Rise (deg. C)		23	13.5	14.5		16.1		13.4		4.7	3.3
Flashing Temp. (deg. C)		118	93.2	81.7		67.5		53.7		37.9	31.7
Heat Transfer Rate (KJ/S)	164	164.495	96.018	102.729		99.530		94.286		95.769	67.205
Heat Transfer Area (Sq.m)	4	4:6723	1.937	1.937		1.937		1.937		4.9556	4.9556
LINST.D. (deg: 10 % % C %	₽	14.598	9.385	12.027		12.224	·. ·	12.308		7.506	5.382
U dcw/sq.m/to		2.412	5.282	 4.410	1	4.204		3.955	-	2.575	2.520
Clean-U Value (kW/sq.m/lo		9.0	9.6	5.1	-	7.5	: 1.	۲.		5.	53
f.sq.m.K/kw	0	0.1582	0.0378	0.0307		0.0418		0.0568		0.1923	0.2008

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CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT. AND FOULING FACTOR

Zu No. 6	Date: December 01, 94	2,2		Time: 04:00		Total Operation 11me: 552 hr.	Time: 352 hr.	
					Evaporator Stages			
Variables			*	N #	eo **	**	10 74	*
Flowrate (kg/h)		6500	9059	6500	9059	0059	18500	18500
specific Heat (ki/kg/k)		3.961	3.939	3.923	3.909	3.897	3.965	3.962
Inlet Temp (deg. C)		88.5	74.9	90.5	46.4	32.9	27.5	23
Outlet Temp. (deg. C)		112	88.5	74.9	60.5	46.4	3	27.5
Temn Pice (ded C)		23.5	13.6	14.4	14.1	13.5	3.5	4.5
Ebshing Temp (deg C)		118	92.1	æ	6.99	53.3	37.5	31.3
Heat Transfer Bate (ki/S)	*	168.058	96.713	102.005	99.518	94.978	71.308	91.633
Heat Transfer Area (SC.m)		4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
Of Ched. IO		14.755	8.696	11.880	12.112	12.454	8.125	2.760
to draw/so m/to		2.438	5.742	4.433	4.242	3.937	1.774	3.210
Clean-U Value (kW/sq.m/lo		3.9	9.6	5.1	5.1	5.7	5.1	5.1
f (sa.m K/KW)		0.1538	0.0226	0.0295	0.0397	0.0579	0.3686	0.1154
		-						

Date: December 01, 94

Run No. 8

Total Operation Time: 356 hr.

Vodables	Brine Heater			Evaporator Stages			
		**	#2	*	*	9#	*
Flowrate (kg/h)	6500	029	0059	0059	9200	18500	18500
Specific Heat (kj/kg/k)	3.961	3.939	3.924	3.909	3.897	3.965	3,963
Inlet Temp. (deg. C)	88.5	75.2	60.7	46.6	33	27.5	23.5
Outlet Temp. (deg. C)	112	88.5	75.2	60.7	46.6	32	27.5
Temp. Rise (deg. C)	23.5	13.3	14.5	14.1	13.6	4.5	4
Flashing Temp. (deg. C)	118	91.9	81.1	67.2	53.4	37.4	31.3
Heat Transfer Rate (KJ/S)	168.058	94.584	102.720	99.523	95.685	91.688	81.454
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg: 10	14.755	8.356	11.688	12.224	12.379	7.424	5.562
U (kW/sq.m/ko.	2.438	5.844	4.537	4.203	3.990	2.492	2.955
Clean-U Value (KW/sq.m/l0	6 10	9.9	, , , , , , , , , , , , , , , , , , ,	5.4	£.8.	7.5	2
f (sq.m K/kW)	0.1538	0.0196	0.0243	0.0418	0.0545	0.2052	0.1423
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Vultables Evaporator Stages # 1 # 2 # 3 # 4 # 5	Run No. 8	Date: December 01, 94	01, 94		Time: 12:00		Total Operation	Total Operation Time: 360 hr.	
6500 6500 6500 6500 6500 6500 6500 6500 46.9 3.897 3.965 3.961 3.939 3.924 3.909 3.897 3.965 89 75.4 60.9 46.9 33.6 27.7 112 89 75.4 60.9 46.9 32 23 13.6 14.5 14 13.3 4.3 A 118.2 98.72 102.726 98.823 93.84 87.615 A 4,6723 1,937 1,937 1,937 1,937 1,937 1,937 2,222 m/N 3.86 5.370 4,369 4,148 3.868 2,222 m/N 3.8 6.6 5.1 5.1 5.1 5.1 A 6.5 5.370 4,369 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450 0,0450		Brine Mester				Evaporator Stag	2		
6500 6500 6500 6500 18500 3,961 3,939 3,929 3,969 3,965 89 75,4 60,9 46,9 33,6 27.7 112 89 75,4 60,9 46,9 35 27.7 C 113,6 14,5 14 13,3 4,3 4,3 C 118,2 96,72 102,726 96,823 98,84 87,615 7,3 A 4,6723 1,937 1,937 1,937 4,356 4,356 4,356 A 4,6723 1,937 1,240 7,340 7,957 7,957 A 4,362 5,370 4,369 4,148 3,668 2,222 A 5,370 6,6 5,1 5,1 5,1 5,1 A 6,6 5,1 5,1 5,1 5,1 5,1 5,1 B 6,6 5,1 6,0,9 8,0,9 8,0 1,3,3 1,3,3				**	71	**	*	₩.	*
3.961 3.939 3.924 3.909 3.897 3.965 89 75.4 60.9 46.9 27.7 112 89 75.4 60.9 46.9 32 23 13.6 14.5 14 13.3 4.3 5 13.6 14.5 14 13.3 4.3 5 14.4 81.7 67.5 53.9 35.8 35.8 3,3 164.495 96.727 102.726 98.823 93.584 87.615 7 3,1m 4.6723 1.937 1.937 1.937 4.9556 4 4.9556 7 4,484 9.299 12.140 12.300 12.492 7.957 7.957 m/N 3.9 6.6 5.1 5.1 5.1 5.1 5.1 m/N 3.9 6.6 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.3 6.2540 <t< td=""><td>Flowrate (kg/h)</td><td></td><td>9200</td><td>6500</td><td>9290</td><td>9200</td><td>0059</td><td>18500</td><td>18500</td></t<>	Flowrate (kg/h)		9200	6500	9290	9200	0059	18500	18500
D T5.4 60.9 46.9 33.6 27.7 D T12 89 75.4 60.9 46.9 33.6 27.7 L C T18.2 13.6 14.5 14. 13.3 4.3 4.3 L C T18.2 93.7 14.7 67.5 53.9 38 38 KU/S) 164.495 96.727 102.726 98.823 93.584 87.615 7 Sq.my 4.6728 1.937 1.937 1.937 4.9556 4 L L L L L L L L L L L L L L L L L L L	Specific Heat (KJ/Kg/IO		3.961	3.939	3.924	3.909	3.897	3.965	3.963
112 89 75.4 60.9 46.9 32 23 13.6 14.5 14.5 14.3 4.3 118.2 93.1 81.7 67.5 53.9 38 118.2 96.72 102.726 96.823 93.584 87.615 7 10 4.6723 1.937 1.937 1.937 4.9556 4 10 4.148 9.299 12.140 12.300 12.492 7.957 10 5.37 4.369 4.148 3.868 2.222 10 5.3 6.6 5.1 5.1 5.1 5.1 10 1.65 5.1 5.1 5.1 5.1 5.1 10 1.652 0.0450 0.0450 0.0625 0.2540 9.2540 9.2540 9.2540	Inlet Temp. (deg. C)	• •	8	75.4	609	46.9	33.6	27.7	24
118.2 13.6 14.5 14.5 13.3 4.3 118.2 93.1 81.7 67.5 53.9 38 164.495 96.727 102.726 98.823 93.584 87.615 7 10 4.6723 1.937 1.937 4.9556 4 10 4.642 9.299 12.140 12.300 12.492 7.957 10 2.372 5.370 4.369 4.148 3.868 2.222 10 3.9 6.6 5.1 5.1 5.1 5.1 10 3.9 6.6 5.1 5.1 5.1 5.1 10 4.1652 0.0328 0.0450 0.0625 0.2540 0	Outlet Temp. (deg. C)		112	8	75.4	6.09	46.9	32	7.72
1182 93.1 81.7 67.5 53.9 38 164.495 96.727 102.726 98.823 93.584 87.615 7 10 4.6723 1.937 1.937 1.937 4.9556 4 10 4.6424 9.299 12.140 12.300 12.492 7.957 10 2.372 5.370 4.369 4.148 3.868 2.222 10 3.9 6.6 5.1 5.1 5.1 5.1 10 1.652 0.0328 0.0450 0.0625 0.2540 0	Temp. Rise (deg. C)		23	13.6	14.5	4	13.3	4.3	3.7
164.495 96.727 102.726 98.823 93.584 87.615 n) 4.6723 1.937 1.937 4.9556 4 14.842 9.299 12.140 12.300 12.492 7.957 10 2.372 5.370 4.369 4.148 3.868 2.222 10 3.9 6.6 5.1 5.1 5.1 5.1 10 1652 0.0347 0.0328 0.0450 0.0625 0.2540 0	Flashing Temp. (deg. C)		118.2	93.1	84.7	67.5	53.9	38	31.6
Area (Sq.m) 4.6723 1.937 1.937 1.937 4.9556 4 10 14.842 9.299 12.140 12.300 12.492 7.957 2.372 5.370 4.369 4.148 3.868 2.222 00M/sq.m/lo 3.9 6.6 5.1 5.1 5.1 0.1652 0.0347 0.0328 0.0450 0.0625 0.2540 0	Heat Transfer Rate (KJ/S)	100	4.495	96.727	102.726	98.823	93.584	87.615	75.348
IQ 14.842 9.299 12.140 12.300 12.492 7.957 CAM/Sq.m/No 3.372 5.370 4.369 4.148 3.868 2.222 IXM/Sq.m/No 3.9 6.6 5.1 5.1 5.1 5.1 0.1652 0.0347 0.0328 0.0450 0.0625 0.2540 C	Heat Transfer Area (Sq.m)	4	.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
0cM/sq.m/lo 2.372 5.370 4.369 4.148 3.868 2.222 3.9 6.6 5.1 5.1 5.1 6.1652 0.0347 0.0328 0.0450 0.0625 0.2540 0	L.M.T.D. (deg: 10	Ť	4.842	9.299	12.140	12.300	12.492	7.957	5.546
00/045q.m/lo 3.9 6.6 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1	U (KW/sq.m/ld		2.372	5.370	4.369	4:148	3.868	2.222	2.742
0.1652 0.0347 0.0328 0.0450 0.0625 0.2540	Clean-U Value (KW/Sq.m/K)		3.9	9.9	5.1	5 5	5.3	5.1	.5.1
	£ (5q.m K/kW)	0	.1652	0.0347	0.0328	0.0450	0.0625	0.2540	0.1687

Date: December 01, 94

Run No. 8

Total Operation Time: 364 hr.

Variables	Brine Heater			Evaporator Stages	seßi		
		# 7	Z#	₩.	7	10 12	*
Fiowrate (kg/h)	0059	9200	6500	9200	9200	18400	18400
Specific Heat (kj/kg/k)	3.961	3.939	3.923	3.909	3.897	3,965	3.963
Inlet Temp. (deg. C)	88.5	75	60.5	46.5	33	27.6	23.5
Outlet Temp. (deg. C)	112	88.5	75	60.5	46.5	31.5	27.6
Temp. Rise (deg. C)	23.5	13.5	14.5	70	13.5	3.9	4.1
Flashing Temp. (deg. C)	119	92.9	81.4	67.3	53.5	37.8	31.5
Heat Transfer Rate (KJ/S)	168.058	96.004	102.715	98.813	94.980	79.032	83.039
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg: K)	15.967	9.621	12.252	12.522	12.564	8.094	5.707
U (KW/Sq.m/N	2.253	5.152	4.328	4.074	3.903	1.970	2.936
Clean-U Value (kW/sq.m/k)	6.6	9.6	5.1	5.	5.5	r.	5.7
f (Sq. m K/kw)	0.1875	0.0426	0.0350	0.0494	0.0601	0.3114	0.1445

	CALCULATIONS OF OVERALL HEAL I KANSFER CO	COEFFICIENT AND FOULING FACTOR	FOULING FACTOR				
Run No. 8	Date: December 01, 94		Time: 20:00		Total Operation Time: 366 hr.	Time: 366 hr.	
	Brine Heater			Evaporator Stages			
		*	Q	⇔	**	\$#	*
Flowrate (kg/h)	0059	029	6500	0059	0059	18200	18200
Specific Heat (kJ/kg/l0	3.960	3.938	3.923	3.909	3.897	3.965	3.963
Injet Temp. (deg. C)	88	74.9	60.4	46.3	33	27.3	23.5
Outlet Temp. (deg. C)	112	88	74.9	60.4	46.3	31.5	27.3
Temp. Rise (deg. C)	72	13.1	14.5	14.1	13.3	4.2	3.8
Flashing Temp. (deg. C)	118.5	92.7	81.7	67.2	53.4	37.6	31.3
Heat Transfer Rate (kJ/S)	171.620	93.151	102.712	99.515	93.571	84.184	76.125
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	15.525	9.838	12.699	12.558	12.601	8.017	2.690
U (KW/sq.m/k)	2.366	4.888	4,175	4.091	3.833	2.119	2.700
Clean-U Value (KW/sq.m/lo	9.9	9.9	5.1	5.1	5.1	5.7	5.7
	0.3560	OKSOV	42000	20000	0.0648	0.2759	0.1743

Total Operation Time: 572 hr.

Rum No. 8	Date: December 02, 84		Time: 00:00		Total Operation Time: 372 hr.	Ime: 372 hr.	
Variables	Brine Heater			Evaporator Stages			
		#	**	177	**	¥5	6
Flowrate (kg/h)	0059	0059	0059	9200	6500	18500	18500
Specific Heat (KJ/kg/K)	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Inlet Temp. (deg. C)	88	74.8	60.2	46	32.5	26.9	23
Outlet Temp. (deg. C)	112	88	74.8	60.2	46	%	26.9
Temp. Rise (deg. C)	24	13.2	14.6	14.2	13.5	1.4	3.9
Flashing Temp. (deg. C)	119	92.6	81.2	67.1	53.2	57.2	30.9
Heat Transfer Rate (KJ/S)	171.620	93.861	103.416	100.215	94.970	83.529	79.412
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L'M,T.D. (deg. 10	16.128	9.755	12.287	12.704	12.783	8.077	5.731
U (kW/sq.m/lo	72.2	4.967	4.345	4.072	3.835	2.087	2.796
Clean-U Value (kW/sq.m/lo	5	9.9	Ŋ	5.1	5.1	5.7	51
f (sq.m.k/kw)	0.1827	0.0498	0.0341	0.0495	0.0647	0.2831	0.1615
第二章 · · · · · · · · · · · · · · · · · · ·		San		70 (10 m)		\$ \\ \frac{\partial \text{\text{\$\sigma}}}{\partial \$\partial \text{\$\partial \text{\$\pa	
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	Date: December 02, 94		Time: 04:00		Total Opera	Total Operation Time: 376 hr.	
	Brine Hester			Evaporator Stages			
		#	#2	£3	**	ko We	*
Flowrate (kg/h)	0059	9200	0059	0059	0059	18500	18500
Specific Heat (KJ/Kg/10	3.960	3.938	3.923	3.909	3.896	3.964	3.962
iniet Temp. (deg. C)	88	74.6	60.2	45.7	32.1	26.6	
Outlet Temp. (deg. C)	112	88	74.6	60.2	45.7	34	26.6
Temp. Rise (deg. C)	24	13.4	14.4	14.5	13.6	4.4	
Flashing Temp. (deg. C)	119.5	91.8	80.7	8 99	52.8	36.8	30.5
Heat Transfer Rate (KJ/S)	171.620	95.280	101.997	102.329	92.666	89.639	93.657
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	16.724	8.875	11.880	12.476	12.710	7.794	5.904
U (KW/sq.m/lo	2.196	5.543	4.432	4.234	3.886	2.321	3.201
Clean-U Value (kW/sq.m/lo	6.5	6.6	5.1	5.1	ភ	े इ.	5.5
f.(sq.m) K/k/w	0.1989	0.0289	0.0295	0.0401	0.0613	0.2348	0.1163

Date: December 02, 94

Run No. 8

Variables	Brine Hester			Evaporator Stages	90		
		*	# 2	m **	7#	10 11	10 11
Flowrate (kg/h)	0059	9200	0059	9200	0059	18200	18200
Specific Heat (kj/kg/k)	3.960	3.938	3.923	3.908	3.896	3.964	3.962
Inlet Temp. (deg. C)	88	74.5	8	45.7	32	26.4	22
Outlet Temp. (deg. C)	112	88	74.5	99	45.7	30	26.4
Temp. Rise (deg. C)	24	13.5	14.5	14.3	13.7	3.6	4.4
Flashing Temp. (deg. C)	120	93.1	81.3	67.1	KC KC	36.8	30.4
Heat Transfer Rate (Kj/S)	171.620	95.990	102.701	100.915	96.368	72.146	88.131
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. to	17.312	10.433	12.699	12.961	12.966	8.473	5.930
U (KW/sq.m/o	2.122	4.750	4.175	4:020	3.837	1.718	2.999
Clean-U Value (kW/sq.m/K)	3.9	9.9	5.4	5.	2.0	5.3	े ? 4
fisq.m Kikw	0.2149	0.0590	0.0434	0.0527	0.0645	0.3859	0.1374
不是一個人的 人名					100 mm (100 mm) (100	12 1 12 1 12 2 13 2 13 2 13 2 13 3 14 3 15 3 16 3 16 3 16 3 16 3 16 3 16 3 16 3 16	

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR Run No. 8 Date: December 02, 94

Total Operation Time: 384 hr.

				Evaporator Stages			·
Variables		#1	#2	m **	**	to 非	9 #
Flowrate (kg/h)	6500	6500	029	9200	6500	18200	18200
Specific Heat (kl/kg/l0	3.960	3.938	3.923	3.909	3.896	3.964	3.962
inlet Temp. (deg. C)	88	74.7	60.2	45.9	32.3	26.6	22.5
Outlet Temp. (deg. C)	112	88	74.7	60.2	45.9	30.5	26.6
Temp. Rise (deg. C)	24	13.3	14.5	14.3	13.6	3.9	4.1
Flashing Temp. (deg. C)	119.5	93	81.2	67.1	53.2	37.1	30.7
Heat Transfer Rate (kl/S)	171.620	94.570	102.707	100.920	95.670	78.162	82.126
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LW.T.D. (deg. 10)	16.724	10.251	12.364	12.740	12.929	8.400	5.915
U (KW/sq.m/lo	2.196	4.763	4.288	4.090	3.820	1.878	2.802
Clean-U Value (KW/Sq.m/K)	3.9	9.9	7.3	5.1	7.	5.1	5.1
f (sq.m K/kW)	0.1989	0.0584	0.0371	0.0484	0.0657	0.3365	0.1608

Date: December 02, 94

Run No. 8

Total Operation Time: 388 hr.

Variables	Brine Heater			Evaporator Stages			
		# 1	#2	₩ ₩	*	1 0	**
Flowrate (kg/h)	6500	6500	0059	6500	9200	18200	18200
Specific Heat (kj/kg/k)	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Inlet Temp. (deg. C)	88	74.8	60.2	45.9	32.2	26.6	22
Outlet Temp. (deg. C)	112	88	74.8	60.2	45.9	30.5	26.6
Temp. Rise (deg. C)	24	13.2	14.6	14.3	13.7	3.9	4.6
Flashing Temp. (deg. C)	120	93.5	87.6	67.3	53.2	57.1	30.7
Heat Transfer Rate (KJ/S)	171.620	93.861	103.416	100.920	96.373	78.162	92.139
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	17.312	10.786	12.735	12.961	12.966	8.400	6.114
U (KW/sq.m/k)	2.122	4.492	4.192	4.020	3.837	1.878	3.041
Clean-U Value (KW/sq.m/K)	8.2.3	9.9	2	5.1		ν.	F.3
f (sq.m.k/kw)	0.2149	0.0711	0.0424	0.0527	0.0645	0.3365	0.1328

8 O	Date: December 02, 94		Time: 20:00		Total Operation	total Operation Time: 392 hr.	
Variables	Brine Heafer			Evaporator Stages			
		*	₹.	m **	*	in **	**
Flowrate (kg/h)	0059	9059	0059	0059	6500	18200	18200
Specific Heat (KJ/Kg/K)	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Inlet Temp. (deg. C)	88	75.1	60.5	46.1	52.4	26.6	2
Outlet Temp. (deg. C)	112	88	75.1	60.5	46.1	30.5	26.6
Temp. Rise (deg. C)	24	12.9	14.6	14.4	13.7	3.9	4.6
Flashing Temp. (deg. C)	119.5	93.4	81.7	2.79	53.4	37.2	30.6
Heat Transfer Rate (KJ/S)	171.620	91.731	103.425	101.632	96.377	78.162	92.139
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	16.724	10.569	12.511	13.107	12.966	8.501	600.9
U (KW/sq.m/lo	2.196	4.481	4.268	4.003	3.838	1.855	3.094
Clean-U Value (kW/sq.m/l0	G, Ki	6.6	r.	tù L	5.1	5.1	. 5.1
f.tsa.m K/kW	0.1989	0.0717	0.0382	0.0537	0.0645	0.3429	0.1271

Date: December 03, 94

Run No. 8

Total Operation Time: 396 hr.

Time: 00:00

Variables	Brine Heater			Evaporator Stages	\$0		
		#	#2	6 7	*	₩;	*
Flowrate (kg/h)	0029	6500	9200	9200	0059	18200	18200
Specific Heat (kj/kg/No	3.960	3.938	3.923	3.909	3.896	3.964	3.962
inlet Temp. (deg. C)	88	74.9	60.5	46.2	32.6	26.6	22
Outlet Temp. (deg. C)	112	88	74.9	60.5	46.2	က်	26.6
Temp. Rise (deg. C)	24	13.1	14.4	14.3	13.6	4.4	4.6
Flashing Temp. (deg. C)	121	93.1	81.5	67.5	53.5	37.2	30.7
Heat Transfer Rate (kj/S)	171.620	93.151	102.005	100.927	95.677	88.185	92.139
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. lo	18.472	10.297	12.441	12.851	12.929	8.204	6.114
U (kW/sq.m/lo	1.989	4.670	4.233	4.055	3.820	2.169	3.041
Clean-U Value (KW/sq.m/K)	6 .	9.9	5.	£.5.	5.1	. . .	2
f (sq.m K/kW)	0.2465	0.0626	0.0402	0.0505	0.0657	0.2650	0.1328

RUS No. 8	Date: December 05, 94		1 III 6: 04:00				-
Variables	Brine Heater			Evaporator Stages			
		*	#5	#3	**	₩ **	*
Flowrate (kg/h)	6500	9200	0059	0059	0200	18500	18500
Specific Heat (kl/kg/l0	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Inlet Temp. (deg. C)	8	75	60.4	45.8	32.1	26.4	23
Outlet Temp. (deg. C)	112	88	75	60.4	45.8	34	26.4
Temp. Rise (deg. C)	24	13	14.6	14.6	13.7	9.6	4.4
Fiashing Temp. (deg. C)	121	92.7	81.6	9.29	53.2	36.9	30.5
Heat Transfer Rate (KJ/S)	171.620	92.441	103.422	103.038	96.370	93.712	89.584
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	18.472	9.804	12.511	13.179	13.075	7.980	6.035
U (KW/sq.m/lo	1.989	4.868	4.268	4.036	3.805	2.370	2.995
Clean-U Value (kW/sq.m/k)	3.9	9.9	5.1	Ť,	5.1	7. 1.	R.
f isq.m K/KW)	0.2465	0.0539	0.0382	0.0517	0.0667	0.2259	0.1378

Date: December 03, 94

Rum No. 8

Total Operation Time: 404 hr.

Time: 08:00

Variables	Brine Hester			Evaporator Stages			
		₩ ₩	#2	e) **	7.8	kn #k	*
Flowrate (kg/h)	029	6500	0059	0059	0059	18500	18500
Specific Heat (KJ/Kg/K)	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Inlet Temp. (deg. C)	88	74.8	60.3	45.8	32	26.3	23
Outlet Temp. (deg. C)	112	88	74.8	60.3	45.8	æ	26.3
Temp. Rise (deg. C)	24	13.2	14.5	14.5	13.8	4.7	K.K
Flashing Temp. (deg. C)	121	92	81.2	67.2	53.1	36.8	30.4
Heat Transfer Rate (ki/S)	171.620	93.861	102.709	102.331	97.073	95.749	67.192
Heat Transfer Area (Sq.m)	4.6723	1.937	1,937	1.937	1.937	4.9556	4.9556
L'M'T.D. (deg. 10	18.472	9.050	12.252	12.811	13.002	7.919	5.589
U (KW/sq.m/f0	1.989	5.355	4.328	4.124	3.854	2.440	2.426
Clean-U Value (KW/sq.m/k)	3.6	9.9	5	5.3	23	5.1	5:1
f-(sq.m.K/kW)	0.2465	0.0352	0.0350	0.0464	0.0634	0.2138	0.2161

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

ELM NO. 8	Date: December 03, 94		Time: 12:00		Total Operation Time: 408 hr.	me: 408 hr.	
Valables	Brine Heater			Evaporator Stages			
		*	* 2	£ #	7	#5	*
Flowrate (kg/h)	9200	0059	6500	9059	0059	18500	18500
Specific Heat (KJ/Kg/lo	3.960	3.938	3.924	3.909	3.896	3.965	3.962
Inlet Temp. (deg. C)	88	75.2	8.09	46.3	32.8	26.7	23
Outlet Temp. (deg. C)	112	88	75.2	8.09	46.3	31.5	26.7
Temp. Rise (deg. C)	24	12.8	14.4	14.5	13.5	4.8	3.7
Flashing Temp. (deg. C)	122	92.4	81.7	67.4	53.5	37.3	30.8
Heat Transfer Rate (KJ/S)	171.620	91.022	102.013	102.344	94.976	97.792	75.338
Heat Transfer Area (Sq.rn)	4.6723	1.937	1.937	1,937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	19.611	9.389	12.329	12.476	12.783	7.960	5.753
U (KW/sq.m/fo	1.873	5.005	4.272	4.235	3.836	2.479	2.643
Clean-U Value (KW/sq.m/K)	6. 8.	6.6	7. 2	£.	5.7	5.1	7.
f.sq.m k/kw)	0.2775	0.0483	0.0380	0.0401	0.0646	0.2073	0.1823

Run No. 8	Date: December 03, 94		Time: 16:00		Total Operati	Total Operation Time: 412 hr.	
Variables	Brine Heater			Evaporator Stages			
		## ##	#2	£.	##	10 #	*
Flowrate (kg/h)	029	0059	0059	0259	0059	18500	18500
Specific Heat (kj/kg/lo	3.960	3.939	3.924	3.909	3.897	3.965	3.962
iniet Temp. (deg. C)	88	75.4	61.1	46.6	33.2	26.9	23.5
Outlet Temp. (deg. C)	112	88	75.4	61.1	46.6	32	26.9
Temp. Rise (deg. C)	24	12.6	14.3	14.5	13.4	5.1	3.4
Flashing Temp. (deg. C)	120	93.5	82.1	6.79	54	57.7	¥
Heat Transfer Rate (KJ/S)	171.620	89.602	101.312	102.351	94.280	103.909	69.233
Heat Transfer Area (Sq.m)	4.6723	1.937	1:937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	17.312	10.578	12.517	12.699	12.966	7.980	5.630
U (KW/sq.m/k)	2,122	4.373	4.178	4.161	3.754	2.628	2.482
Clean-u value (kW/sq.m/lo	3.9	9.9	5	23	5.1	5.7	\$
f (sq.m K/kw)	0.2749	0.0772	0.0432	0.0443	0.0703	0.1845	0.2069
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CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

Run 160. 8	Date: December 03, 94		Time: 20:00		Total Operation Time: 416 hr.	se: 416 hr.	. [
	Brine Heater			Evaporator Stages			
		**	#2	65.44	**	₩.	o
Flowrate (kg/h)	9200	0059	0059	029	6500	18200	18200
Specific Heat (KJ/Kg/K)	3.960	3.938	3.923	3.909	3.896	3.964	3.962
Inlet Temp. (deg. C)	88	74.9	60.4	46.1	32.5	26.7	23
Outlet Temp. (deg. C)	112	88	74.9	60.4	46.1	30.5	26.7
Temp. Rise (deg. C)	24	13.1	14.5	14.3	13.6	80; M	3.7
Flashing Temp. (deg. C)	120	92.9	84.1	9.79	53.5	37.2	30.8
Heat Transfer Rate (kj/S)	171.620	93.151	102.712	100.925	95.674	76.158	74.117
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	17.312	10.068	12.027	13.072	13.039	8.458	5.753
u (kw/sq.m/ko	2.122	4.776	4.409	3.986	3.788	1.817	2.600
Clean-U Value (kW/sq.m/k)	9.5	9.9	ř.	5.1	5.1	5.1	5.1
f isq.m KKW	0.2149	0.0578	0.0307	0.0548	0.0679	0.3543	0.1886

Date: December 04, 94

Run No. 8

Total Operation Time: 420 hr.

Time: 00:00

Variables	Brine Heater			Evaporator Stages	*			
		*	**	6 **	**	 # S		
Flowrate (kg/h)	9200	9200	0059	0059	0059	18200		18200
Specific Heat (KJ/kg/10.	3.960	3.938	3.923	3.909	3.896	3.964		3.962
Iniet Temp. (deg. C)	88	74.6	60.1	45.8	32.1	26.5		22.5
Outlet Temp. (deg. C)	112	88	74.6	60.1	45.8	30		26.5
Temp. Rise (deg. C)	24	13.4	14.5	14.3	13.7	3.5		4
Flashing Temp. (deg. C)	123	92.8	81.6	67.5	53.4	37.1		30.7
Heat Transfer Rate (KJ/S)	171.620	95.280	102.704	100.917	96.370	70.142	æ	80.123
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4	4.9556
L.M.T.D. (deg. 10	20.735	10.054	12.922	13.292	13.294	8.733		5.979
U (kw/sq.m/lo	1.771	4 893	4.103	3.920	3.743	1 621		2.704
Clean-U Value (kW/sq.m/kd	9. E	9.9		V	7	2.		2
f (sq.m K/kw)	0.3081	0.0529	0.0476	0.0590	0.0711	0.4209	0	0.1737
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CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

Run No. 8	Date: De	Date: December 04, 94	2,			Time: 04:00	:		Total Opera	Total Operation Time: 424 hr.	
	90	Brine Meeter					ប័	Evaporator Stages			
				*		#2		en #	*	10 **	*
Flowrate (kg/h)			6500	9290		0059		0059	0059	18200	18200
Specific Heat (KVKg/K)		M)	3.960	3.938	~	3.923		3.909	3.896	3.964	3.962
inlet Temp. (deg. C)			88	74.6		60.1		45.7	31.9	26.3	22.5
Outlet Temp. (deg. C)			112	88		74.6		60.1	45.7	30	26.3
Temp. Rise (deg. C)			24	13.4		14.5		14.4	13.8	3.7	89. M
Flashing Temp. (deg. C)			124	93.2		82.1		67.9	53.4	37	30.6
Heat Transfer Rate (kJ/S)		171	171.620	95.280		102.704		101.622	97.071	74.149	76.115
Heat Transfer Area (Sq.m)		4	4.6723	1.937		1.937		1.937	1.937	4.9556	4,9556
L.M.T.D. (deg. 10		2	21.846	10.514	-	13.474		13.767	13.439	8.720	6.001
U (KW/sq.m/lo		•	1.681	4.679		3.935		3.811	3.729	1.716	2.560
Clean-U Value (kW/sq.m/k)			3.9	9.9	(0	5.7		5.1	5.7	5.1	5.7
f (sq.m K/KW)		Ö	0.3383	0.0622		0.0580		0.0663	0.0721	0.3867	0.1946
		,									

Date: December 04, 94

Run No. 8

Variables	Brine Heater	·		Evaporator Stages	2		
4		*	*	**	*	10	*
Flowrate (kg/h)	0059	0059	6500	0059	0059	18200	18200
Specific Heat (kJ/kg/k)	3.960	3.938	3.923	3.908	3.896	3.964	3.962
Inlet Temp. (deg. C)	88	74.7	60.1	45.5	31.6		2
Outlet Temp. (deg. C)	112	88	74.7	60.1	45.5	.5 29.5	26
Temp. Rise (deg. C)	24	13.3	14.6	14.6	13.9	3.5	.
Flashing Temp. (deg. C)	123.5	92.2	81.4	67.4	52.9	36.4	93
Heat Transfer Rate (KJ/S)	171.620	94.570	103.414	103.031	97.769	70.137	100.140
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937		4.9556
L.M.T.D. (deg. kg.	21.292	9.319	12.623	13.289	13.148	8.531	6.166
U (KW/sq.m/K)	1.725	5.239	4.229	4.002	3.839		3.277
Clean-U Value (kW/sq.m/k)	6. 10	6.6	5.1	T.	V:51		1.3°
fisq.m k/kw	0.3233	0.0394	0.0404	0.0538	0.0644	0.4067	0.1090

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

Run No. 8	Date: December 04, 94	ber 04, 94			Time: 12:00		Total Operation Time: 432 hr.	rime: 432 hr.	
	Brine Hester	- tet				Evaporator Stages			
			1	*	#2	£	*	ko *	*
Flowrate (kg/h)		6500		9200	0059	9200	9200	18300	18300
Specific Heat (kj/kg/k)		3.960		3.938	3.923	3.908	3.896	3.964	3.962
Inlet Temp. (deg. C)		87.5		74.4	59.9	45.5	31.8	25.9	72
Outlet Temp. (deg. C)		112		87.5	74.4	59.9	45.5	29.5	25.9
Temp. Rise (deg. C)		24.5		<u> </u>	14.5	14.4	13.7	3,6	4.9
Flashing Temp. (deg. C)		123.5		93	6.18	9.79	53.3	36.8	30.2
Heat Transfer Rate (kj/S)		175.182		93.138	102.699	101.617	96.364	72.537	98.676
Heat Transfer Area (Sq.m)		4.6723		1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10		21.469		10.752	13.474	13.658	13.512	8.980	6.442
U (KW/sq.m/K)		1.746		4.472	3.935	3.841	3.682	1.630	3.091
Clean-U Value (KW/sq.m/K)	•	3.9		9.9	. R.	r:3	5.1	5.1	5.7
f (sq.m K/kW)		0.3162		0.0721	0.0581	0.0643	0.0755	0.4174	0.1275
			-						

Date: December 04, 94

Run No. 8

Total Operation Time: 456 hr.

Weighler	Brine Heater			Evaporator Stages			
		*	# 5	D #	**	10 M	9#
Flowrate (kg/h)	029	0059	0059	6500	9200	18500	18500
Specific Heat (kj/kg/K)	3.960	3.938	3.923	3.908	3.895	3.964	3.961
Inlet Temp. (deg. C)	88	74.3	59.7	45.1	χ. κ.	25.6	23
Outlet Temp. (deg. C)	112	88	74.3	59.7	45.1	59	25.6
Temp. Rise (deg. C)	24	13.7	14.6	14.6	13.8	3.4	4.6
Flashing Temp. (deg. C)	123	92.5	81.1	67.3	52.9	36.3	29.8
Heat Transfer Rate (k)/5)	171.620	97.409	103.403	103.021	97.058	69.252	93.645
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg 10	20.735	9.804	12.735	13.620	13.548	8.892	6.219
U (KW/sq.m/k)	1.77.1	5.129	4.192	3.905	3.698	1.572	3.039
Clean-U Value (kW/sq.m/l0	6. 6.	9.9	5.1	5.1	5.1	5.1	5.1
f (sq.m K/kW)	0.3081	0.0434	0.0425	0.0600	0.0743	0.4402	0.1330
							3

Vertables			Time: 20:00		Total Operation	Total Operation Time: 440 hr.	
	Brine Heater			Evaporator Stages	•		
		*	2	T)	**	100 98	9
Flowrate (kg/h)	6500	6500	9200	0059	0059	18500	18500
Specific Heat (KJ/Kg/K)	3.960	3.937	3.922	3.908	3.895	3.963	3.961
inlet Temp. (deg. C)	87	74	59.3	44.6	30.7	24.9	8
Outlet Temp. (deg. C)	112	87	74	59.3	44.6	88	24.9
Temp. Rise (deg. C)	25	13	14.7	14.7	13.9	3.7	4.9
Flashing Temp. (deg. C)	123.5	91.6	81.2	66.2	52.1	35.6	29.2
Heat Transfer Rate (KJ/S)	178.743	92.415	104.101	103.715	97.750	63.135	99.742
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	21.646	9.688	13.215	12.881	13.257	9.062	6.442
U (KW/sq.m/to	1.767	4.925	4.067	4.157	3.807	1.406	3.124
Clean-U Value (kW/sq.m/k)	O i	6.6	5.1	5.7	5.1	5.7	5.1
f sq.m K/kW	0.3094	0.0515	0.0498	0.0445	0.0666	0.5152	0.1240

tun No. 8	Date: December 05, 94		Time: 00:00		Total Ope	Total Operation Time: 444 Mr.	9: 444 hr.		
Vanishine	Brine Heater			Evaporator Stages	9				
		*	#3	€ **	**		in #L		•
Flowrate (kg/h)	0290	0059	6500	0059	6500		18200		18200
Specific Heat (kj/kg/k)	3.958	3.936	3.922	3.908	3.895		3.963		3.961
Inlet Temp. (deg. C)	78	74.1	59.4	44.5	30.5		24.5		8
Outlet Temp. (deg. C)	112	84	74.1	59.4	44.5		58	· :	24.5
Temp. Rise (deg. C)	28	6.	14.7	14.9	14		3.5		4.5
Flashing Temp. (deg. C)	124	92.3	81.3	29	52.5		35.5		28.8
Heat Transfer Rate (kj/S)	200.097	70.348	104.104	105.126	98.450		70.123		90.112
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937		4.9556		4.9556
L.M.T.D. (deg. K)	23.256	12.609	13.215	13.728	13.839		9.139		6.284
U (kw/sq.m/lo	1.841	2.880	4.067	3.953	3.673		1.548		2.894
Clean-U Value (KW/sq.m/lo	5:2	9.9	5.4	5.3	73		5.1		5.7
fisq.m K/kW	0.2866	0.1957	0.0498	0.0569	0.0762		0.4497		0.1495

Fun No. 8	Date: December 05, 94		Time: 04:00			Total Ope	Total operation Time: 448 hr.	Ě	
				Evapora	Evaporator Stages				
	Brine Heater	**	~	#		*	*		*
Flowrate (kg/h)	0200	029	9200	0059	8	9200	18	18500	18500
Specific Heat (KJ/kg/K)	3.958	3.935	3.922	3.907	70	3.894		3.963	3.961
inlet Temp. (deg. C)	84	73.9	59.1	4	44.2	30.1		24.2	- 6
Outlet Temp. (deg. C)	112	84	73.9	ì.	59.1	44.2		28	24.2
Temp. Rise (deg. C)	78	10.1	14.8	7	14.9	14.1		3.8	5.2
Flashing Temp. (deg. C)	124.5	92.3	81.3		29	52.2		35.1	28.5
Heat Transfer Rate (KJ/S)	200.097	71.767	104,805	105.118	18	99,145	77	782.77	105.838
Heat Transfer Area (Sq.m)	4.6723	1.937	1,937	1.937	27	1.937	4.9	4.9556	4.9556
L.M.T.D. (deg. K)	23.818	12.687	13.472	14.058	82	13.876		8.865	6.560
U (KW/Sq.m/K)	1.798	2.920	4.016	3.860	. 09	3.689	• *	1.762	3.256
Clean-U Value (KW/Sq.m/K)	6.2	9.9	5.1		5.1	5.7		5.1	5.1
f (sq.m K/kW)	0.2997	0.1909	0.0529	0.0630	30	0.0750		0.3716	0.1111

Run No. 8 Date	Date: December 05, 94		Time: 08:00		Total Operation Time: 452 hr.	ne: 452 hr.	
Variables	Brine Heater			Evaporator Stages			
		# 1	#2	#3	**	5	40
Flowrate (kg/h)	6500	9059	6500	9200	0059	18500	18500
Specific Heat (K)/kg/IG	3.960	3.937	3.922	3.907	3.894	3.963	3.961
Inlet Temp. (deg. C)	86.5	73.7	29	4	29.9	23.9	8
Outlet Temp. (deg. C)	112	86.5	73.7	23	87	28	23.9
Temp. Rise (deg. C)	25.5	12.8	14.7	15	14.1	4.1	6.8
Flashing Temp. (deg. C)	124.2	91.8	₩.	66.7	52.1	35	28.3
Heat Transfer Rate (KJ/S)	182.303	90.982	104.093	105.820	99.141	83.495	79.382
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
LM.T.D. (deg. 10	22.602	10.422	13.325	13.874	13.985	8.893	6.145
U (kw/sq.m/to	1.726	4.507	4.033	3.938	3.660	1.895	2.607
Clean-U Value (KW/sq.m/K)	3.9	6.6	5.	\}		5.	5
f (sq.m K/KW)	0.3229	0.0704	0.0519	0.0579	0.0772	0.3317	0.1875

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR
Run No. 8 Time: 12:00

	a de la companya de l				Evaporator Stages			· · . ·
		I	# 7	# 2	(*) **	*	10 M	9 *
Flowrate (kg/h)		6500	6500	0059	6500	9200	18500	18500
Specific Heat (KJ/Kg/N)		3.960	3.937	3.922	3.907	3.894	3.963	3.961
Iniet Temp. (deg. C)		86.5	73.7	82	44	29.9	23.9	8
Outlet Temp. (deg. C)		112	86.5	73.7	59	44	88	23.9
Temp. Rise (deg. C)	i i	25.5	12.8	14.7	15	14.1	4.1	3.9
Flashing Temp. (deg. C)		124.2	91.8	8	66.7	52.1	32.	28.3
Heat Transfer Rate (Kj/S)		182.303	90.982	104.093	105.820	99.141	83.495	79.382
Heat Transfer Area (Sq.m)		4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. lo	2	22.602	10.422	13.325	13.874	13.985	8.893	6.145
U (kw//sq.m/lo		1.726	4.507	4.033	3.938	3.660	1.895	2.607
Clean-U Value (kW/sq.m/k)		9.6	9.9	5.1	5.1	5.1	5.1	5.1
f (sq.m K/kw)	•	0.3229	0.0704	0.0519	0.0579	0.0772	0.3317	0.1875

un No. 8	Date: December 05, 94		Time: 16:00		Total Operation Time: 460 hr.	Time: 460 hr.	
Variables	Brine Heater			Evaporator Stages			
		**	#2	(T)	*	10 11	•
Flowrate (kg/h)	0029	9200	9200	9059	6500	18300	18300
Specific Heat (KJ/Kg/K)	3.959	3.937	3.922	3.907	3.894	3.963	3.961
inlet Temp. (deg. C)	86.3	73.5	58.6	43.7	30	23.5	19.2
Outlet Temp. (deg. C)	112	86.3	73.5	58.6	43.7	æ	23.5
Temp. Rise (deg. C)	25.7	12.8	14.9	14.9	13.7	5.5	4.3
Flashing Temp. (deg. C)	122.3	91.6	80.9	66.8	52.5	35	28.4
Heat Transfer Rate (KJ/S)	183.727	72.06	105.501	105,106	96.326	110.799	86.571
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	20.537	10.422	13.507	14.386	14.594	8.454	6.826
U (kW/sq.m/xo	1.915	4.507	4.032	3.772	3.408	2.645	2.559
clean-U Value (KW/sq.m/K)	3.9	6.6	5.1	r.	5.1	5.1	r.
reg.m K/kwj	0.2659	0.0704	0.0519	0.0690	0.0974	0.1820	0.1946

CALCULATIONS OF OVERALL HEAT TRANSFER COEFFICIENT AND FOULING FACTOR

Rum No. 8	Date: December 05, 94		Time: 20:00		Total operation lime: 464 fif.	me: 464 fir.	
				Evaporator Stages			
Vertables		#	7.	(7) **	*	10	to
Flowrate (kg/h)	0290	0059	9059	0059	9200	18500	18500
Specific Heat (ki/kg/lo	3.960	3.937	3.921	3.907	3.894	3.962	3.960
Inlet Temp. (deg. C)	88	73.4	58.3	43.4	29.4	23.5	19
Outlet Temp. (deg. C)	112	88	73.4	58.3	43.4	27	23.5
Temp. Rise (deg. C)	24	14.6	15.1	14.9	14	3.5	4.5
Flashing Temp. (deg. C)	116	6.06	80.1	65.3	51.1	33.9	27.6
Heat Transfer Rate (k/S)	171.620	103.795	106.911	105.098	98.426	71.270	91.586
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
Ci Ded (ded K)	12.334	8.122	12.799	13.064	13.512	8.531	6.075
U (KW/sq.m/io	2.978	6.597	4.312	4.153	3.761	1.686	3.042
Clean-U Value (KW/sq.m/lo	6:H	9.9	5.1	ξ.	5.3	5.1	5.1
f (sq.m K/KW)	0.0794	0.0001	0.0358	0.0447	0.0698	0.3971	0.1326

Run No. 8	Date: December 06, 94	٠	Time: 00:00		Total Operation Time: 468 hr.	ime: 463 hr.	
Variables	Brine Heater			Evaporator Stages			
		*	#2	8*	*	30	*
Flowrate (kg/h)	9200	9059	029	6500	0059	18500	18500
Specific Heat (kj/kg/k)	3.960	3.937	3.921	3.906	3.893	3.962	3.960
Inlet Temp. (deg. C)	28	72.9	57.9	42.9	28.8	23.1	6
Outlet Temp. (deg. C)	112	87	72.9	57.9	42.9	22	23.1
Temp. Rise (deg. C)	25	14.1	15	15	14.1	3.9	4.1
Flashing Temp. (deg. C)	115.8	90.2	79.3	92	50.3	53.4	27.3
Heat Transfer Rate (kj/5)	178.743	100.219	106.191	105.792	99.117	79.413	83.443
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. 10	12.343	8.355	12.427	13.210	13.220	8.196	6.019
U (KW/sq.m/k)	3.099	6.192	4.412	4.134	3.871	1.955	2.797
Clean-U Value (kW/sq.m/k)	3.9	6.6	ŗ,	5.1	2.2	5.1	5
f isq.m K/kW)	0.0662	0:0100	0.0306	0.0458	0.0623	0.3154	0.1614
	5						

Kun No. 8	Date: December 06, 94		Time: 04:00		total Operation Time: 472 hr.	me: 472 hr.	
				Evaporator Stages			
Variables		*	*	(7) **	*	ks #k	10 14
Flowrate (kg/h)	0059	0059	6500	9200	0059	18500	18500
Specific Heat (KVKg/IO	3.960	3.937	3.921	3.906	3.893	5.962	3.960
inlet Temp. (deg. C)	48	73.2	58.1	43.1	28.8	22.9	18.5
Outlet Temp. (deg. C)	112	87	73.2	58.1	43.1	27	22.9
Temp. Rise (deg. C)	25	13.8	15.1	75	14.3	1.4	4.4
Flashing Temp. (deg. C)	116	90.4	79.4	65.2	50.5	33.4	27.2
Heat Transfer Rate (KJ/S)	178.743	060.86	106.906	105.797	100.526	83.484	89.545
Heat Transfer Area (Sq.m)	4.6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	12.620	8.513	12.235	13.210	13.292	8.282	6.244
U (KW//sq.m/k)	3.031	5.949	4.511	4.135	3.904	2.034	2.894
Clean-U Value (kW/sq.m/k)	3.9	9.9	5.1	. 5.1	5.1	5.1	5.1
44517 W 1374	0.0735	0.0166	0.0256	0.0458	0.0600	0.2955	0.1495

Run No. 8	Date: December 06, 94		Time: 04:00		Total Operation Time: 472 hr.	ı Time: 472 hr.	
Variables	Brine Heater			Evaporator Stages			
		**	#2	***	*	10° #	40 31
Flowrate (kg/h)	029	0059	6500	. 0059	0259	18500	18500
Specific Heat (kj/kg/K)	3.960	3.937	3.921	3.906	3.893	3.962	3.960
Inlet Temp. (deg. C	4B	73.2	58.1	43.1	28.8	22.9	18.5
Outlet Temp. (deg. C)	112	87	73.2	58.1	43.1	. 27	22.9
Temp. Rise (deg. C)	25	13.8	15.1	15	14.3	4.1	4.4
Flashing Temp. (deg. C)	116	90,4	79.4	65.2	50.5	33.4	27.2
Heat Transfer Rate (k)/5)	178.743	98.090	106.906	105.797	100.526	83,484	89.545
Heat Transfer Area (Sq.m)	4,6723	1.937	1.937	1.937	1.937	4.9556	4.9556
L.M.T.D. (deg. K)	12.620	8.513	12.235	13.210	13.292	8.282	5.244
U (kw/sq.m/k)	3.031	5.949	4.511	4.135	3.904	2.034	2.894
Clean-U Value (kW/sq.m/k)	3.9	6.6	5.3	5.4	5.1	5.4	£,2
f (sq.m K/kW)	0.0735	0.0166	0.0256	0.0458	0.0600	0.2955	0.1495
				:			