Supplementary Materials

Modelling and Optimisation of Multi-Stage Flash Distillation and Reverse Osmosis for Desalination of Saline Process Wastewater Sources

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Table S1. Comparison of industrial and simulated data: Temperature of recirculating brine entering each flash stage.

Temp. of Recirculating Brine Entering Each Flash Stage [°C]			
Stage Number	**Industrial Data**	**Simulated Data**	**Error [%]**
1	83.2	82.8	-0.5
2	81.1	80.7	-0.5
3	78.8	78.5	-0.4
4	76.4	76.3	-0.1
5	74.0	73.7	-0.4
6	71.7	71.4	-0.4
7	69.4	69.2	-0.3
8	67.1	66.9	-0.3
9	64.8	64.4	-0.6
10	62.7	62.4	-0.5
11	60.5	60.3	-0.3
12	58.3	58.2	-0.2
13	56.2	56.0	-0.4
14	54.1	53.9	-0.4
15	52.0	51.8	-0.4
16	49.9	49.8	-0.2
17	47.9	47.7	-0.4
18	45.9	45.8	-0.2
19	44.0	43.7	-0.7
20	42.1	42.0	-0.2
21	40.3	40.2	-0.2
22	38.0	37.9	-0.3
23	35.3	35.2	-0.3
24	32.2	32.2	0.0

Table S2 Comparison of industrial and simulated data: Distillate produced from each stage

Distillate Produced From Each Stage [Ton/min]			
Stage Number	**Industrial Data**	**Simulated Data**	**Error [%]**
1	0.690	0.692	0.24
2	0.870	0.872	0.19
3	0.930	0.933	0.36
4	0.950	0.950	0.00
5	0.940	0.942	0.18
6	0.910	0.917	0.73
7	0.880	0.883	0.38
8	0.860	0.867	0.77
9	0.850	0.853	0.39
10	0.830	0.837	0.80
11	0.820	0.827	0.81
12	0.810	0.815	0.61
13	0.800	0.805	0.62
14	0.780	0.785	0.64
15	0.770	0.772	0.22
16	0.750	0.750	0.00
17	0.730	0.733	0.45
18	0.720	0.722	0.23
19	0.700	0.700	0.00
20	0.680	0.683	0.49
21	0.650	0.650	0.00
22	0.550	0.550	0.00
23	0.630	0.633	0.53
24	0.700	0.700	0.00

Table S3 Comparison of industrial and simulated data: Outlet pressure from each stage

Outlet Pressure From Each Stage [bar]			
Stage Number	**Industrial Data**	**Simulated Data**	**Error [%]**
1	0.638	0.640	0.31
2	0.585	0.590	0.85
3	0.536	0.540	0.74
4	0.488	0.490	0.41
5	0.436	0.440	0.91
6	0.398	0.400	0.50
7	0.368	0.370	0.54
8	0.327	0.330	0.91
9	0.298	0.300	0.67
10	0.278	0.280	0.71
11	0.248	0.250	0.80
12	0.228	0.230	0.87
13	0.209	0.210	0.48
14	0.189	0.190	0.53
15	0.169	0.170	0.59
16	0.149	0.150	0.67
17	0.139	0.140	0.71
18	0.119	0.120	0.83
19	0.109	0.110	0.91
20	0.100	0.100	0.10
21	0.090	0.090	0.33
22	0.090	0.090	0.56
23	0.080	0.080	0.19
24	0.070	0.070	0.10