

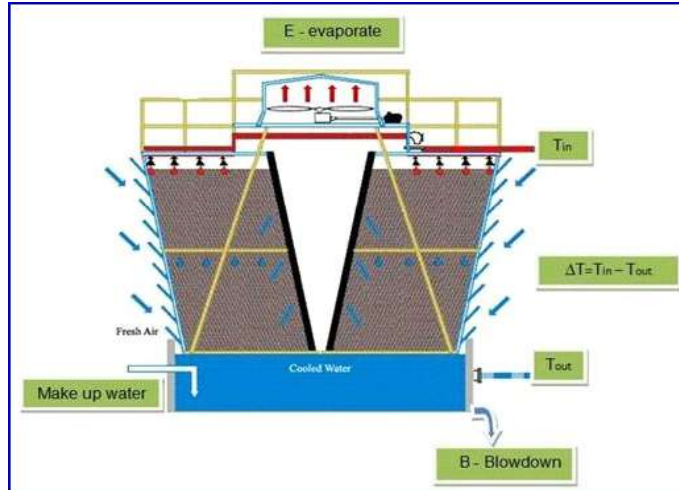
# C.Q.M.

## K.A.N.- Japan Corporation

### CONSOLIDATED REPORT OF TOTAL SAVINGS FROM SRS INSTALLATION

CUSTOMER:  
 INSTALLATION SITE:  
 COOLING TOWER SIZE (TR)  
 YEAR OF INSTALLATION

**Sanribu Munakata**  
 Shopping mall  
 600  
 2005



<b>CALCULATION OF EVAPORATION FLOW RATE ACORDING TO:</b>			<b><math>mc_p \Delta T = E \lambda</math></b>
m - Cooling water flow in the system [Ton / hr]	379	Ton/hr	
TR - Cooling tower capacity [TR]	600	TR	
Cp - Specific heat - [Ton cal / Ton water °c]	1	Ton cal / Ton water °C	
Ti - inlet cooling water temp [°c]	26.1	°C	
To -outlet cooling water temp [°c]	20.6	°C	
?T - ?T = Ti - To	5.5		
Cooling tower conductivity withuot CQM	1,357	μs	
Cooling tower conductivity with CQM	4500	μs	
Makeup water conductivity μs	359	μs	
λ latent heat evaporating water temp. [Ton Cal / Ton w	540	Ton cal / Ton water °C	
E - Evaporating water [Ton / hr]	3.86	Ton/hr	

<b>SAVINGS IN DRAINAGE FLOW RATE:</b>			<b><math>B = E / (C-1)</math></b>
	<b>BEF. SRS</b>	<b>WITH SRS</b>	<b>SAVINGS</b>
B - Drainage flow rate	1.39	0.34	1.06 Ton/hr
E - Evaporation flow rate	3.86	3.86	Ton/hr
C - Concentration cycle	3.78	12.52	

<b>CALCULATION OF SAVINGS:</b>		
Cooling tower working hours per year	4320	hr / yr
Average utilization capacity	75%	usd / m3
Cost of one cubic water	1.44	usd / m3
Cost of chemical treatment to one cubic water	0.68	usd / m3
Water savings from drainage	4,915	usd / m3
Chemical treatment savings	11,558	usd / m3
Water savings from re-utilization	1,561	usd
<b>TOTAL SAVINGS</b>	<b>18,035</b>	<b>usd/yr</b>