

RTR SEA WATER FLASH EVAPORATOR (SWFE#5) PRODUCTION IMPROVEMENT

Air & Water Unit -October 18, 2017

By

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where energy is opportunity

Saudi Aramco: Company General Use

Outline

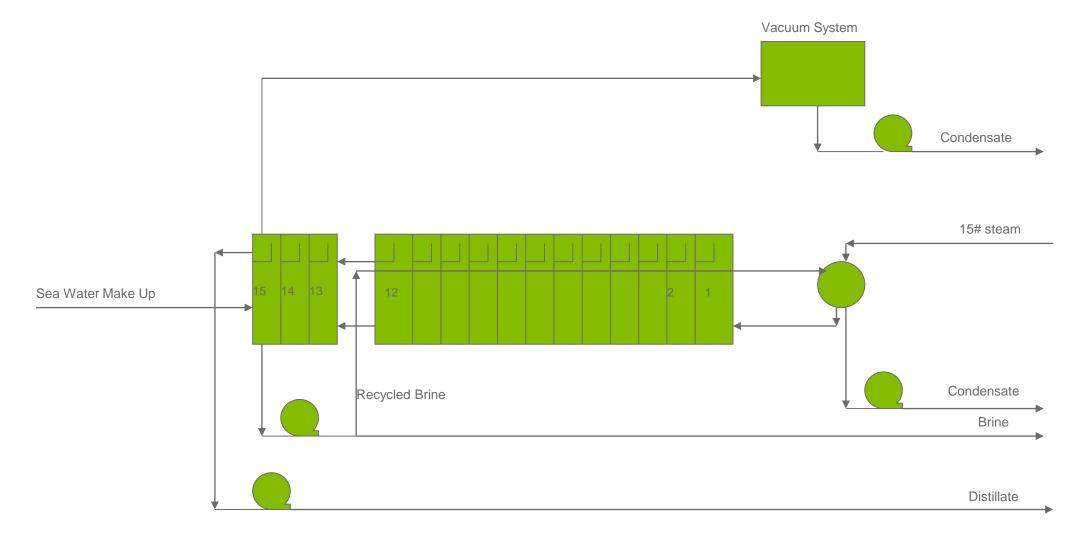
- Introduction
- System Description
- Challenges
- Recommendations & Actions
- Results

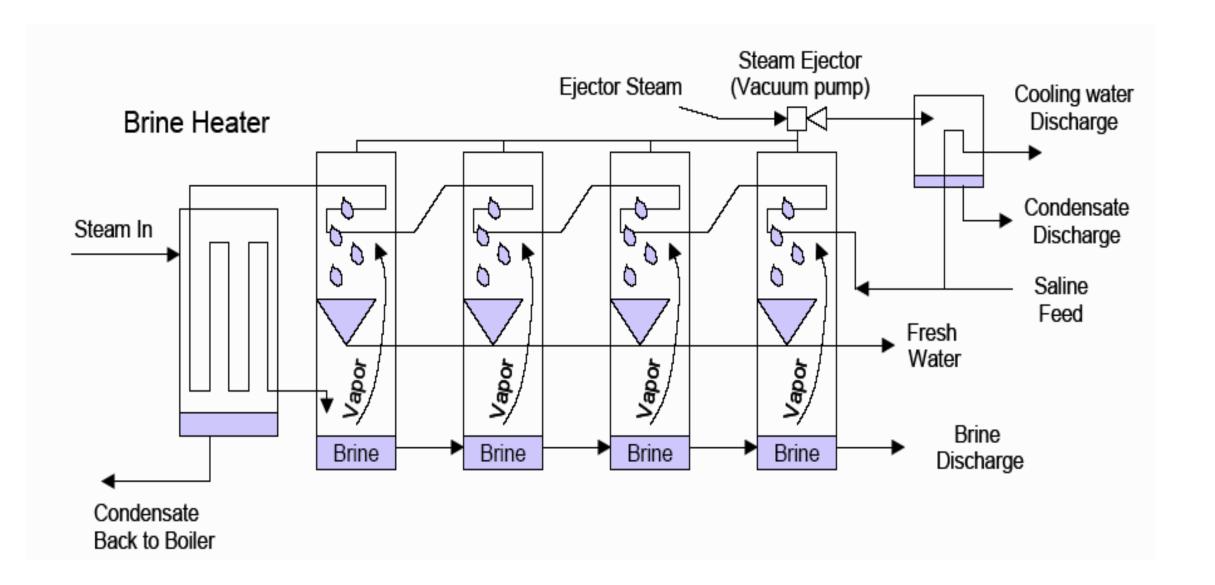
AIR & WATER UNIT



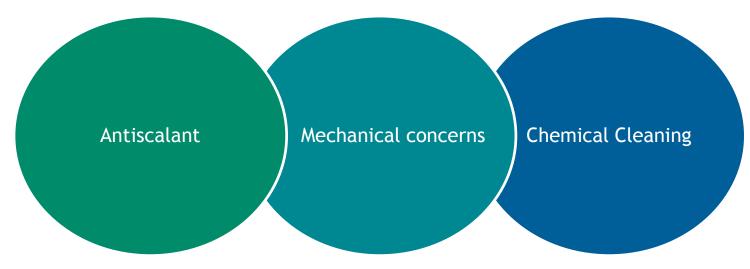
SWFE#5: 300 GPM

System Description



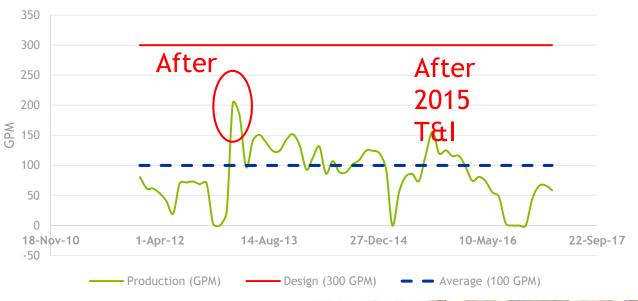


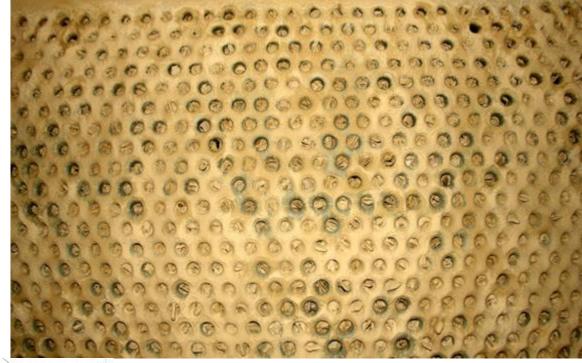
Challenges



- Not most adequate for the service
- Dosing monitoring
- Low flow in circulation pump
- Off-spec valve were passing
- Low vacuum
- Hard Scale in brine heater and stages' tubes

SWFE#5 Producion





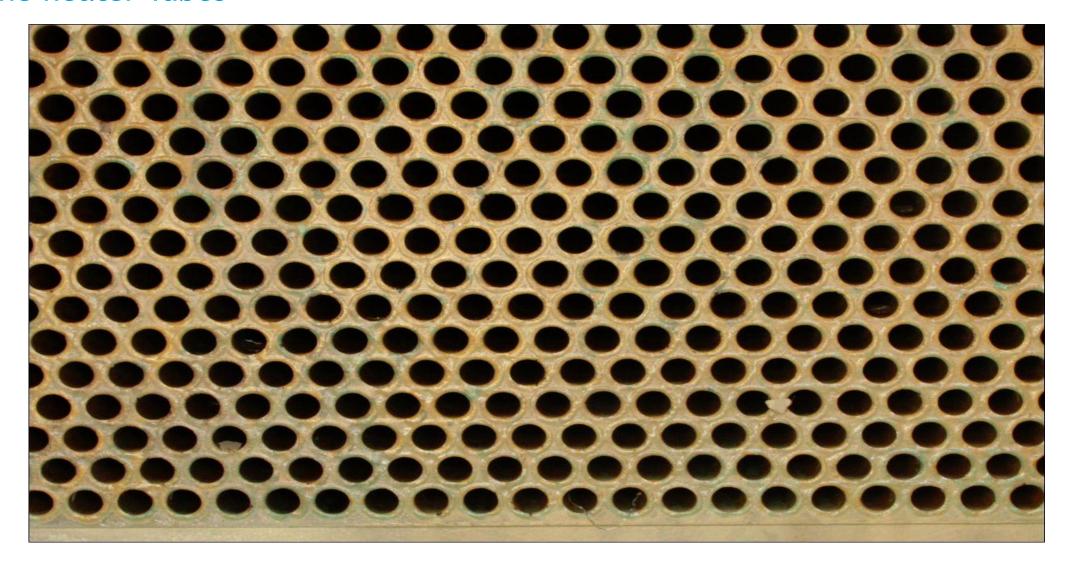


Recommendations & Actions

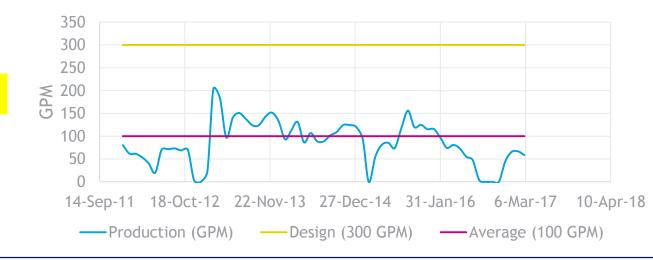
Unit	Deficiencies	Action
SWFE#5	Hard scale in brine heater and stages	 Expedite Shutdown to implement mechanical and chemical cleaning using HCl
	High steam consumption	 Use automated antiscalant dosing Connect the antiscalant pump indications to DCS and add alarms
	Vacuum leak	Replace all passing valvesImplement vacuum decay test
	All 2" distillate dump valves on all stages are passing	Replace all defective and off-spec passing valves

Results

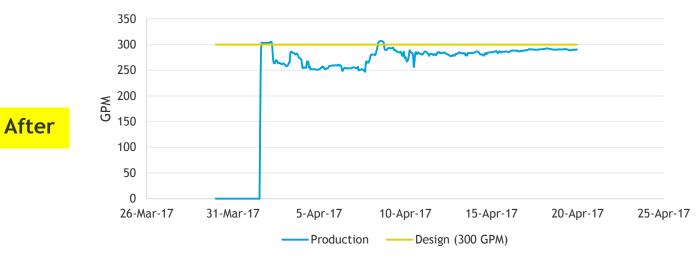
Brine heater Tubes



SWFE#5 Production



SWFE#5 Production



Before













Thank you

