



# “Designer Water” Concept

Nizar Kammourie

General Manager

SAWACO Water Desalination

Arabian Power & Water Summit 2012

Abu Dhabi –UAE

March 5-8 , 2012

# SAWACO Desalination

- SAWACO -Water Desalination is the leading and among the first private supplier of un-bottled potable water in K.S.A. License granted in 1999.
- SAWACO operates and maintains its own and third party desalination plants and water transportation fleets.
- Current production capacity exceeds 32,000 m<sup>3</sup> /day
- It operates its own 100+ SS tanker fleet carrying water to customers spread over a 10,000 km<sup>2</sup> area in the Western Region of Saudi Arabia.
- New contract under negotiation to cover an area spanning from Najran (Yemeni Border) to Tabuk (Jordanian Border)





# SAWACO Desalination

- Saudi Brother Commercial Group is the parent company of SAWACO.
- SAWACO celebrated its 10<sup>th</sup> anniversary on December 23, 2011.
- SAWACO- Water Desalination consist of 3 branches
  - North Obhor
  - CROP
  - SOJECO





# The Need for a New Approach

- SAWACO started its business when water was scarce in Jeddah.
- Lately, Government water supplies improved drastically with NWC
- Industrial Clients held the key for survival
- The answer was in designing water for different industrial needs
- Something government extensive /complicated networks cannot possibly achieve
- Hence the concept “Designer Water” was created
- This concept can be applied when industrial clients are clustered anywhere in the world
- This is a concept that is infrastructure-resistant and water abundance-resistant!!



## “Designer Water” Concept

- Many industries need different types of water for their processes
- In-house pre-treatment is costly, needs valuable space and adds to opex and requires specialist knowledge
- SAWACO has its own fleet of SS tankers
- O&M capabilities + Good analytical skills + expertise in water treatment = customization of water
- That was the beginning of the “Designer Water” concept
- Industrial users are open to outsource water treatment in order to focus on their core business
- All of a sudden, water tankers turned from a symbol of backward infrastructure into a solution for the most sophisticated industries!!





# O&M Capabilities: first ingredient



Beach Well



Ultra Filtration



Raw Tank



Feed Tank



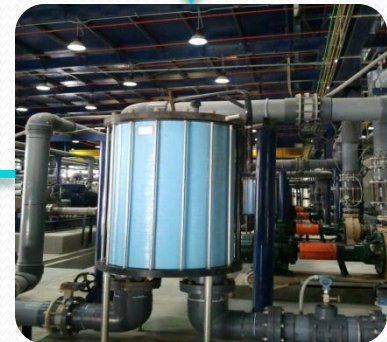
Product Tank



Reverse Osmosis



High Pressure  
Pumps

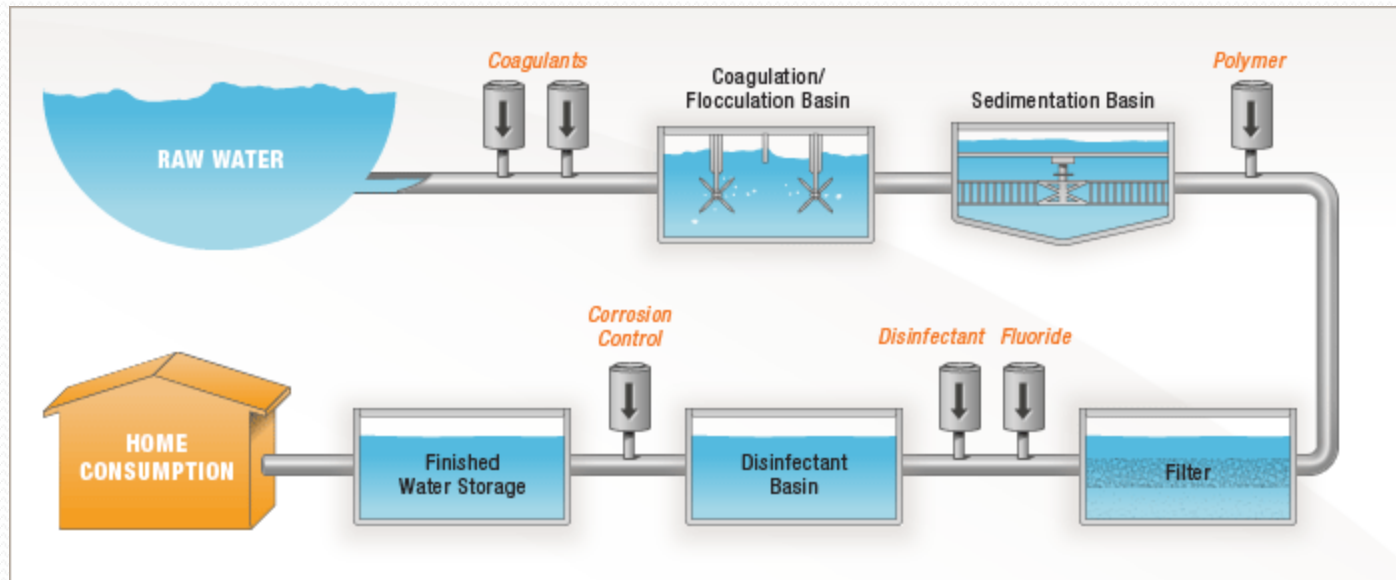


Cartridge Filters

# Good Labs Facilities : second ingredient



# Expertize In Water Treatment : third ingredient





# “Designer Water” : designs to suit all tastes!

## SAWACO Produces 10 different types of Water

Water Type	TDS Value in ppm	PH
Type I	280<TDS<350	7.0 <pH<7.8
Type II	200<TDS<250	6.8<pH<7.5
Type III	150<TDS<200	6.5<pH<7.5
Type IV	100<TDS<150	6.3<pH<7.5
Type V	50<TDS<100	6.3<pH<7.2
Type VI	25<TDS<50	6.0 <pH<7.2
Type VII	TDS<10	6.0 <pH<6.5
Type VIII	280<TDS<350	Zero Chlorine
Type IX	280<TDS<350	8.0 <pH<9.2
Type X	280<TDS<350	High Chlorine - 1 ppm



## “Designer Water” : new designs keep rolling out..

SAWACO has launched in March 2012 Type XI: Low Boron Potable water :

- $0.3 < \text{BORON} < 0.7 \text{ PPM}$
- $7.5 < \text{pH} < 9.5$
- $\text{TDS} < 90 \text{ ppm}$

Three new types of water are under development that cater for different industries .



# Examples of Product Customization

- SAWACO tailors its water as per individual customer requirements.
- Some customers want water free from chlorine.
- Other customers may want water with low TDS ( total dissolved solids) for boilers etc.
- Some industries look for high pH, others for Chlorine free water
- Things can get tricky : high alkalinity but pH not exceeding 7.5



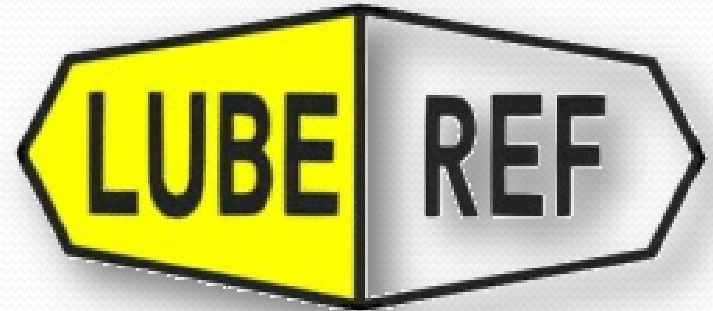


# PEPSI COLA

- Requirement : TDS below 200ppm and chloride not more than 90 ppm
- Solution: We assigned one skid intended only for them with post chemicals dosing.
- SAWACO uses a separate product tank to store water for PEPSI.



# LUBEREF – ARAMCO



- Requirements: TDS below 10ppm



# UNILEVER

- Requirements: TDS below 15ppm with high chlorine of around 3.5ppm with a pH of 7.5





# Binzagr Co-Ro

- Requirements: Chlorine must be totally eliminated from water but bacteria free as well. Treatment by Ozone prohibited



# Makkah Water

- Requirements: Low boron content, must be below 1ppm.



# Al Rajhi Steel

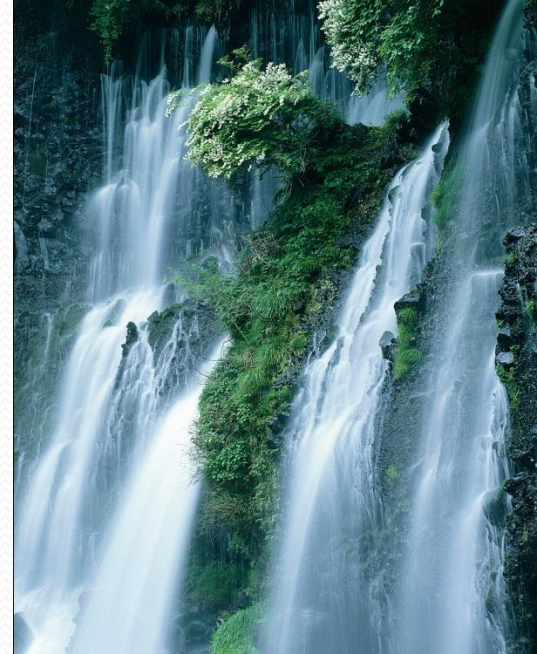
- Requirements: High alkalinity and low chloride.





# Strong Points

- Water -abundance Resistant
- Infrastructure Resistant



# Quality Challenges

- Cannot ensure proper quality of storage facility at customers' end.
- Quality compliance from Customers labs.





Thank you

[nizarkam@sawaco.com](mailto:nizarkam@sawaco.com)

[www.sawaco.com](http://www.sawaco.com)