&U\VWDOOL]DWLRQ

8WLOL]LQJ WKH '\9D5 V\VWHP LW LVDSSRQVHLEOHWRFXWGR WRRQDFHQWUDWHDOD]QDWLRQ
%ULQH OLTXLG

8OWUD /RZ 6,EDFRLPSUHVVLRQ WR RWKHU HYDSRUDWLYH WHFKQRORJLHV 7KH '\9D5 V\VWHP
VLQFH ERLOLQJ SRLQW HOHYDWLRQ LQ\9DFXXP HQGXUHVKHDWVHQVLWLYH DQG WKHUPDOO\ GHJUDGDEOH
RI WKH UHFRYHUHG OLTXLG LV ZHOO EHORZ WKRVH RI VHDZDWHU

1R &KHPLFDOV RU)LOWHUV 8VHG EEO GD\ V\VWHP LV DSSURYHG
)RRWSULQW IRU D EEO GD\ V\VWHP LV DSSUR[LPDWHO\ ¶ [¶

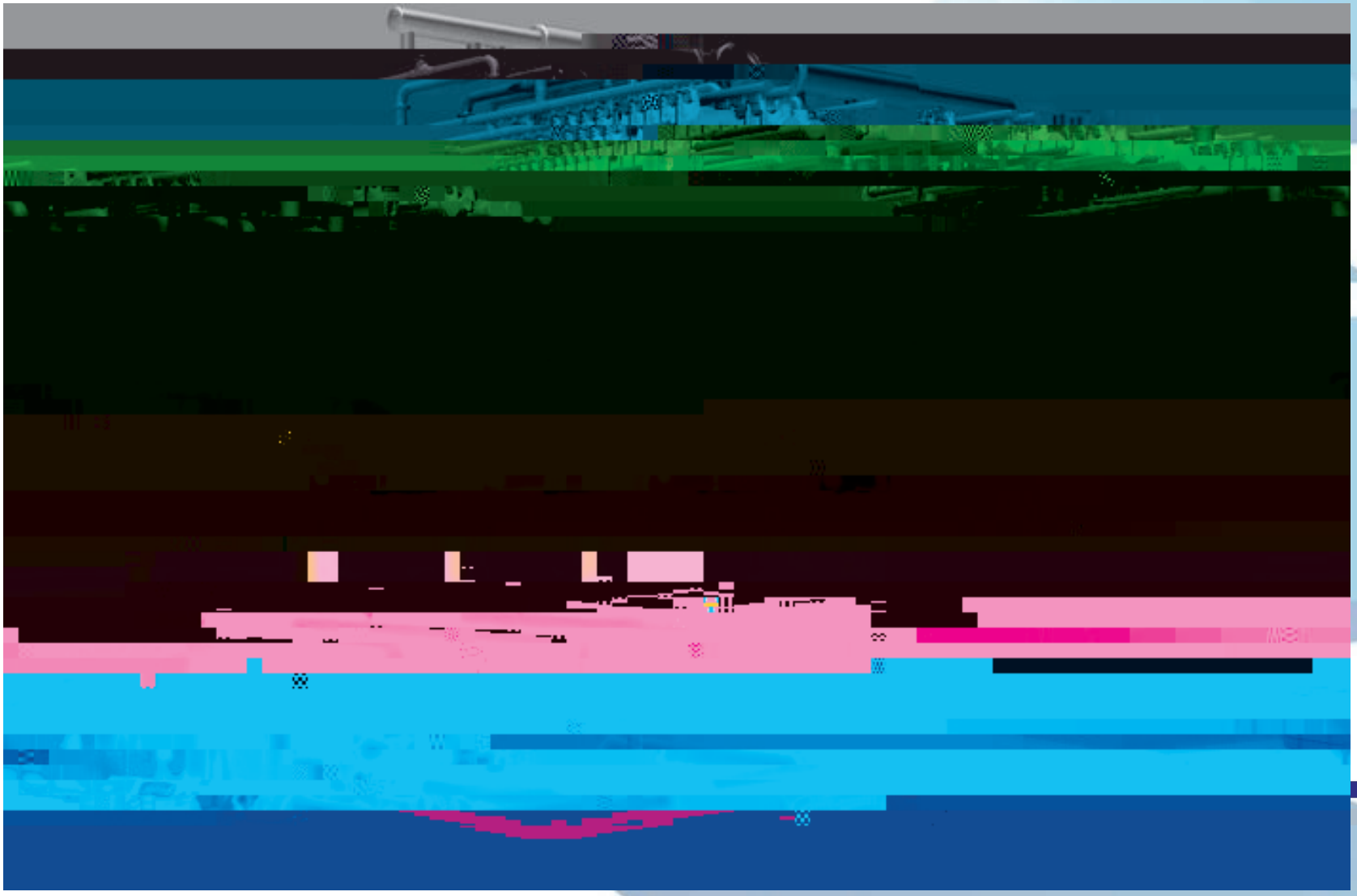
=HUR /LTXLG 'LVFKDUJH ZR/HIIOXHQW VWUHDPV DUH SURGXFHG RU VHQW
EULQH LV QHHGHG IRU GULOOLQJ RSHUDWLRQV WKHUHIRUH WKH SRRUWHGDDQG]PHGWDKD
WUDQVSRUWLQJ OLTXLG EULQH

2LO *DV 3URGXFHG DQG)OLRZEDFN:DWHUWR 7'6

STW Water Process & Technologies

"DyVaR 2700 3-D Drawing"

A Subsidiary of STW Resources Holding

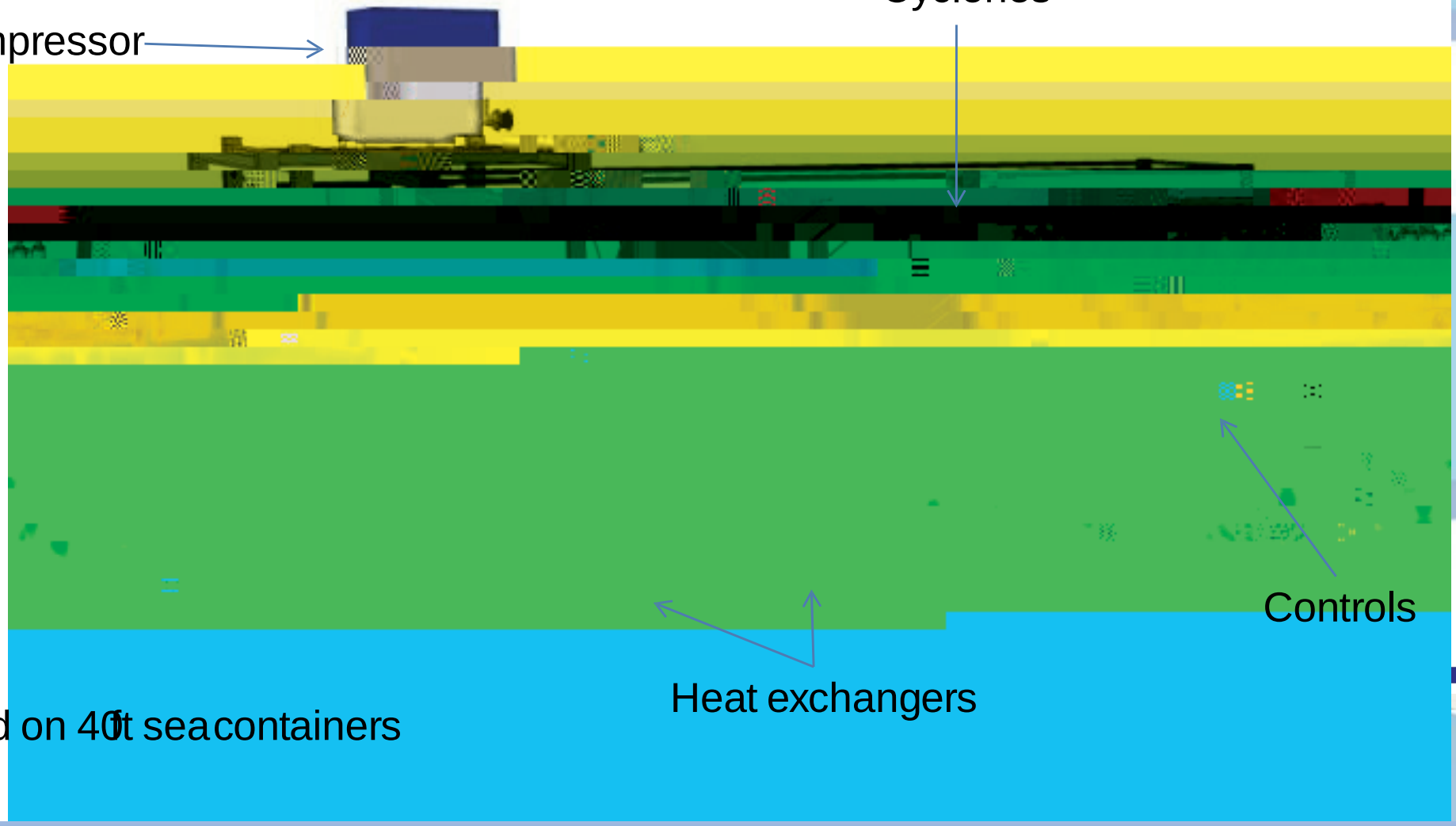


STW Water Process & Technologies

"DyVaR Systems"

A Subsidiary of STW Resources Holding

Demo system: Containerized Model

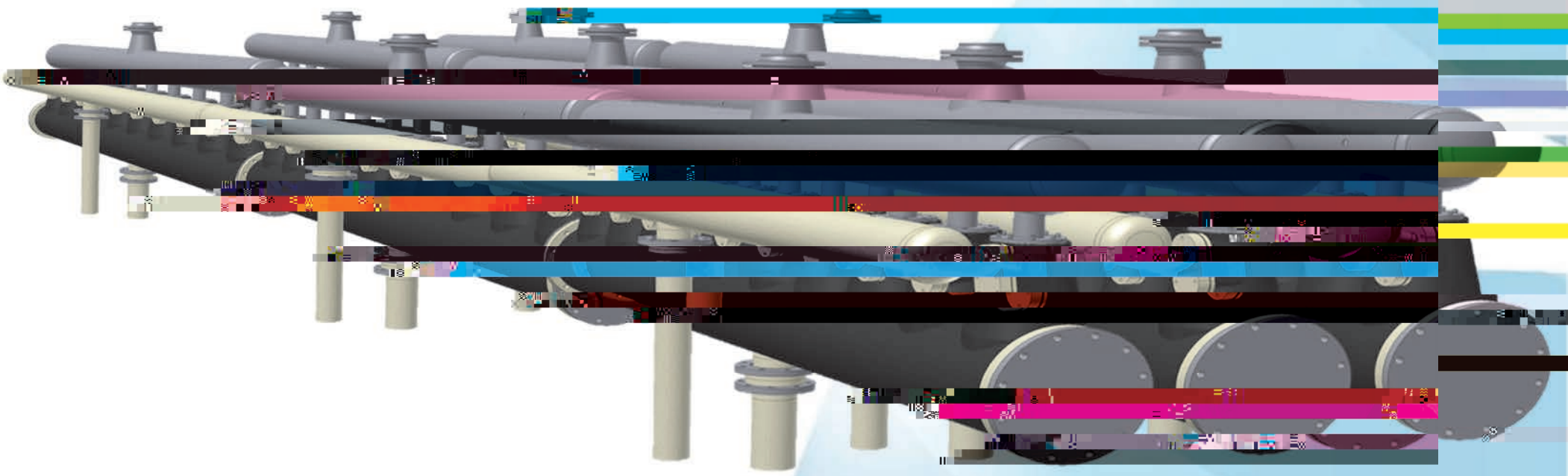


Based on 40ft sea containers

STW Water Process & Technologies

"DyVaR Systems"

A Subsidiary of STW Resources Holding



30 cyclones in row = 1 string

90 cyclones in 3 rows of 30 = 1 section

1 string of 3 modules (or 30 cyclones) can be fed from 1 header

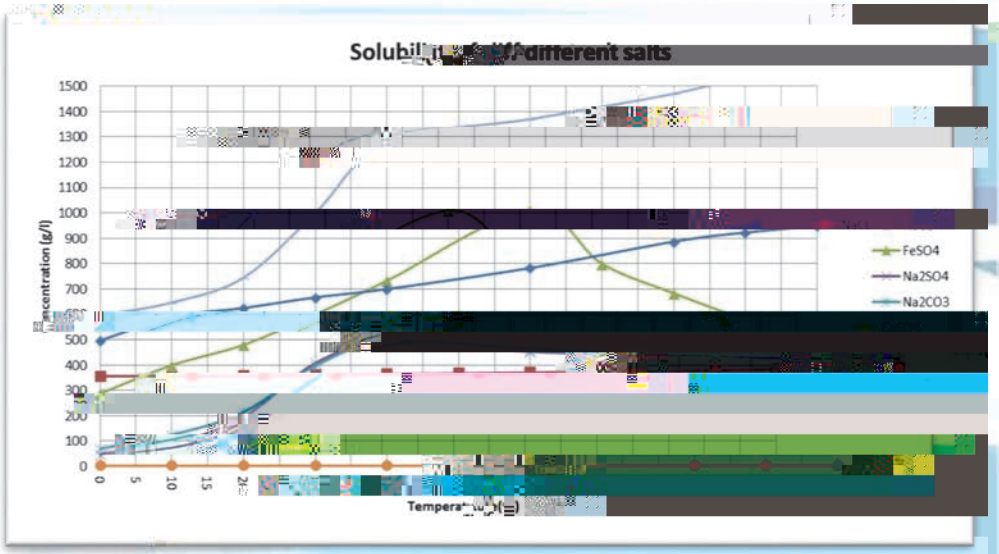
3 strings of 3 modules (or 90 cyclones) can be fed by 1 pump

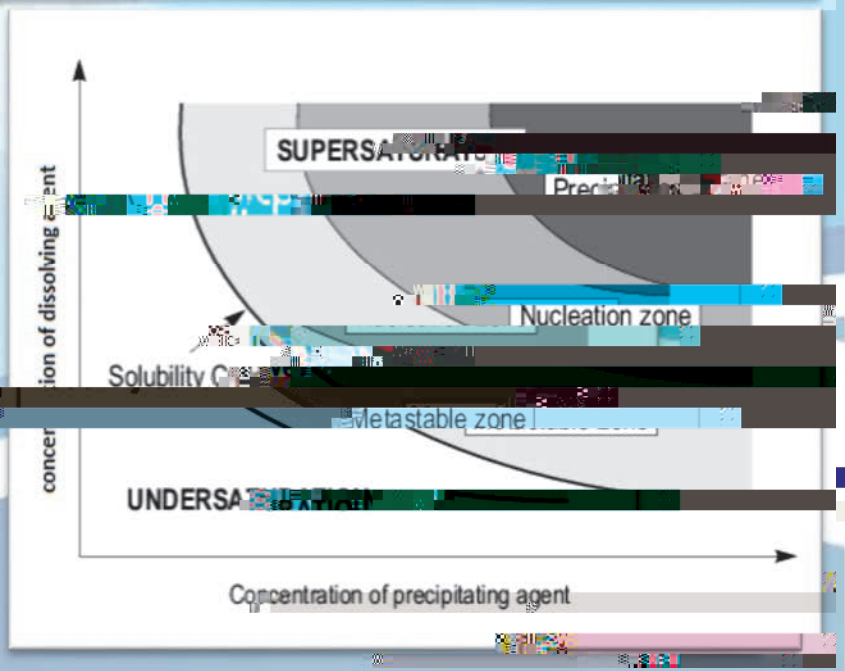
STW Water Process & Technologies

"DyVaR Systems Crystallization"

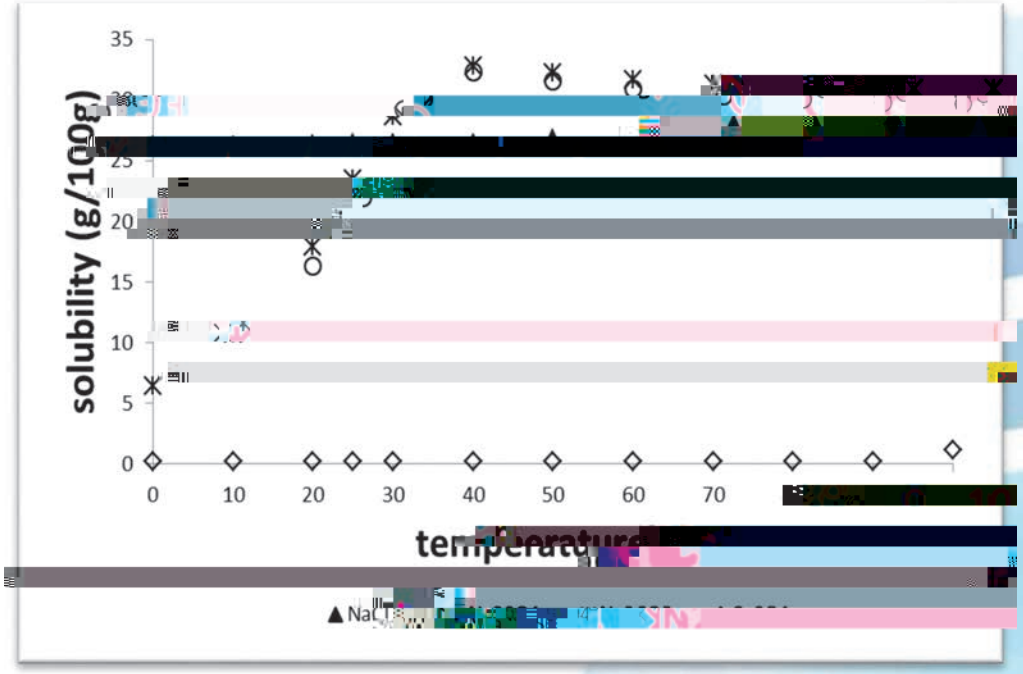
A Subsidiary of STW Resources Holding

- Positive and negative ions can combine into different molecules
- A molecule will form and crystallize when a super saturation of the positive and negative ions that make it up are present
- Salt molecules have different points of super saturation depending on for example: composition, temperature, pressure etc.

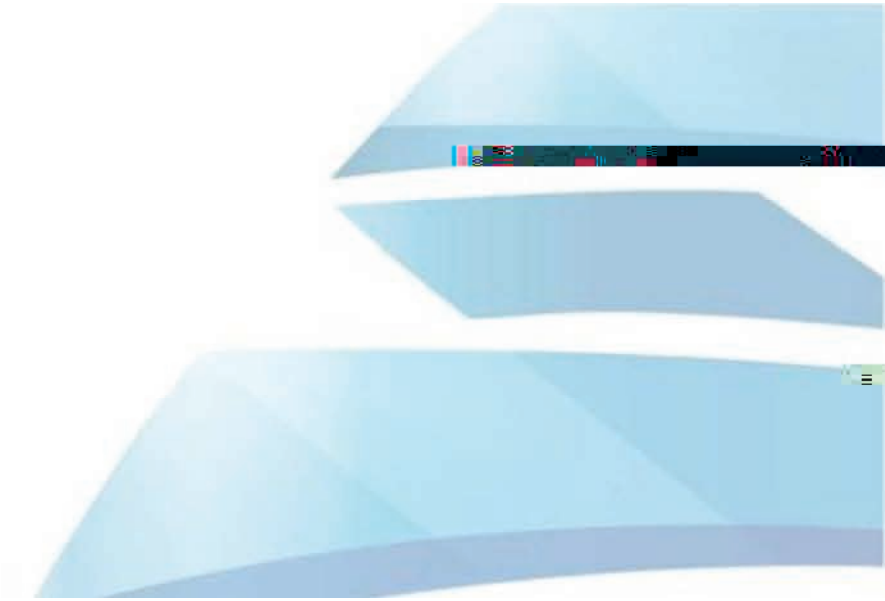




STW Water Prn cm Tc - v-0.01 0 Td [(arbonate)-342.2(



- In order to maintain the desired 10 ppg dens ity of the fluid with the provided legacy specs*, the sodium chloride needs to be concentrated to its saturation point.
- To create a consistent brine, a concentration point is chosen just above the crystallization point of sodium chloride. This ensures that sodium chloride is optimally dissolved when it exits the unit. And any exces caused by fluctuations in the composition of the influent will precipitate.
- While concentrating the solution up to th e saturation point of sodium chloride, a precipitation of Calcium sulphate and c arbonate will occur because they become oversaturated at far lower concentrations.
- Solids can be removed from the brine stream through physical separation.



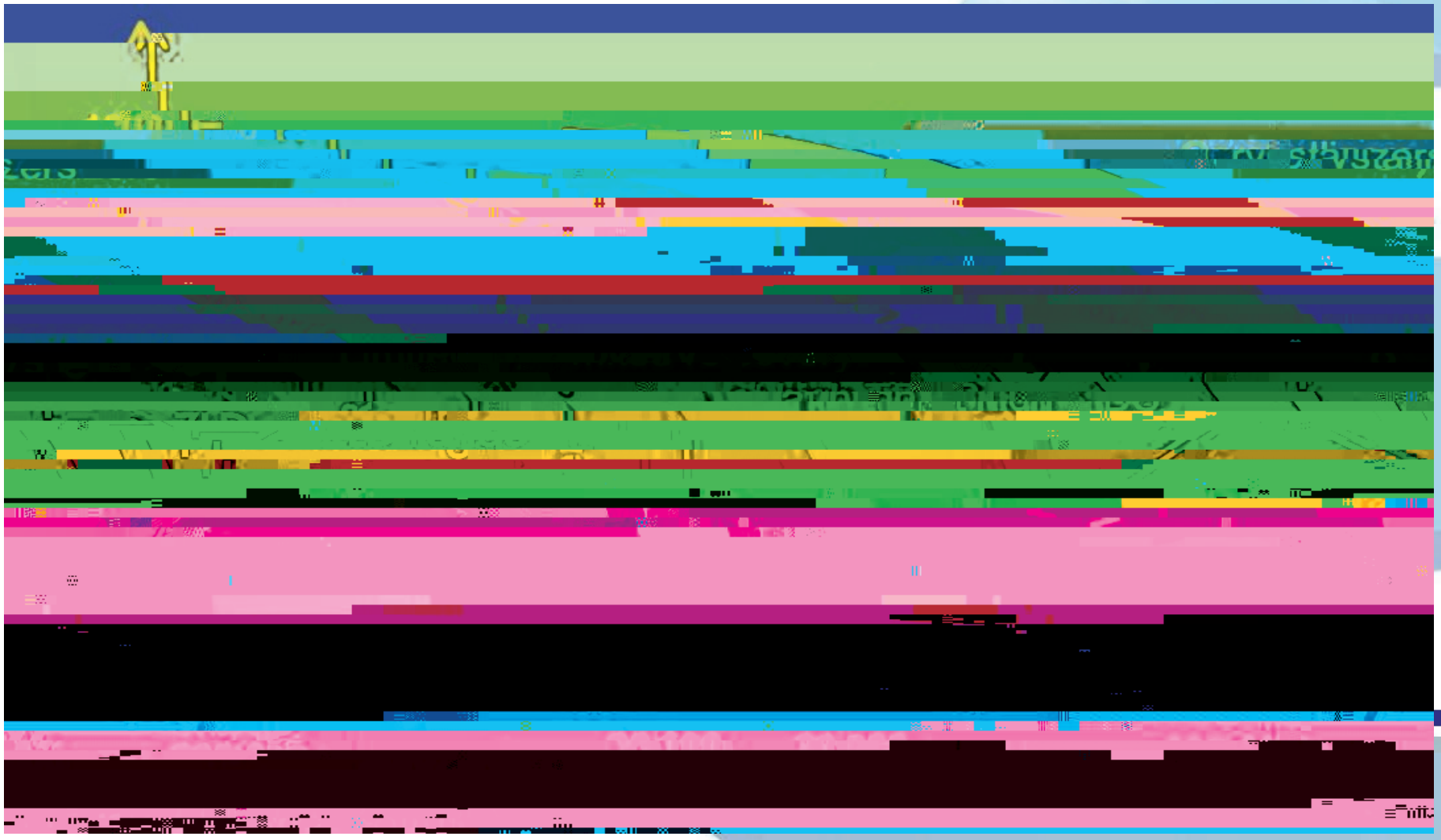
STW Water Process & Technologies

"DyVaR Systems"

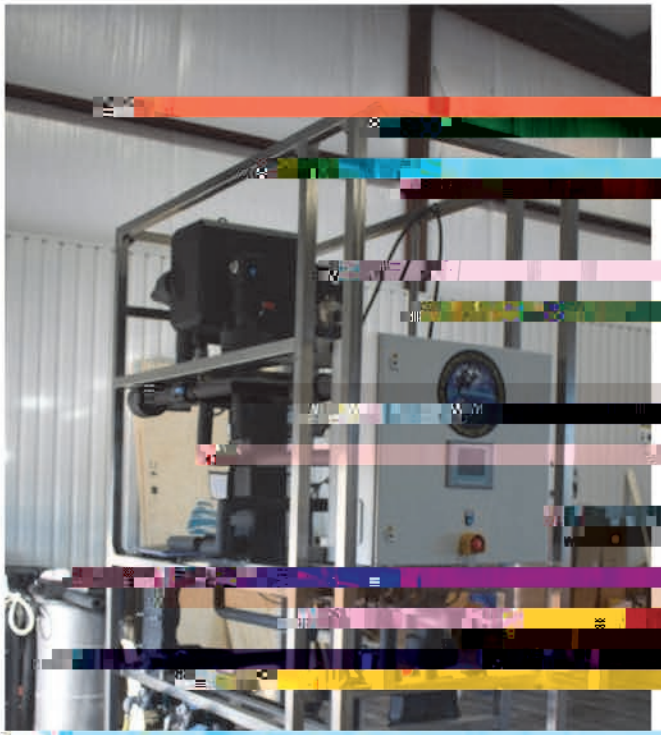
A Subsidiary of STW Resources Holding

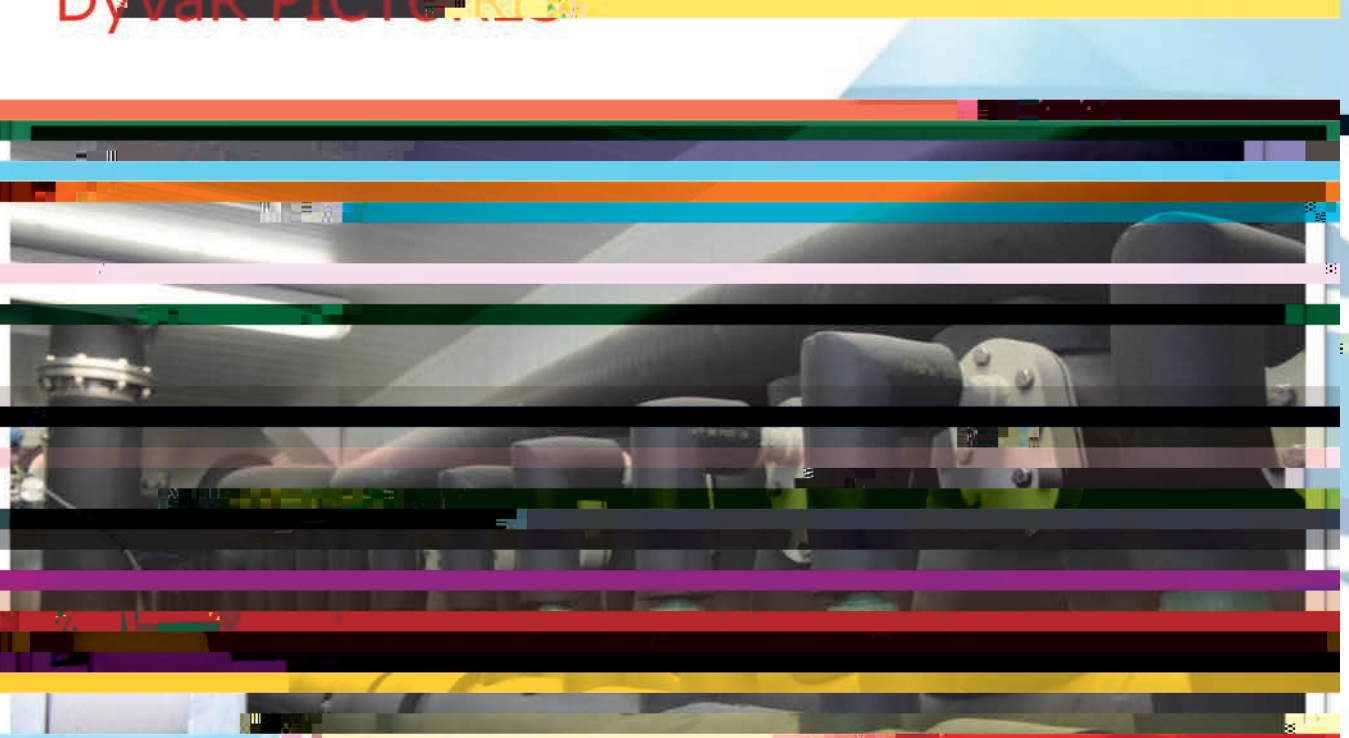
DyVaR

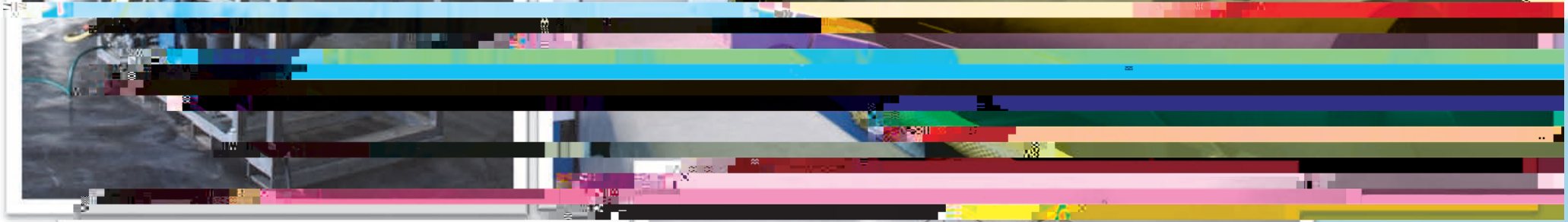
*basics forthis diagram are based orinformation of RoyaDutch Shell/Shell Oil

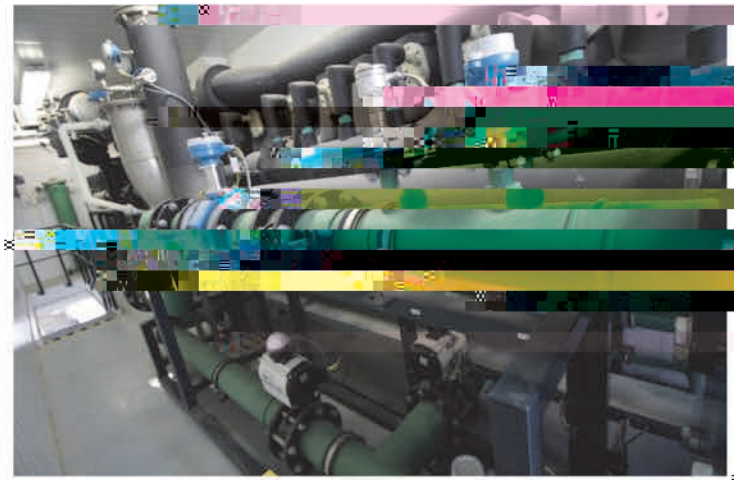


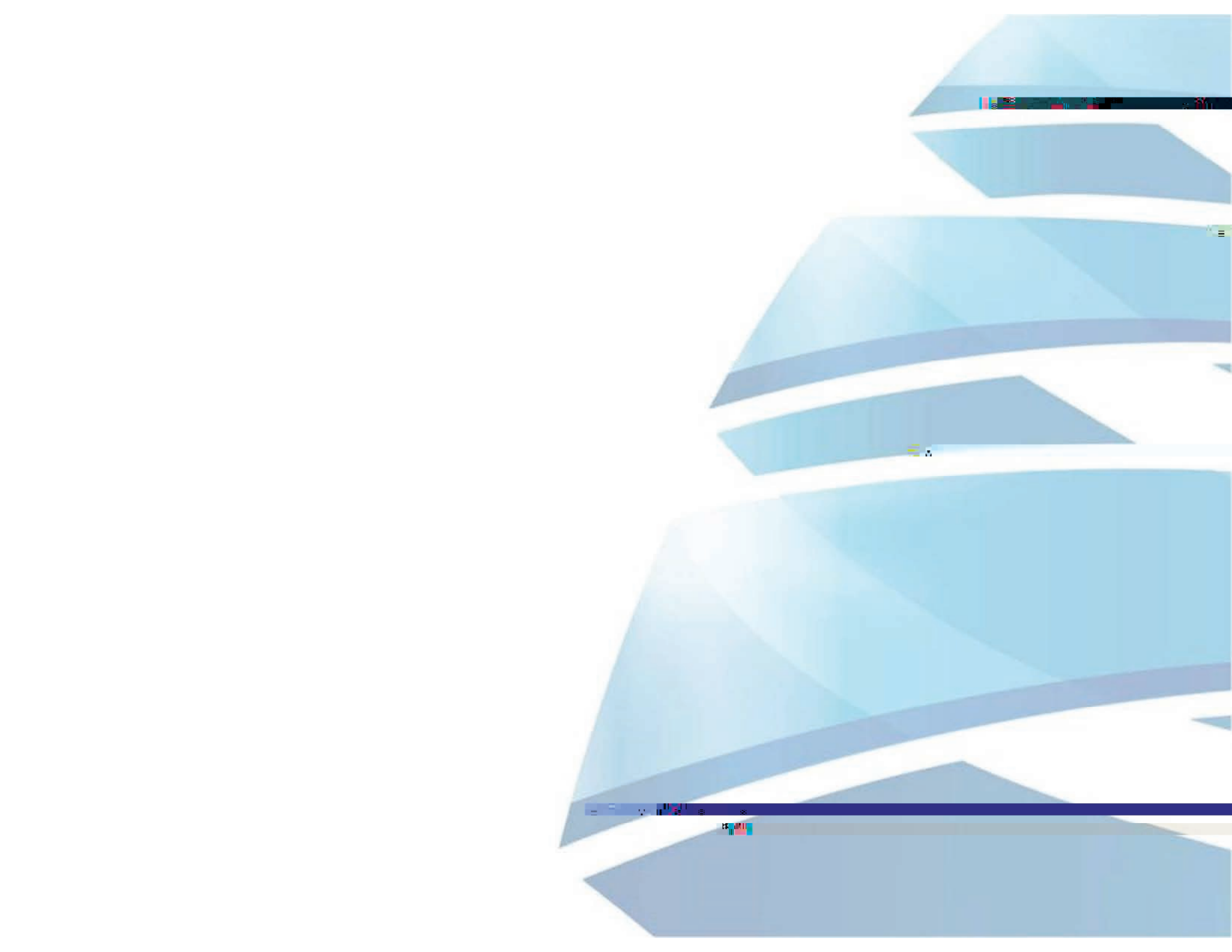
Dyvar Pictures











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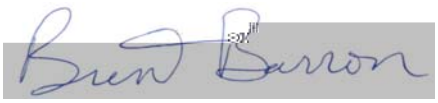

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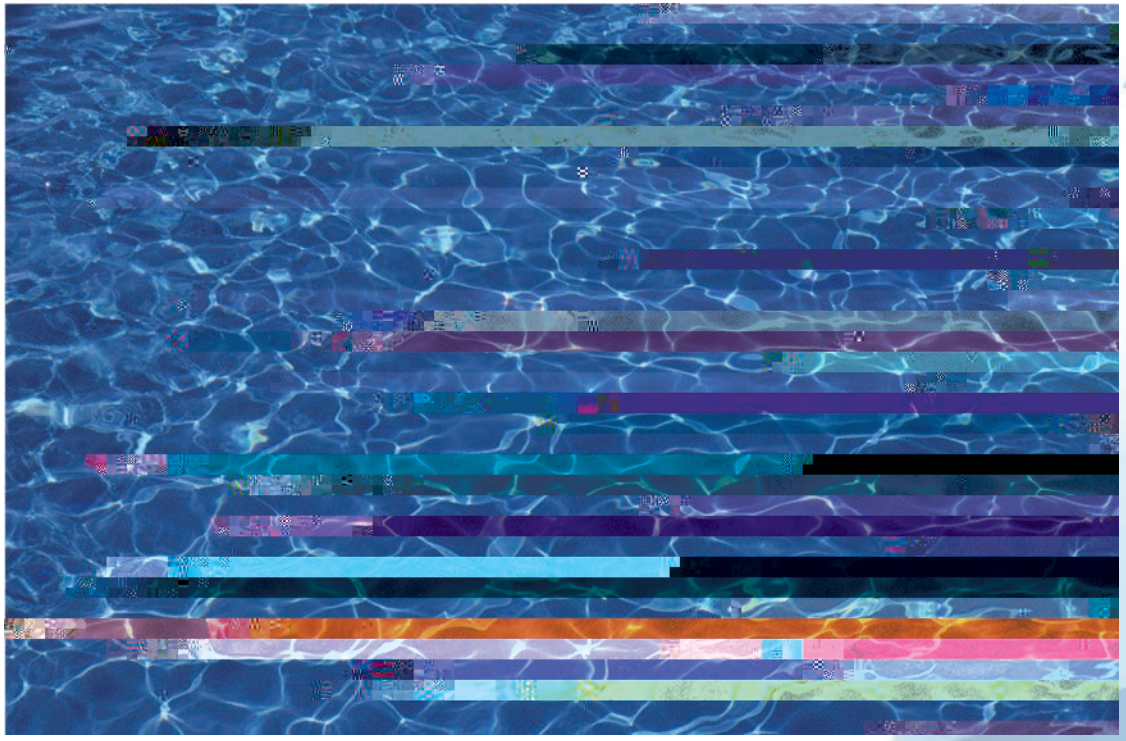
STW Water Process & Technologies

Water Management, Water Conservation, and Water Reclamation

STW currently operates in West Texas, Oklahoma, & New Mexico with expansion plans in South Texas and other areas of the North Americas, Mexico, Central America, and the Caribbean.



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