&U\VWDOOL]DWLRQ

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

8OWUD /RZ 6,EDFRLPSULVRQ WR RWKHU HYDSRUDWLFRQVWLFKRO'RJD5W\DQHP
VLQFH ERLOLQJ SYQLGFXHDQ\9DH5HPLRGGXLWKVHDHGQHGDQRWFKQJHU 7KH UH FLUFXODWRI WKH UH FLUFXODWLQJ OLTXLG LZLVRKEHJKWRYHQE\WKHRFFXSLHGURFFVRWDWKH OL

1R &KHPLFDOV RU)LRWWSULQW8VHG EEO GD\ V\VWHP LV DSSUR[LPDW
)RRWSULQW IRU D EEO GD\ V\VWHP LV DSSUR[LPDWHO\ ¶ [¶

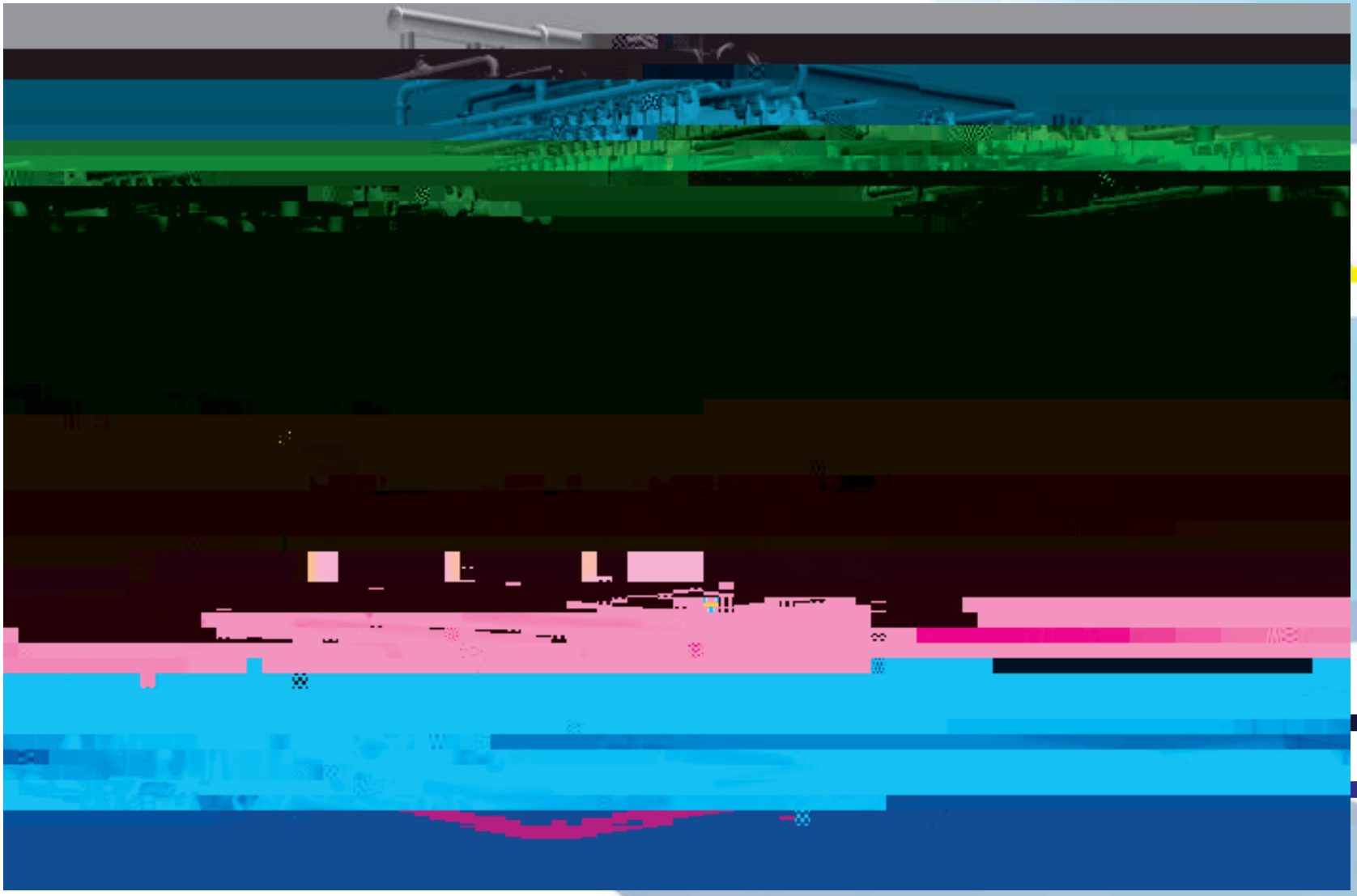
=HUR /LTXLG 'LVFKDJHZZR/HIIOXHQW VWUHDPV DUH DSQGR[LP%DWLQQH\ RU VL
EULQH LV QHHGHG IRU GULOOLQJDOWSHFDQWELRQVWUDWKSRFUWVHGDDQG]PLG[HGWDKVD
WUDQVSRUWLQJ OLTXLG EULQH

2LO *DV 3URGXFHG DQG)OLRZEDFNH:DWXSWR 7'6

STW Water Process & Technologies

“DyVaR 2700 3-D Drawing”

A Subsidiary of STW Resources Holding

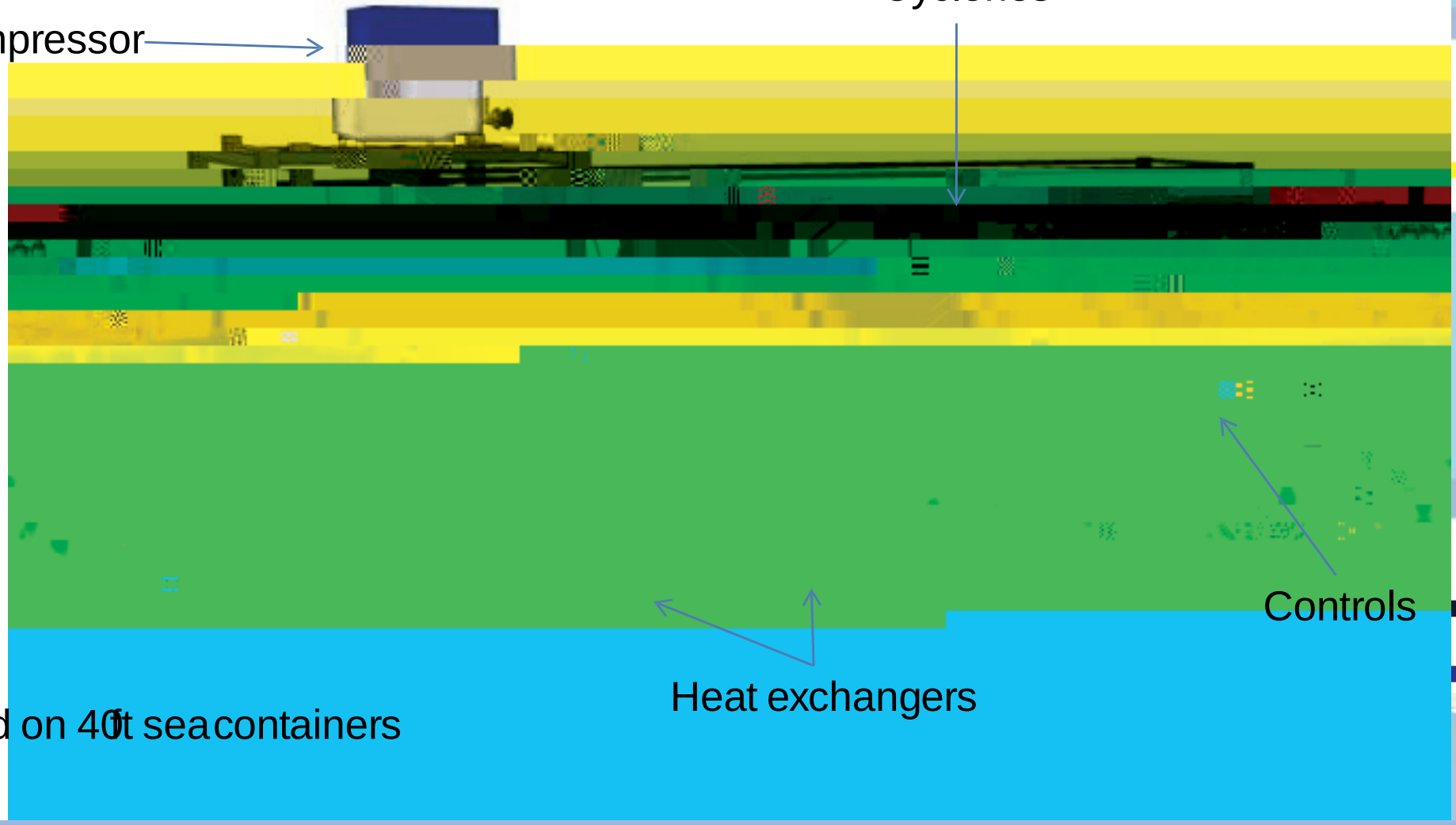


STW Water Process & Technologies

"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

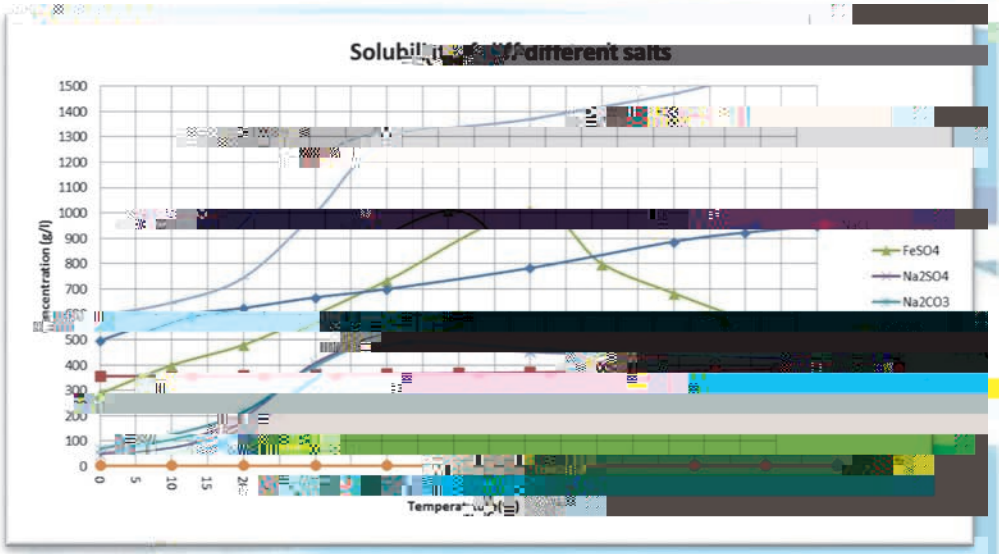
3 strings of 3 modules (or 90 cyclones) can be fed by 1 pump

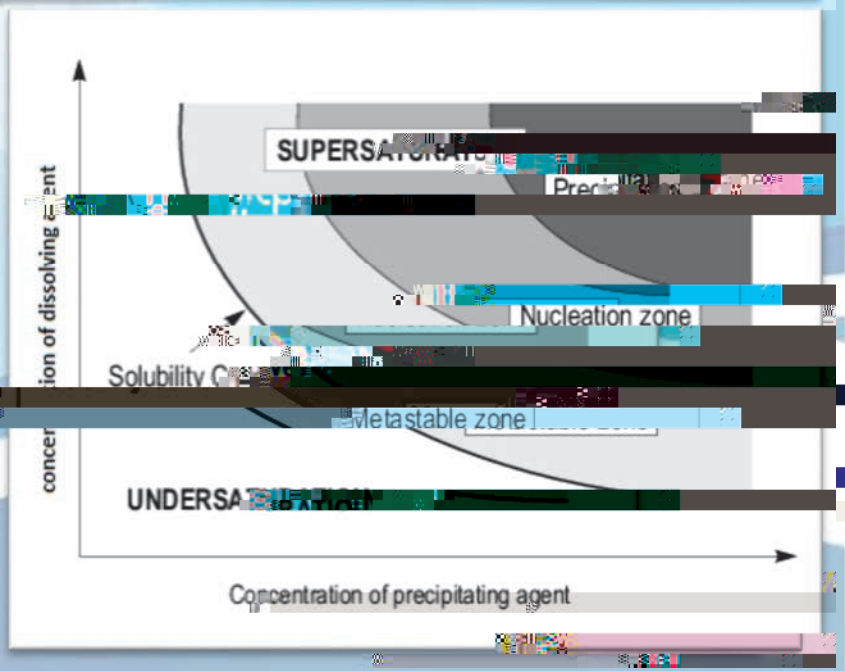
STW Water Process & Technologies

"DyVaR Systems Crystallization"

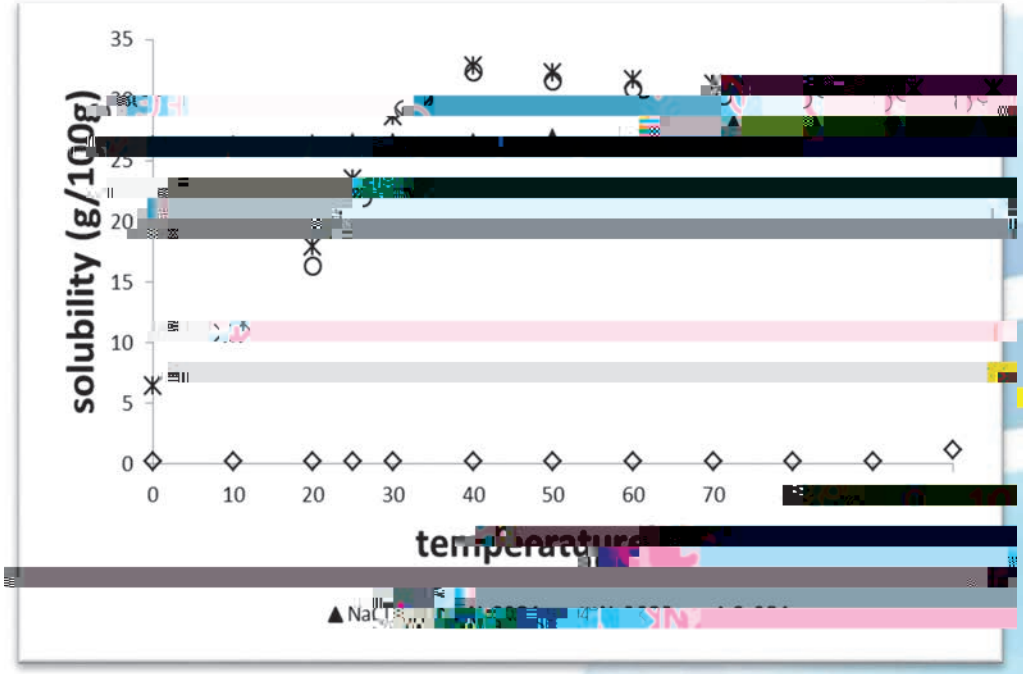
A Subsidiary of STW Resources Holding

- 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.

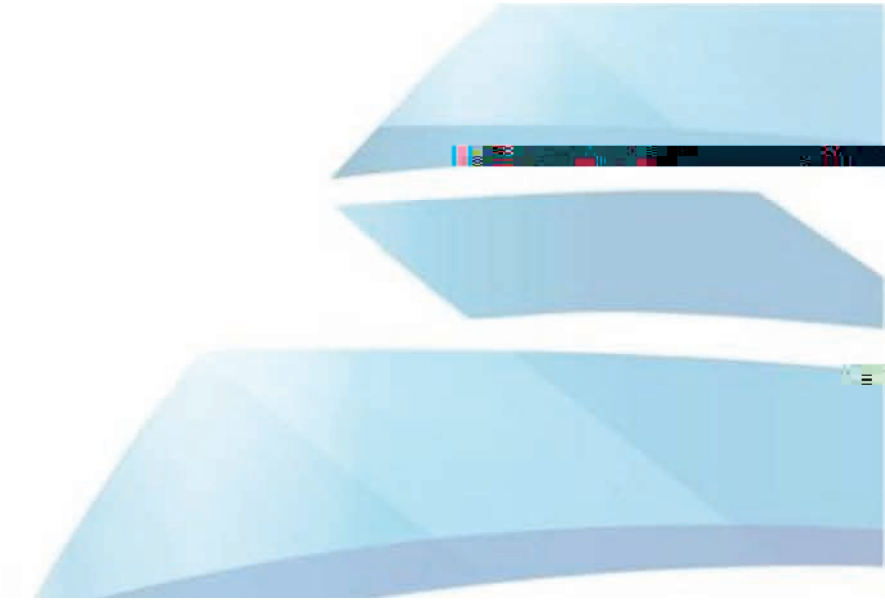




STW Water Prn cm Tc - v-0.01 0 Td [(arbonate)-342.2(



- 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.



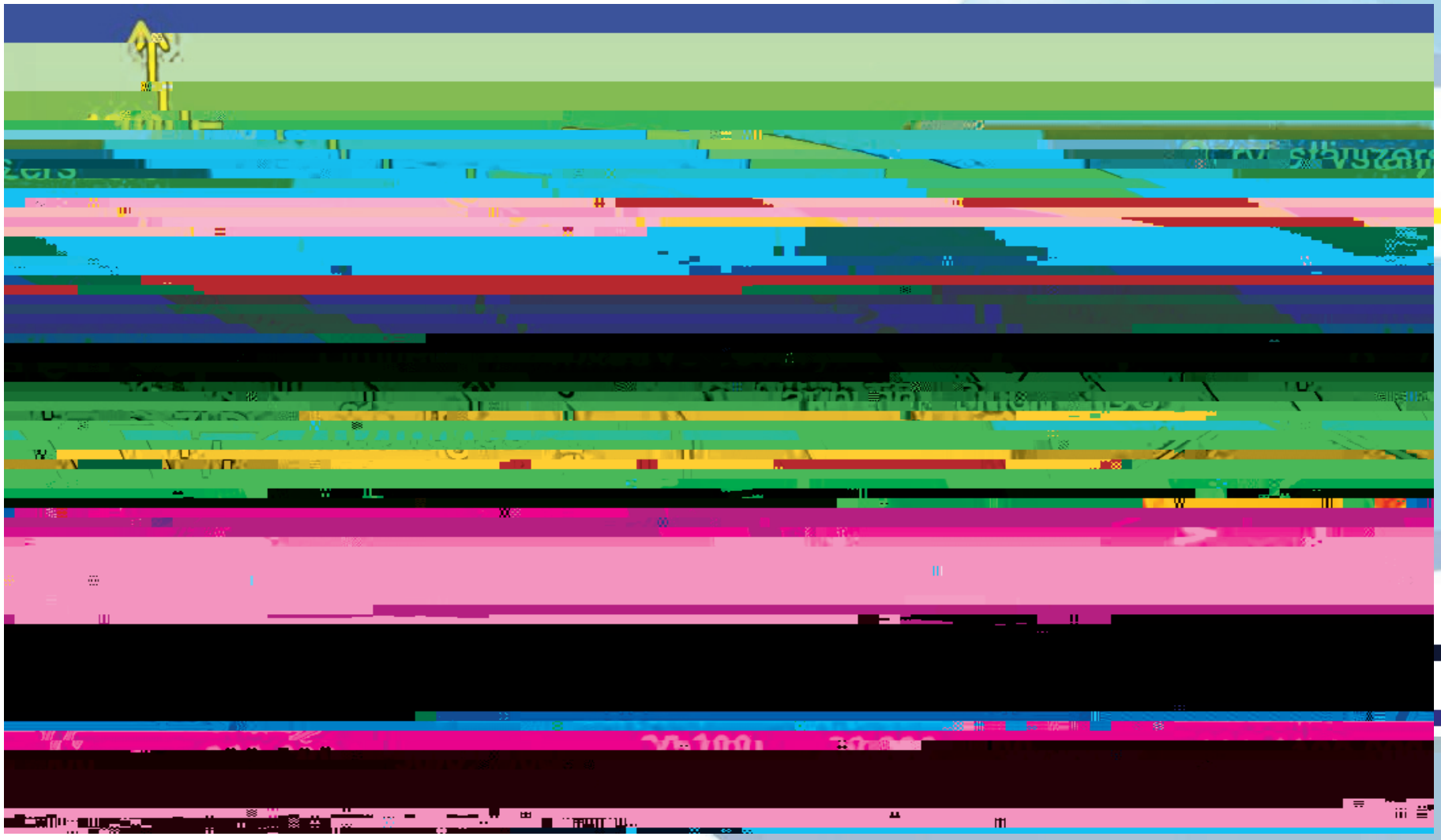
STW Water Process & Technologies

"DyVaR Systems"

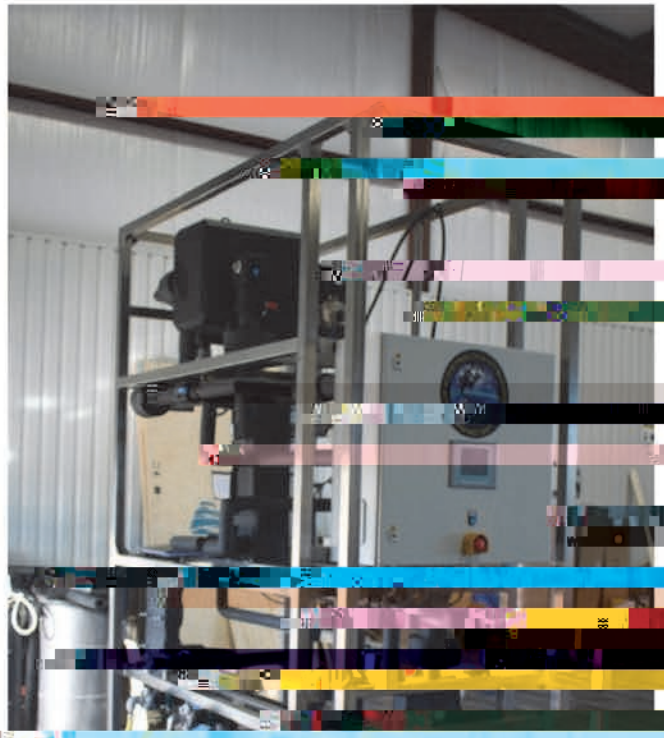
A Subsidiary of STW Resources Holding

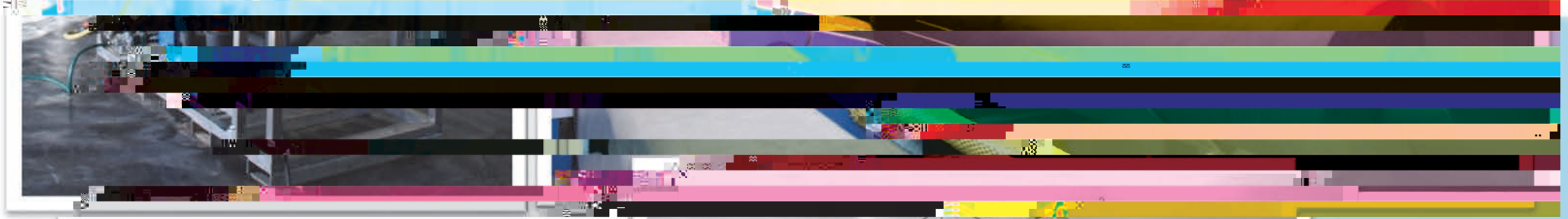
DyVaR

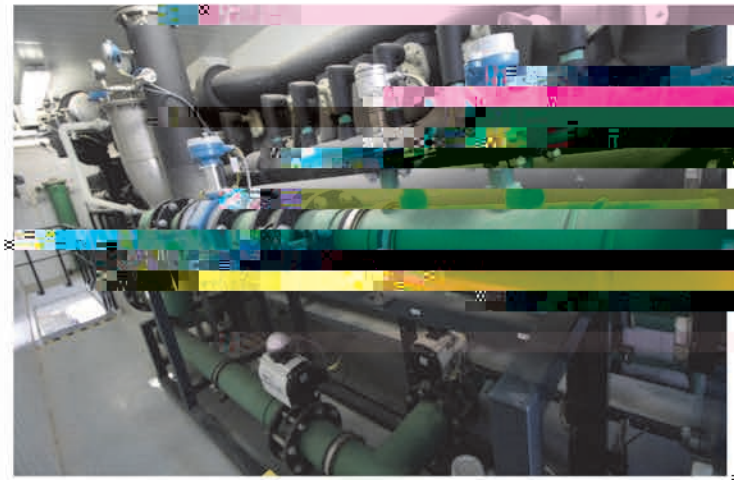
*basics forthis diagram are based orinformation of RoyaDutch Shell/Shell Oil

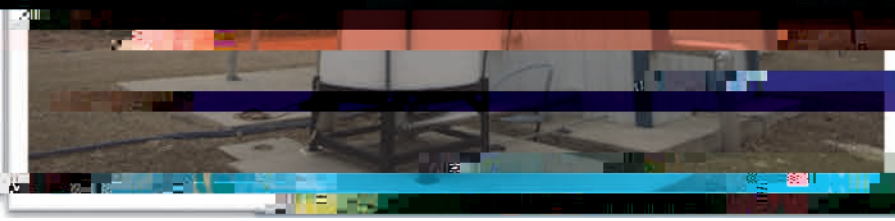


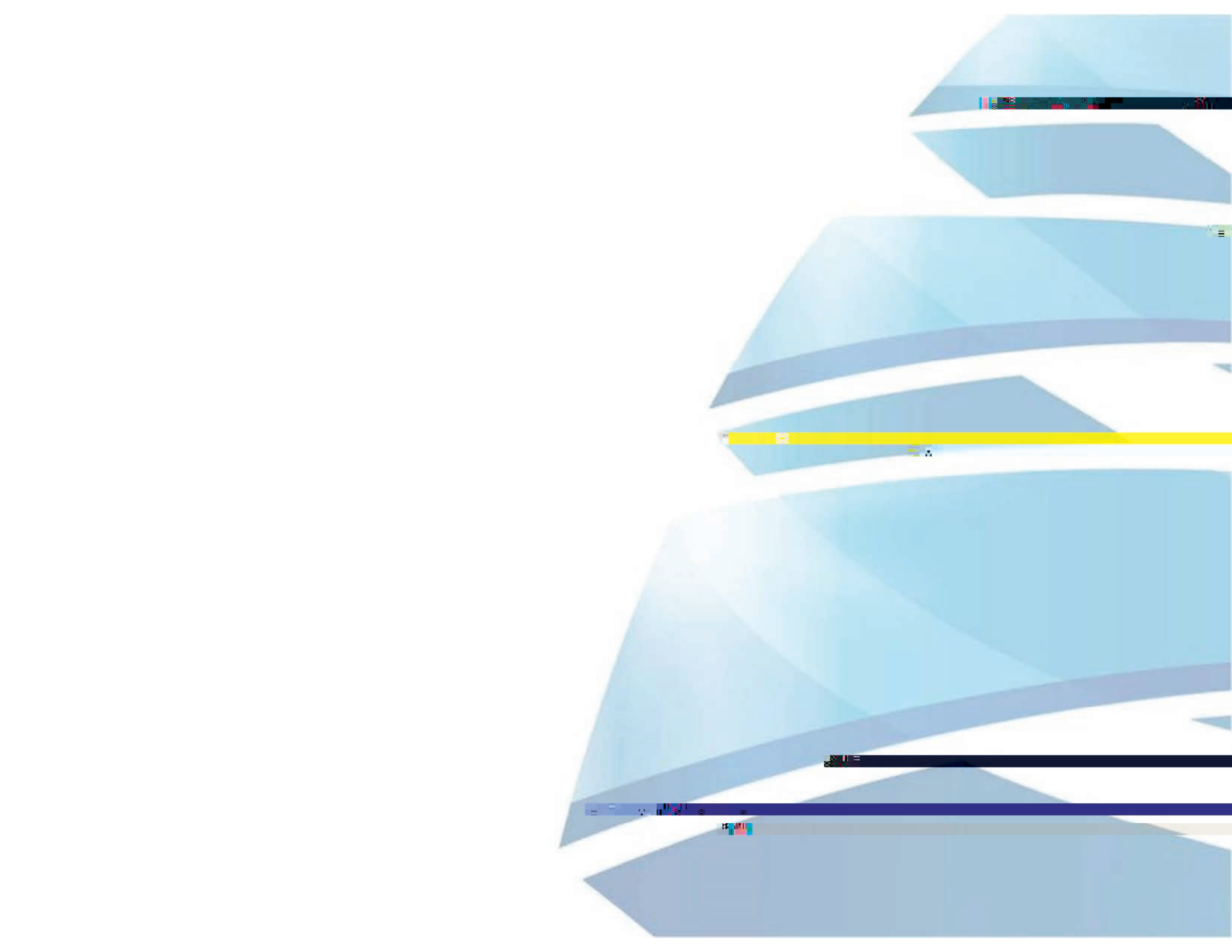
Dyvar Pictures











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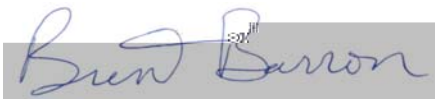

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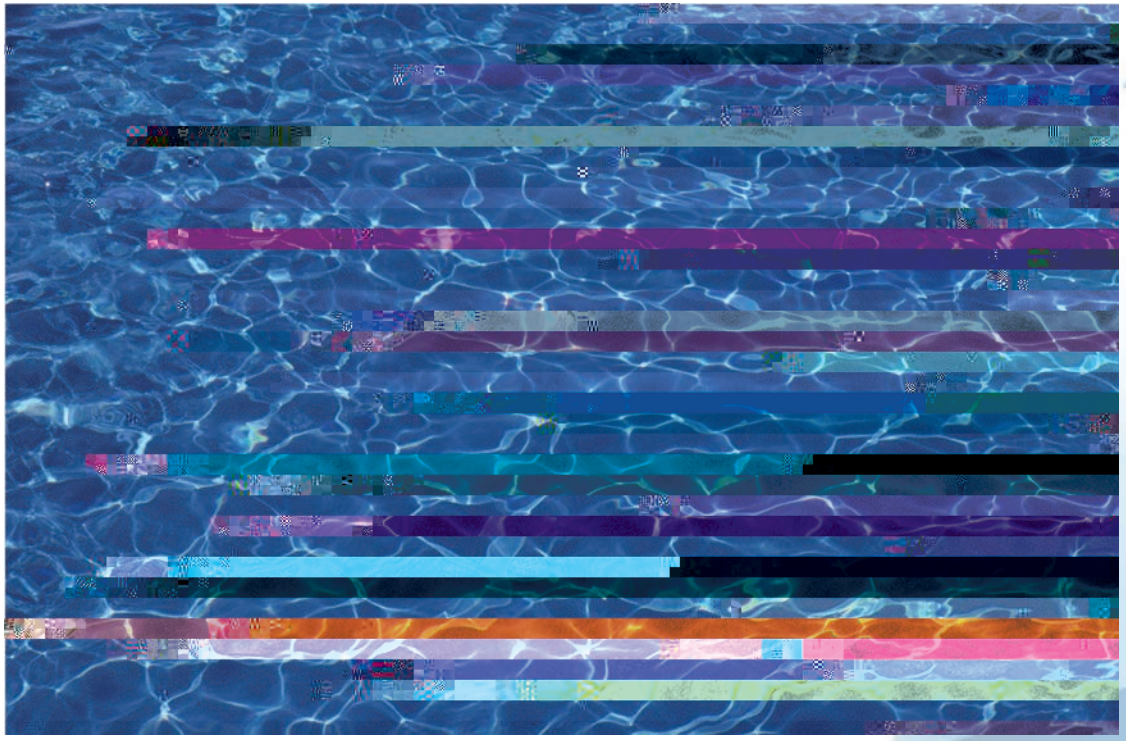
STW Water Process & Technologies

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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