

Next Generation cooling water treatment chemistry

Industries in Europe, Middle East and Africa are focused on continuously improving their competitiveness, environmental and energy footprint while reducing their total cost of operation.

NALCO Water has developed a new program to help customers maximize the efficiency of the cooling operations, allowing them to achieve those goals.

Coupled with the recent development of the next generation 3D TRASART[™] Cooling Water Technology, this new generation chemistry provides a new level of performance delivering stronger management of scale, fouling and corrosion in your cooling systems compared to industry standards.

- It has been formulated with the latest high performance dispersant polymer providing exceptional scale and corrosion control capabilities, helping your cooling water system to run at optimum efficiency, even under changing and stressed conditions.
- The new NALCO Water polymer is more tolerant of system cycle upsets, allows a wider pH operating range, it is halogen stable, and can handle high temperatures.
- Figure 1 shows an example of the improvement in calcium phosphate control at high temperature.

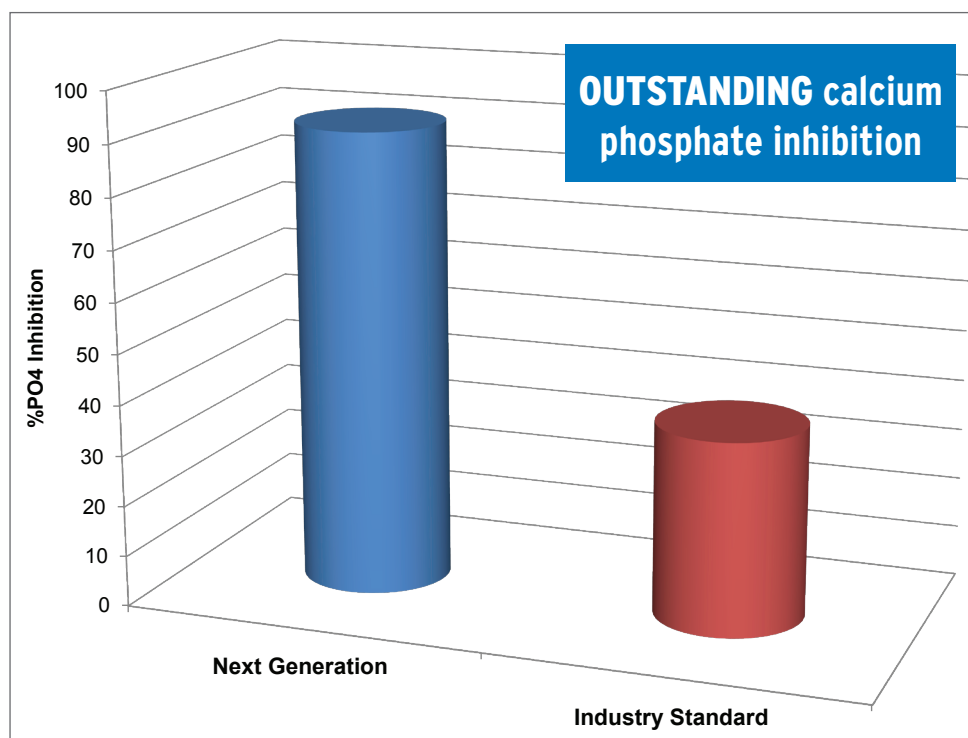


Figure 1 - **Water Conditions:**
Stabilized Phosphate Program, 500 ppm Ca as CaCO₃, 9 ppm ortho PO₄, 8.5 pH, 8 ppm active polymer, 60°C.

BENEFITS TO OUR CUSTOMERS



Water Savings



Improved Corrosion Protection



Greater Scale Inhibition



Greater Tolerance to Difficult Waters



Reduced Fouling Rate

- Similar improvements are also observed for zinc phosphate and calcium carbonate. Improved stabilisation of these compounds means lower fouling and less corrosion in your system.
- Better control of contaminants such as iron and aluminum, which increase deposit formation and increase the risk of corrosion.

NALCO Water next generation solutions for cooling water helps you meet your growing demands to minimize water, maximize results at optimized total cost of operations

NALCO Water cooling water solutions are an integration of industry-leading chemistries , automation and expertise. The next generation of cooling water chemistry works harder and offers a better environmental profile.



Capability	Industry Standard	Next Generation
Environmental	3	5
Calcium phosphate inhibition	3	4 to 5
Zinc phosphate inhibition	3	4 to 5
Calcium carbonate inhibition	3	4 to 5
Fe and Al tolerance	3	5
Halogen demand	3	5
Halogen stability	5	5
Thermal stability	5	5

Scale: 1=worst, 5=best

Figure 2 - Benchmark between next generation of cooling water chemistry and current industry standard

The combination of new, robust chemistry with our 3D TRASAR Cooling Water Technology platform allows for real time monitoring and control of your system across a wide range of operating conditions.

**MINIMIZE
Water**

Optimize cooling system efficiency, enabling water reduction and reuse initiatives.

_____ to _____

**MAXIMIZE
Results**

Maximize plant reliability and availability with improved heat transfer and lower corrosion. Improve customer sustainability goals in a wide range of operating conditions.

_____ at _____

**OPTIMIZED
TCO**

Reduce water, maintenance and cleaning costs with energy efficient operations

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