



NANO CATALYTICAL INSTANT WATER CONVERTER (NCIWC)

An environmental friendly water treatment solutions

INDUSTRIAL SECTOR

Industrial Systems

- Boilers and Heat Exchangers
- Cooling towers.
- Chilling plants & Condenser systems
- Water Storage Tanks in Industries
- Compressors
- Fire Safety



Issues:

- Steam boilers, heat exchangers, and cooling towers can all collect Calcium Carbonate scale, and foul their operating potential.
- Allowing untreated water into hot water systems will result in scale build up. Many companies choose to try and solve that by adding chemicals dosing, this is a momentary partial solution and takes constant laborious efforts.
- Even after adding chemicals most systems have to be shut down entirely for manual scale removal using heavy machinery that can actually do harm to the systems.
- The chemicals added to try and fight the already built up scale can be harmful to the environment, which the government is cracking down on.
- When you shut down you are losing production hours, and spending a lot of money during a non working period.
- Between these lost hours, and the constant purchasing of harmful chemicals you gain terrible inefficiencies.
- Scaling of pipes holding water for fire safety & blockages in automatic Fire sprinkler systems.

Benefits of Using a NCIWC:

- Our equipments have proven over time to drastically reduce downtime.
- No more heavy machinery needed to get rid of built up hard water scale.
- Reduction and usually elimination of chemicals used to fight the already built up scale.
- Minimal energy needed with the NCIWC products.
- No more harm done to the environment with chemicals.
- Using zero energy, and eliminating chemicals makes the NCIWC hard Water treatment entirely eco-friendly and green.
- With the reduction of downtime, elimination of heavy machinery, and elimination of chemicals the systems will be much more efficient and run at a higher level for a longer period of time
- Scale free water storing pipes & scale free nozzles in automatic Fire sprinkler systems & fire safety.

A couple of examples: Boilers and Cooling Systems

- Calcium Carbonate scale can collect inside boilers and foul cooling systems.
- Untreated water used to produce hot water for heating systems creates tremendous scale build up and requires expensive chemical treatment or physical removal.
- Production time is lost when systems are shut down for de-scaling
- Chemicals used for de-scaling are harmful to the environment.

Benefits of using a NCIWC:

- Reduction in downtime resulting in decreased maintenance costs and production losses.
- Reduction in chemicals used to maintain boilers. No power needed.
- No environmentally damaging chemicals needed to clean scale.
- Boilers run more efficiently with fewer restrictions due to scaling.

OIL AND GAS SOLUTIONS:

- Compressors
- Oil with high paraffin contents
- Reverse osmosis pre treatment
- Water Flooding



Issues:

- Calcium Carbonate scale can collect inside and foul cooling systems of rig mounted compressors.
- Problems with Untreated water used to produce steam to heat paraffin to separate paraffin from oil.
- Untreated water used in RO water production can reduce efficiency and output.
- When water flooding, injecting untreated hard water can cause a reaction with the formation water damaging the formation. This is due to the presence of calcium carbonate in hard water.
- Scale deposits in the formation during the flooding sealing the fractures in the formation after a period of time. Acid and other caustic chemicals are often used to eliminate the scale build up in the formation.
- Hard water requires expensive corrosive chemicals to clean scaling from pipelines.
- Production time is lost when systems are shut down for de scaling.
- Chemicals used for de scaling are harmful to environment.

Benefits from using NCIWC:

Reduction in downtime so revenue is increased.

Reduction in chemicals used to maintain compressors.

No environmentally damaging chemicals needed to clean scale.

Compressors run more efficiently with fewer restrictions due to scaling.

Decrease in pump energy usage.



ADVANTAGES IN RO PLANT WITH OUR CONVERTER:

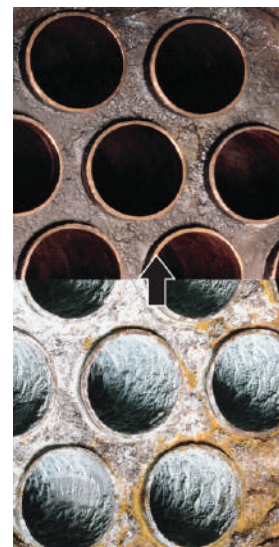
Everybody is well aware of the fact that the Reverse Osmosis plants are the only remedy for removal of hardness & other dissolved compounds of the water though the percentage reduction of water of the above RO plant is more than 50 percent is just been drawn out into drain or being used for gardening where actually the greenish color of the grass or plants gets faded up and no growth occurs, for back wash of the Ro Plant 4 -6 hours of manual labor is being wasted every day.

The Ro Plant filters, candles which are very costly are being replaced frequently and certain chemicals are also being added for anti corrosion and acids are also being used for backwash and the power consumption in RO Plants comes very high where the power is a scarcity factor, we avoid all the above problems with our NCIWC being used before Ro Plant.

All the above problems get 100 % solved

Advantages

1. The Ro in house power consumption gets reduced by 40-50%
2. The life of the Ro Candles gets increased tenfold.
3. Back wash time gets reduced by 60%
4. The rejected water gets reduced by 40%
5. The same rejected water can be re circulated through our converter to avoid further rejection keeping the same output of the Ro Plant
6. Under specific conditions only the Ro Plant may be used or otherwise it can be bypassed.
7. Biocides fouling or formation of gel on the Ro membranes shall not form at all
8. Increase in the life time of membranes.



Summary:

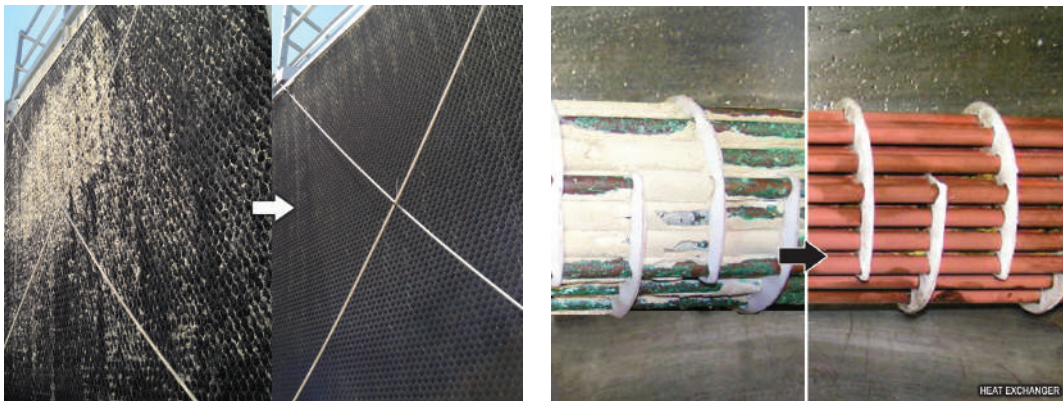
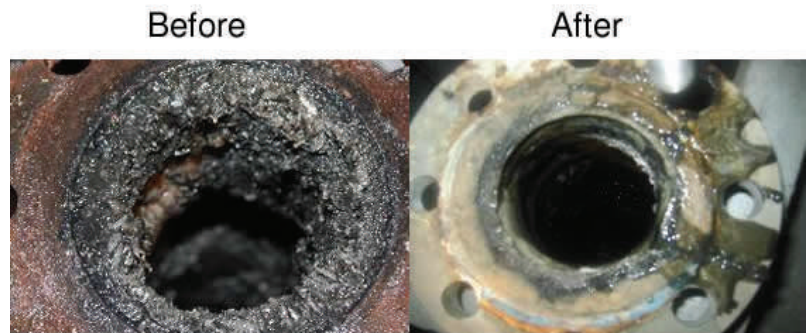
NCIWC offer significant benefits over other hard water treatments. They eliminate the use of power and chemicals making them entirely eco-friendly and green. They stop the hard water scaling before it happens. They drastically reduce downtime for heavy maintenance on already built up scale. When you combine all of these assets NCIWC is unmatched by other solutions that take a lot of money, time, and energy to maintain.

NCIWC over other convention chemical system

	NCIWC	CONVENTION CHEMICAL SYSTEM
Installation	Simple- 1 Or 2 persons	Complicated Professional Stuff
Investment	One Time	On- Going Running Cost
Energy Consumption	None	Consume
Chemicals	None	Consume
Storage For Chemicals	None	Required
Spare Parts	None	Required
Waste Water	None	Daily
Environmental Pollution	None	Creates
Maintenances	None	Daily
Guarantee	5 Years	1 to 2 Years
Handle Variable Water Quality	yes	No

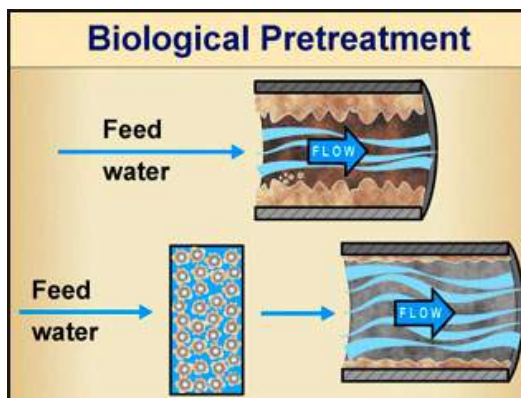
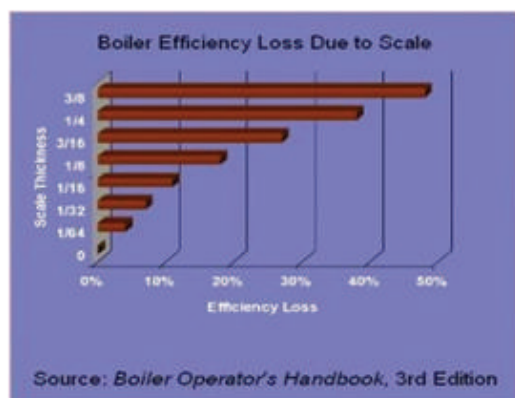
Advantages:

1. It is totally safe to the environment.
2. Constant supply of treated water.
3. Requires no shutdowns for maintenance.
4. Uses minimal energy or electricity.
5. NCIWC has no moving parts; it requires no replacement of spares hence Maintenance Free.
6. Extra Space for the unit is not required, as the equipment is installed on – line.
7. NCIWC has no recurring costs associated with chemical dosing or water softening, as no chemicals, regenerative salts or resins are used.
8. Unlike conventional water treatment NCIWC doesn't require much power or electrical inputs.
9. Easy to install without affecting existing system, Dual action - prevention and removal of existing scales.
10. Scale reduces heat transfer efficiency resulting in increased energy consumption, which can rise by almost 50%. As NCIWC is constantly preventing the deposition of Scale, thereby saving valuable energy cost Pollution free as chemical dosing and water softening system require the use of chemicals, which are hazardous and cause pollution. Disposal of such hazardous chemicals in the environment is also a difficult task faced by customers. No Corrosion Risk.



COMPARISON BETWEEN CHEMICAL DOSING, WATER SOFTENER, RO SYSTEMS & NCIWC

S.NO	Factors Of Difference	Chemical Dosing	Water Softener & Ro Systems	Non Chemical Water treatment NCIWC
1	Composition of Water	The Water becomes acidic thereby eating away Copper tubes and pipelines	Increases the corrosion of tubes and pipelines as water becomes acidic.	The water remains neutral only the physical properties changes
2	Recurring Cost	A recurring capital expenditure every year	Heavy monthly expenses in procurement, inventory, storage, handling and supervision of chemicals and salts to be dozed.	No Recurring Cost.
3	Prevention of Scale	Plant shutdowns, heavy chemical usage , huge laborious work.	Designed for a separation of hard mineral particles	Prevents scale formation and removes existing scales hardness level (up to 5600ppm)
4	Maintenance	Requires daily maintenance and check of water quality.	Requires regular maintenance and Supervision.	No maintenance required.
5	Man Power	Requires extra manpower for monitoring and dosing of chemicals.	Special manpower for regeneration of resin and operation.	No man power required as NCIWC - is online equipment.
6	Energy Consumption	Energy required for running chemicals in condenser tubes.	Needs electrical energy for operation.	Less power required for operation thus least electricity bills.
7	Pollution	Causes water pollution.	Disposal of untreated rejected water is a major problem.	No pollution.
8	Inventory	Extra space for storing chemicals.	Huge spaces are required.	Very less space is required.
9	Risk Factor	High risk of burn injury and accidents due to negligence as chemicals are hazardous in Nature.	Heavy salt usages & costly membranes.	No risk.
10	Pay back	Add on recurring cost per year	Add on recurring cost per year	Depending on hardness payback time is 3 months to 1 Year



Industrial / Commercial Applications and Solutions

1. Humidifiers (Air Washers)
2. Compressors
3. Condensers
4. Air Conditioning
5. Air Washers, Scrubbers, Humidifier Coolers
6. Cooling Rods Felt Washing
7. Film and X-Ray Processing Furnaces
8. General Cooling Systems
9. Hot Water Heaters
10. Boilers, Low Pressure Clarifiers
11. Ice Makers
12. Machines, General Bearings, Glands and Seal Compressors
13. Extruders
14. Friction Brakes
15. Grinders and Mixers
16. Injection Molding Machines, Stationary Engines
17. Presses
18. Compressors
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29. Extruders
30. Friction Brakes
31. Grinders and Mixers
32. Injection Molding Machines, Stationary Engines
33. Presses and many more...

