

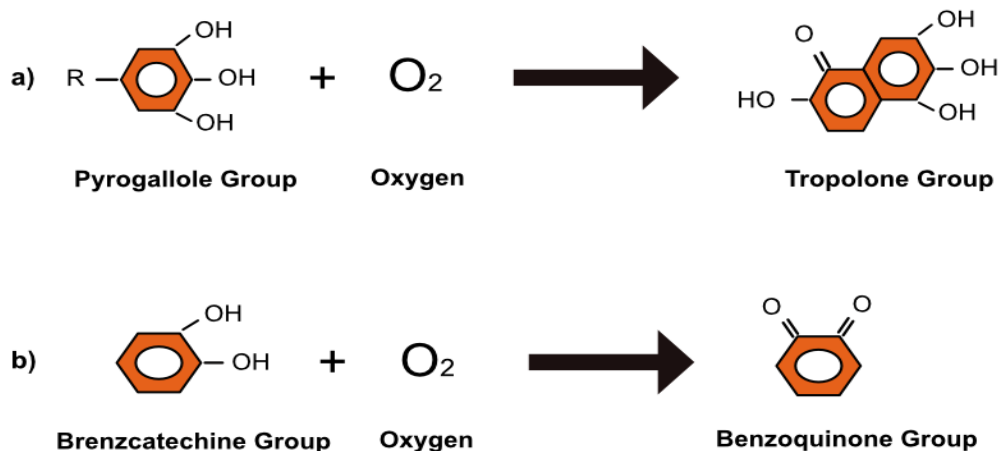
# Chemtech Solutions Private Limited

We supply 'Servivap' high quality and environment friendly following products in Pakistan.

## Boilers

Servivap offers state of the art Organic technologies that can operate up to 150 bars. We have different products as per plant operational requirements. Also, we can supply AVT (all volatile) ammonia-based treatment.

Products are MK 3124 (Neotannin) organic polymers, alkalizers and strong dispersants for systems that are not recovering condensate return. Neotannin is modification of tannin and by addition of Benzcatchine group and enhance performance of product to scavenge oxygen by making 0.1- 0.2 mm thick passive film on metal surface, its inert does not retard heat and prevent oxygen attack on metal surface and disperse sludge and prevent deposition.



Multifunctional Product: Oxygen scavenger, hardness stabilizer, film forming, dispersant, & self-cleaning

- Higher cycles of concentration to reduce water and energy consumption
- Dual action: cleaning and protecting
- High performance corrosion and scale inhibitor for low or high pressure boiler
- Our green technology generates energy, water saving and improves boiler lifetime
- Our organic based chemistry with unrivalled efficiency provides no side

effect, sludge or conductivity

- Our dynamic film structure is mononuclear and avoid multilayers.

MK 3103 and MK 3105 are blends of Ammonia and amines selected as per system requirement.

Products do not contain  $\text{PO}_4$  and prevent phosphate hide out in HP boilers. MK series can also remove existing scale by addition of some extra dose without damaging or malfunctioning operation and steam purity.

Also, you can operate above ASME limits with our full back up support and quality assurance.

## Cooling Water Systems

We offer a range of scale, corrosion and microbial protection solutions for open cooling water systems.

### PERFORMANCE

- Higher cycles of concentration to reduce water consumption
- Better corrosion control in the presence of oxidizing biocides to extend plant life
- Microbiological control and system cleanliness to maintain safety and efficiency
- Greener, metal-free programs that support sustainability
- More effective scale control for systems in steel or other plants containing dissolved or suspended iron

Servivap can supply present in use most of cooling water technologies, that includes Phosphonates, Polymers, Zinc and high stress scale inhibitors and corrosion protection.

A vast range of Oxidizing biocides and non-oxidizing biocides. Products selected as per system requirement and bacterial load.

We can supply all organic chemical treatment, to operate on high pH and alkaline conditions, consequently acid savings.

Very high performance dispersants to keep clean heat transfer surfaces and support main treatment and corrosion inhibitors.

## Reverse Osmosis (RO) Plants

We provide the full range of high performance anti-scalants and membrane cleaners for reverse osmosis and nanofiltration systems, backed by expert product and dose selection software.

Dedicated, locally-based service is always available, including troubleshooting, membrane autopsies, deposit analysis and pilot plant trials.

## PERFORMANCE

- Preventing premature membrane replacement
- Reducing downtime caused by frequent membrane cleaning
- Improving plant operations and lowering chemical treatment costs

SERVIGUARD software was developed specifically to assist operators or designers of membrane systems in the selection of the most appropriate anti-scalant for a specific system.

SERVIGUARD software calculates brine "salt solubility" for specific water qualities and specific plant operating parameters.

SERVIGUARD software allows for the most appropriate anti-scalant selection or optimum dose rate.

We can provide acid and alkaline cleaners for all types of membranes. A range of effective biocides for RO membrane also available.

With our technologies you can operate RO system without acid addition and product water quality remains excellent.

## Close Circuit Systems

Our solutions provide best-in-class corrosion control, are based on our NEOTANNIN, and are simple to blend with azole and other yellow metal inhibitors.

## PERFORMANCE

- Quick removal of corrosion, scale/s, and deposits
- Extended life corrosion protection with minimal refill opportunities
- Total dispersion of insoluble mineral salts
- Programs that can easily formulate with yellow metal corrosion inhibitor
- Organic approach, replacing traditional more hazardous nitrite-based chemistries, using organic Servivap's NEOTANNIN chemistry.
- Protection of metals by constitution of a dynamic film preventing the resumption of corrosion and deposits, in particular aluminum in condensing boilers