

IESL TECHNICAL BULLETIN

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This time we have come out with different kind of successful story of our “**SERRCON SIL**” as “**De-scaling Chemical**” for condenser and heat exchanger tube. We carried out the successful trial of this chemical for both **Shell & Tube type Condenser system** and **Coil Type Heat Exchanger system**. So, we are sharing the same with all of you,

Site Name- M/s. All India Radio, Chennai- “ The metallurgy of condenser tube was copper”.

We received the enquiry for de-scaling of condenser tubes from customer as they were facing the problem of reduction in heat exchange capacity through the condenser. Our **Mr. Jagadish Kumar- Engineer WTC**, Chennai had approached to customer and suggested them to go for SERCON SIL chemical as de-scaling chemical.

We carried out the de-scaling of condenser tube with SERCON SIL chemical @ 0.7 % concentration. We followed the following procedure during de-scaling,

- a. Preparation of 0.7% SERCON SIL chemical by using Soft water. The solution has been heated up to 38 degree Celsius temperature.
- b. Recirculation of SERCON SIL chemical through the condenser tubes for 1 hour by using SS316 pump.
- c. Soaking of chemical for 1/2 hour. (The soaking may vary from ½ hour to 4 hours depending on condition of Scaling).
- d. Recirculation of SERCON SIL chemical through condenser tubes for one hour.
- e. Solution drained out. Flushing of chemical with softened water for half an hour.

Result: - The visual inspection of condenser tubes reveal that the total scale has been removed and it has increased the heat exchange capacity of condenser.

Customer was very much satisfied with the performance of SERCON SIL and he has given the same de-scaling order for another seven numbers of condensers.

The same enquiry received from following three customers,

1. Motherson Automotive Technologies & Engineering Unit I, Chennai- shell & tube type condenser system.
The metallurgy of condenser tube was copper.
2. Pondichery polymers pvt. Ltd. Pondichery- Coil type Heat exchanger system.
The metallurgy of condenser tube was copper.
3. M/s. Goetz India Ltd., Yelhanka, Bangalore- Dye-casting Machine (Shell & Tube Heat Exchanger) - **The metallurgy of tube was copper.**

TECHNICAL SERVICES, ION EXCHANGE SERVICES, BANGALORE

At above two sites also Mr. Jagadish Kumar and Mr. Mohan, Mr. Raji (IESL Chennai) and Mr. Malappa (IESL Bangalore) conducted the de-scaling of condenser with same procedure as done in M/s. All India Radio and got the very good results.

The benefits of SERCON SIL in de-scaling of condenser tubes are:

1. Efficient **removal hard scales like silica and metal silicates** from both types of condenser tubes.
2. **No harmful effect on MOC of condenser** as compared to conventional chemicals.
3. Time required is very less (few hours- 4 to 5 hours) as compared to conventional chemicals. They used to soak the condenser systems in conventional chemicals for hours or may be days.
4. Effectivity of this chemical is more at **Low concentration and hot solution**.

Kudos to **IESL Chennai team (Mr. Jagadish, Mr. Mohan, Mr. Raji) and IESL Bangalore (Mr. Malappa)** under the guidance of Technical Services and under the supervision of **Mr. S. Sooria Narayanan (Sr. Branch Manager) & Mr. Sundran (Sr. Branch Manager)** for their initiative and successful trial of innovative use of SERCON SIL as de-scaling chemical.

We are forwarding this case study to Technology so that they can also study and standardize this **SERCON SIL for cleaning of Condenser systems**.

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