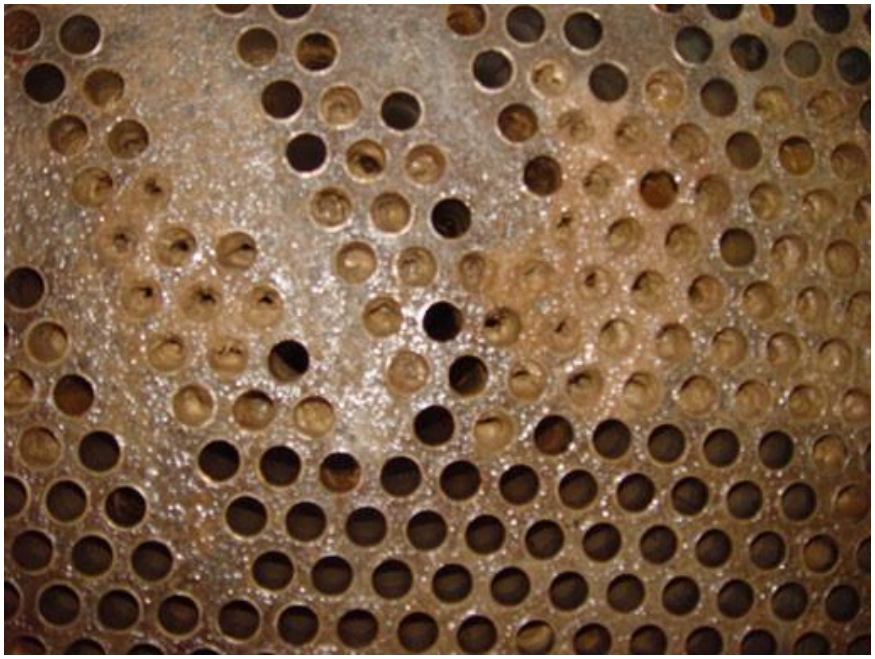
Why Condenser Cleaning required?

1. Normally in Initial fabrication and commissioning stages of Condenser water system (HVAC) and Condensers commissioning there should be proper Pre Commissioning cleaning as per BSRIA guidelines. But most of the systems not followed or commissioned as of this procedures. Hence During installation and prior to commissioning the system pipes and layouts will be with installation debris, Welding plugs, Dust and outside debris, Corrossive debris, Oil and paint debris etc. These all external debris will be affecting the entire chilled water system. Hence by doing Precommissioning cleaning will ensure the system life, equipments performance assurance and efficiency of the system.



Scaling on condenser tubes before cleaning

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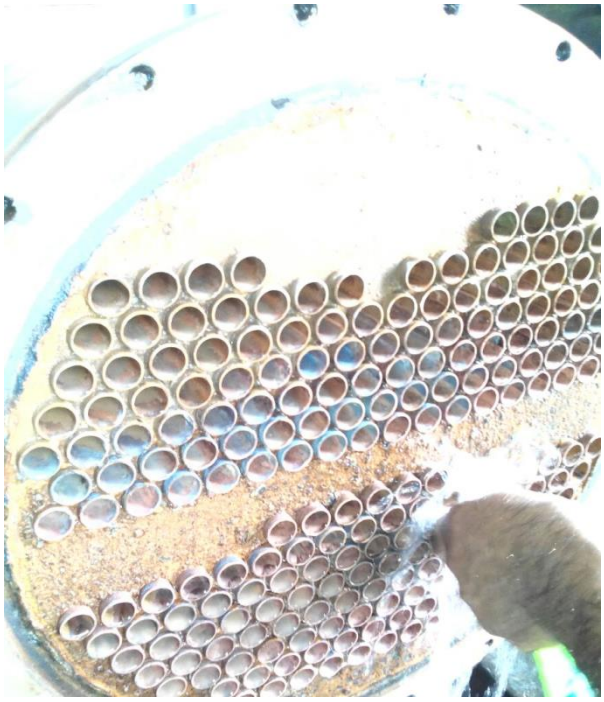
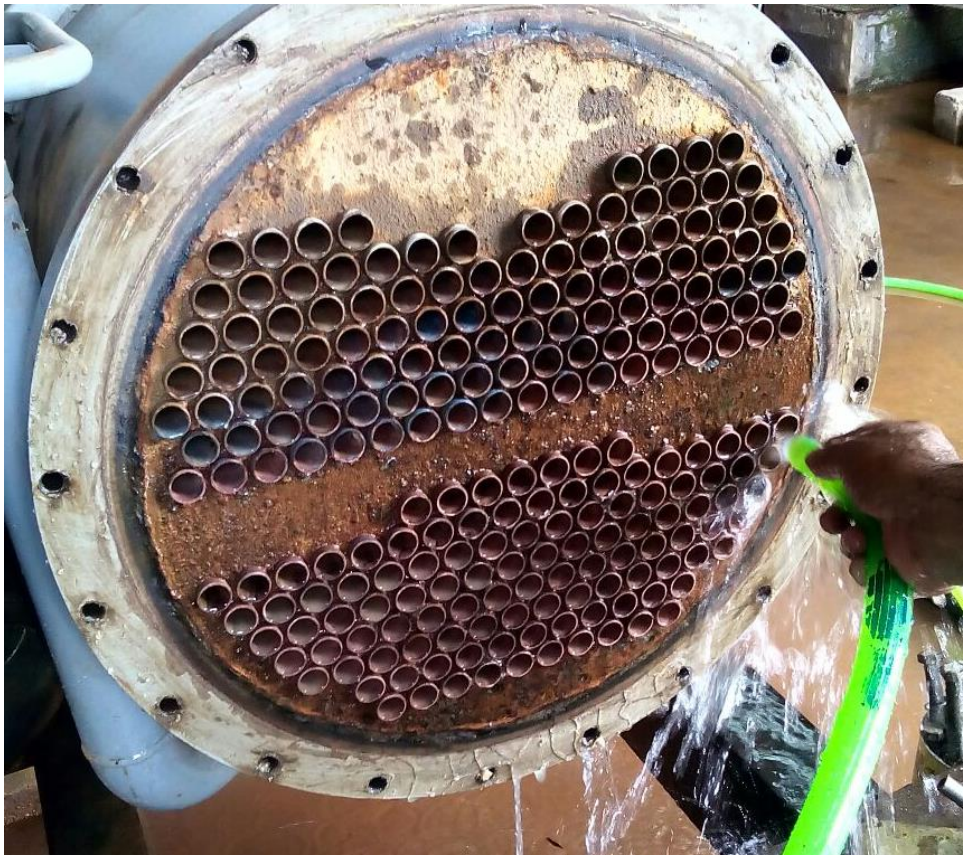


Condenser tubes during flushing after chemical cleaning



Condenser tubes after chemical cleaning and flushing

2. Bad quality of makeup water to the cooling tower Make up water may be from Bore well or from Open wells. This water may have High hardness, TSS , Turbidity and High level of Iron. High Hardness causes Calcium Scaling on condenser tubes, pipe lines, cooling tower fills etc. This scaling will result the increased wall thickness of the tubes inside condensers and decreased flow rate through the tubes.

   Increased wall thickness will cause low heat transfer efficiency and will cause the condenser systems over working status to give the required heat transfer.
   The decreased tube diameter due to the scaling inside will cause decreased flow through the tubes and pipes. Hence for achieving the required heat transfer the pumps should work more for giving more flow and this will cause more power consumption and more expenses as electricity.

3. If proper regular chemical treatment is not implemented in Condenser system:
   If the condenser water system is not protected from Scaling , Corrosion and Microbilogical fouling all this will cause Condenser tubes scaling, Corrosion and Punctures etc. Hence if the system not protected with proper chemical treatment, the condenser cleaning needed frequently.