INDUSTRIAL CASE STUDY

IFM Design/ Builds Zinc and Copper Removal Skid for Cooling Tower Blowdown

IFM recently assisted a large tire and rubber manufacturer with issues associated with years of corrosion occurring in facilities' cooling tower system.

Due to the corrosion in the cooling tower, copper and zinc was being released in the blowdown water which was received by the local POTW. The levels of copper and zinc discharged to the POTW were in violation with the local pretreatment limits.

To help the client overcome these violations, IFM designed and built a 4 gpm skid mounted system with triple 10x54 vessels, each holding 2 cubic foot capacity SIR 300 resin. The skid design also included a mounted pump, pre-filtration and a water meter.

SIR 300 is a chelating resin with a pre-disposition for heavy metals, ignoring back-ground TDS (high concentrations of calcium, hardness and chlorides). The permanent system was built according to a successfully run pilot system that proved the effective-ness of ion exchange earlier in 2010.

The system should only require an annual* change out of resin and will produce sub-ppm levels of copper and zinc in the cooling water blowdown discharge.

** Depending on flow rates, copper and zinc levels and the tank capacities.*

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