

INLAND POWER PLANT, CHINA

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This application was on an inland power plant in China, which used water from the Yuen for the cooling system of 2x 600MW. The inlet pipe to each of the two condensers was 1800mm outer-diameter.

Two HydroFLOW Multi-head 72" units were installed to treat the complete system of the steam condensers in the power station on 7th Nov 2016. A clear plastic cover was placed over each as a shield.

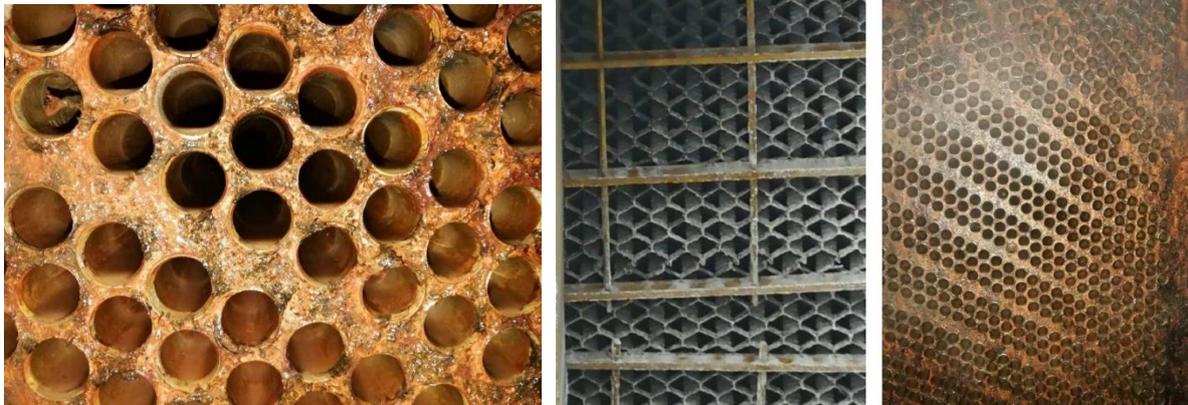
RESULTS - PARAMETERS

At the time of installation, on condenser 1 was in operation. Chemical dosing was stopped immediately one week after HydroFLOW installation. System 2 was put into operation on Jan 21st, 2017. The transit temperature the year before installation for the same period was 5-6 deg C. After installation of HydroFLOW, the transit temperature was maintained at 4-5 deg C, and the vacuum pressure within the condenser increased by 1kPa, indicating an increase in the amount of steam condensed into water.



RESULTS – INSPECTION

On March 23, 2017, system 1 was opened for inspection. There was NO HARD SCALE formation inside the steam condenser. Only soft scale was found and could be washed down by water jets per attached photos. The factory were so impressed they decided to let system 2 keep on running until the annual preventive maintenance which will be in November 2017 if all operation data are within safety limit.



There was no hard scale on the heat exchanger tubes or the cooling tower packing (above). The small amount of scale that was present was soft to the touch (below) and could easily be removed by water jets.



CONCLUSIONS

After the installation of HydroFLOW, the power station achieved the following saving and environment benefits:

- Chemical dosage was eliminated for the operation.
- No hard scale was found inside the condenser and cooling tower cooling mate
- Steam condenser transit temperature dropped by 1.5°C and vacuum pressure increased by 1KPa compared with the same period in previous year.
- Discharge water from the cooling tower could now be used for gardening and other applications because there were no chemicals in the discharged water.