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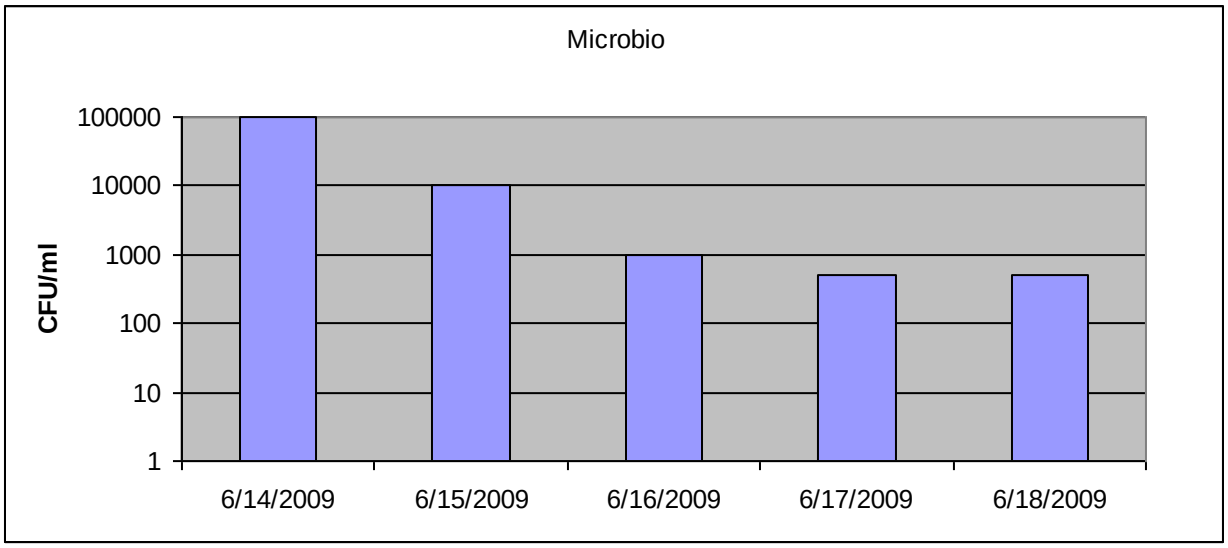
Engeenuity Cooling Tower Test

Bacteria Control

We performed another pilot cooling tower test last week and the following is the results of our findings. In summary, the devices performed very well in reducing the microbiological activity in the the tower tested.

Test Protocol: A pilot cooling tower in our lab was inoculated with a combination of microorganisms and micro-nutrients. This resulted in a bacteria count of 100,000 cfu/mls. We then inserted 21 devices into the tower for the duration of the test. Our continuous data logging of pH, conductivity, ORP and corrosion was not working correctly so we could only record these readings on a periodic basis during the test period. Bacteria levels were tested using an Orion test method for total aerobic bacteria counts. The following is a graphic analysis of the data collected during the test.

Test Data:



The devices effectively reduced the bacteria level in the pilot cooling tower to less than 1000 cfu/ml.

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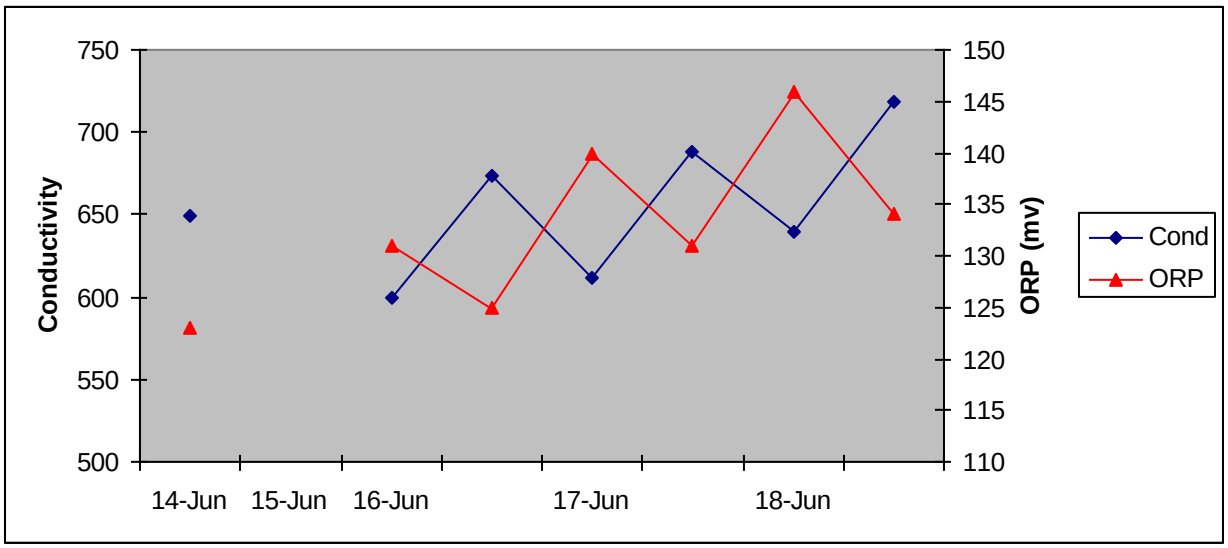
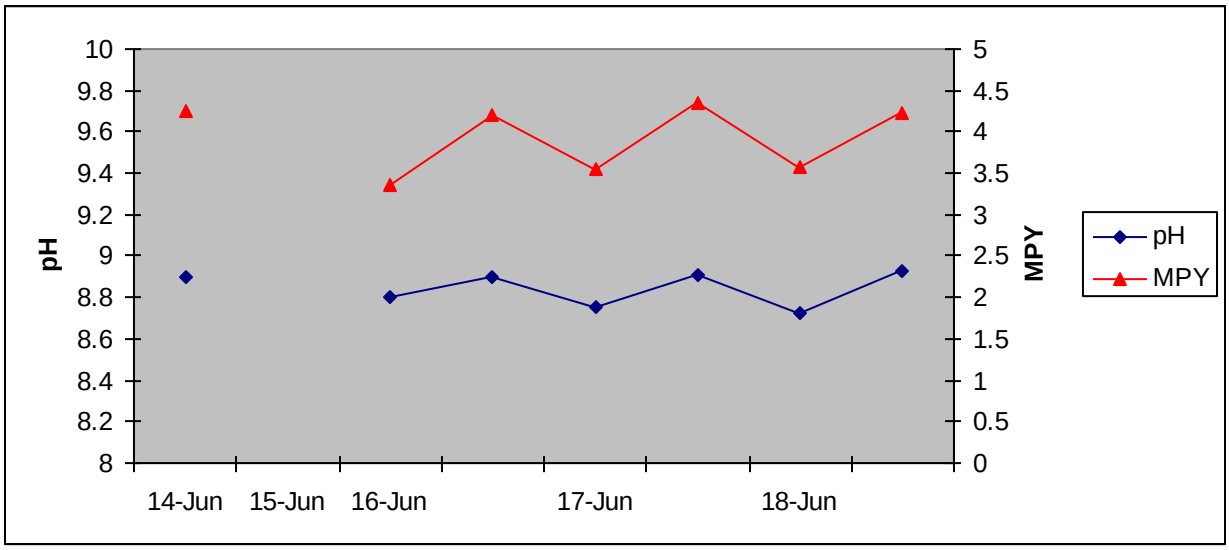


There was a slight increase in the conductivity and ORP readings during the test.



The pH and mild steel corrosion did not change significantly during the test period, indicating no adverse effects by the devices on these critical parameters.

Conclusions: The technology demonstrated its ability to reduce microbiological activity in a pilot cooling tower without adversely affecting at least 5 critical performance parameters of a cooling system. Due to the repeated outstanding performance of this technology in controlling bacteria in laboratory testing it is imperative that field testing be the next step in the commercialization. I do not feel that any additional laboratory testing would be of benefit at this point

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