CLAIMS

We claim:

1. A method for microbiological control in cooling systems wherein a recirculating fluid containing a biocide is passed through a fine filtration system containing membranes that have a pore size of 5 or less μm.

2. The method of claim 1 wherem the recirculating fluid is diverted to a side stream then passed through the fine filtration system,

~~3. The method of claim 1 wherein the fine filtration system contain membranes that have a pore size at 5 or less μm.~~

~~4.~~3. The method of claim 1 wherein the fine filtration system contain membranes that have a pore size from 0.01 to 0.10 ~~μm~~μm.

~~5.~~4. The method of claim 1 wherein the fine filtration system contain membranes that are micro ultra-filtration membranes.

~~6.~~5. The method of claim 1 wherein the fine filtration system is back flushed to regenerate the membranes.

~~7.~~6. The method of claim 1 wherein the fine filtration system is air scrubbed to regenerate the membranes.

~~8.~~7. The method of claim 1 wherein the biocide is an oxidising biocide.

~~9.~~8. The method of claim ~~6~~5 wherein the oxidising biocide is one or more of the following: chlorine, hypochlorite, ClO2, bromine, ozone, hydrogen peroxide, peracetic acid and peroxysulphate.

~~10.~~9. The method of claim 1 wherein the biocide is a non-oxidising biocide.

~~11.~~10. The method of claim ~~10~~9 wherein the non-oxidising biocide is one or more of the following: glutaraldehyde, dibromo-nitrilopropionamide, isothiazolone, quaternary ammonium, terbutylazine, polymeric biguanide, methylene bisthiocyanate and tetrakis hydroxymethyl phosphonium sulphate.

12. The method of claim 1 wherein the biocide is a mixture of an oxidising biocide and a non-oxidising biocide.

13. The method of claim 1 wherein the biocide is one or more of the following:

chlorine, hypochlorite, ClO2, bromine, ozone, hydrogen peroxide, oxygen based biocides, peracetic acid, peroxysulphate, glutaraldehyde, dibromo-nitrilopropionamide, isothiazolone, quaternary ammonium, terbutylazine, polymeric biguanide, methylene bisthiocyanate and tetrakis hydroxymethyl phosphonium sulphate.

~~14. A method for microbiological control in cooling systems wherein a recirculating fluid containing an oxidising or a non-oxidising biocide or a mixture of an oxidising and a non-oxidising biocide is passed through a fine filtration system contain membranes that have a pore size at 5 or less μm.~~

~~15. The method of claim 14 wherein the fine filtration system contain membranes that are micro ultra filtration membranes.~~

~~16. The method of claim 14 wherein the fine filtration system is back flushed to regenerate the membranes.~~

~~17. The method of claim 14 wherein the fine filtration system is air scrubbed to regenerate the membranes.~~