





Drew Ameroid® Marine Division

Address Reply: 2049 N. Miami Ave. Miami, FL 33127 Tel: (305) 576-3739 Fax: (305) 576-3814

Mr. Per Sopp Kloster Cruises 95 Merrick Way Coral Gables, FL 33134

September 11, 1991

Dear Mr. Sopp:

Enclosed are service reports and comments regarding the SS NORWAY.

Our service report was written following seawater contamination from a condenser leak. The Engineers were blowing down to correct the solids levels. They had also taken corrective measures to stop The phosphate levels were somewhat low due to the the leak. Dosage recommendations were given accordingly. The Ph blowdown. and hydrazine values were within limits.

We ran a spot check the following Saturday and found the readings were still somewhat out of limits due to blowdown. recommendations were noted on the report to adjust the treatment levels. All cooling water systems are being well maintained. Test results were satisfactory.

The Chief Engineer asked us to look at a sample of water from the A/C system condensate drains. We were told the water was turning The sample contained copper as well as the laundry "green". organics (algae, etc.). The copper is most likely a result of corrosion in the evaporator coils of the A/C unit. These corrosion products are common in A/C systems due to the low Ph of the The low Ph causes corrosion of the copper patina on the coils. Also, airborne contaminants enter the water which may lead to corrosion in the system and or biological growth in the water.

We are looking into a flocculent chemical additive to drop the We will follow up as soon as the copper out of solution. information is compiled. The Chief Engineer informed us that they are currently using a filter system which fouls quickly. Perhaps a better filter system or more frequent element changes will aid in clearing the water.

If you have any questions or comments please do not hesitate to contact us.

Sincerely,

Drew Ameroid Marine

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QUALITY

Kevin Gilbert

Headquarters One Drew Plaza Telex: 136444

Fax: (201) 263-8483/3323

Boonton, N.J. 07005

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