

2nd April 1998

TO ALL MEMBERS

Dear Sirs,

THE MILLENNIUM BUG

Most Members will be aware already of the problems posed by the approaching change in millennium for computer hardware and software systems as well as electronic chips embedded in equipment, especially control systems.

Computer systems which have stored year values as a two-digit field will recognise the year **2000** as an earlier date than **1999**. Any computer function which uses a date to calculate, initiate, action, schedule or report will be affected. These problems may be accentuated in systems in which programmers have used the digits 00 and 99 for special purposes, such as to start up or shut down certain processing or programs. The date 9th September 1999 (9.9.99) may be problematic in some systems. Some equipment will be affected by the fact that the year 2000 is a leap year and will not handle the date 29th February 2000.

Any piece of equipment containing process control chips incorporating date-sensitive functions, even if those functions are dormant, will be vulnerable to failure.

Much equipment on board ships may be affected, including fire alarm and sprinkler systems, engine management and alarm systems, radar and navigational systems, cargo handling and tank control systems, and communications systems. GPS receivers may be additionally affected by the global positioning system reaching the end of its 1024 week cycle on 21st August 1999.

Research has shown that:

- * there may be more than 50 chips embedded in such equipment in a modern ship;
- * between 20% and 30% of these chips may not be millennium compliant;
- * malfunctions in such chips will be varied with some systems failing safe, others shutting down and the rest just providing incorrect data.

The same problems will also impact upon the whole infrastructure which supports shipping: this will include port operations, cargo terminal systems and equipment, traffic management systems and Coastguard controls. Therefore while the Shipowners themselves may become compliant, their operations may be affected, in some cases severely, by the problems of others.

It is essential that those Members who have not already begun to do so should immediately plan and implement their response to the problems posed by the change in millennium. This will necessitate compiling a complete inventory of all hardware and software systems including equipment with embedded chips, deciding whether to repair or replace each item in the inventory and testing each that remains to ensure that it is millennium compliant - that is to say that neither performance nor functionality is affected by dates prior to, during and after the year 2000.

Members should expect that regulatory and certificating authorities, banks, auditors and business partners may insist on millennium compliance.

It is anticipated that sources of technical advice and support in ensuring millennium compliance will become increasingly scarce so it is prudent for Members to take action now.

For its part, the International Group has implemented steps to check that its suppliers will be millennium compliant, including the member Clubs participating as reinsurers of each other in the Pooling Agreement, the reinsurers underwriting the Group General Excess Loss Reinsurance Contract, and the Club Correspondent network.

The Group is in the process of arranging four conferences, to be held in Asia, Europe and the United States in the early summer. The purpose of these conferences is to raise awareness as widely as possible of the need for timely action, to provide more detailed information as to the problems identified to date and to put forward methods of addressing those problems. Details of the dates, venues and agendas will be circulated as soon as they are available and Members are urged to attend the conference most convenient to them.

Members will be expected to take all prudent steps to ensure their own compliance.

In the meantime, Members are urged to take action now. This is one deadline which cannot be put back.

A circular in similar terms is being sent by all the other Clubs in the International Group.

Yours faithfully,
A. BILBROUGH & CO. LTD. (MANAGERS)