CONTENTS

ENERGY CONSERVATION

REFERENCES

ISO 14001

1. NEED FOR ENERGY CONSERVATION

The Company recognises the need for Energy Conservation in order to achieve the following objectives:

1.1. Minimise funnel emissions in order to protect the atmosphere.

1.2. Conserve fuel to provide cost benefits to our Charterers and to protect the marine environment by reducing the amount of fuel handled on board over the lifetime of the ship and thus reducing the opportunity for mishaps that may cause pollution.

1.3. Minimise wear and tear on machinery to provide cost benefits to the Company and reduced work load for ships staff.

2. ENERGY SAVING

2.1. Whenever planning or arranging operations on board ship attention must be given to opportunities for energy conservation. This will require “Good Housekeeping” practices and close co-operation between departments on board.

2.2. The Master should reduce the ships speed in order to save fuel whenever the opportunity arises, provided that it does not impact negatively on the operation of the engine or the vessels charter requirements and does not create unwanted delays e.g. a delay in berthing because vessel missed its turn in the queue.

2.3. It is essential that fuel is used efficiently. Engine builders instruction manuals defining design limits, operating parameters and maintenance intervals should be closely consulted to ensure optimum use of fuel. Particular attention should be given to heat exchanger and turbo-charger performances that should be monitored to detect fouling and allow remedial action.

The storage and handling of fuel is important. Bunker and settling tank temperatures should be minimised consistent with operating requirements and the properties of the fuel. Close attention to fuel treatment will minimise operating problems.

2.4. Diesel generators operate best when under full load and long low load operation must be avoided. The electrical load requirements need to be carefully managed, rather operate one

generator on full load than two on low load – this may require shedding the load from some non-essential equipment.

2.5. Plant and equipment shall be promptly shut down and isolated when its service is no longer necessary, or if its service is not likely to be immediately required. This applies particularly to diesel generators, cooling water pumps and heat exchangers. The unwarranted running of machinery wastes fuel and lubricating oil, and results in unnecessary fouling and wear and tear. Increased running hours reduces the remaining service lifespan of the unit, and increases exposures to breakdowns.

2.6. Maximise waste heat recovery in exhaust gas economisers/composite boilers by ensuring that boiler tubes are maintained in a clean state.

2.7. Ensure engine turbochargers and air-intercoolers are maintained in a clean condition so that maximum effect may be obtained from energy in the engines' exhaust.

2.8. Ensure that steam and condensate piping and systems are tight. Steam and condensate leaks represent a loss of not only energy, but also of water and costly water treatment chemicals.

2.9. Do not run accommodation air-conditioning (cooling or heating) unless genuinely necessary.

3. TRAINING

Energy Conservation awareness training should be provided on board to all crewmembers (make use of HSE talks on-board). Engineer Officers must be given familiarisation training to ensure that they are aware of the energy conservation procedures and requirements on board. Co-operation between departments must be encouraged to optimise energy conservation.