

Report on the investigation of a collision between

WIGHTSTONE

and the moored yacht

ROSE RYAL

in the River Medina, Isle of Wight

on 9 November 2000

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Extract from
The Merchant Shipping
(Accident Reporting and Investigation)
Regulations 1999

The fundamental purpose of investigating an accident under these Regulations is to determine its circumstances and the causes with the aim of improving the safety of life at sea and the avoidance of accidents in the future. It is not the purpose to apportion liability, nor, except so far as is necessary to achieve the fundamental purpose, to apportion blame.

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Glossary of Abbreviations

C	Celsius
CWBA	Constant Wear Buoyancy Aid
GPS	Global Positioning System
GRP	Glass Reinforced Plastic
kW	Kilowatt
m	Metre
mm	millimetre
MCA	Maritime and Coastguard Agency
MGN	Marine Guidance Note
MRSC	Maritime Rescue Sub-Centre
UTC	Universal Co-ordinated Time
VHF	Very High Frequency

SYNOPSIS



At approximately 1030 on 9 November 2000, the 439gt cargo ship *Wightstone*, hit an unoccupied pleasure yacht, *Rose Ryal*, on the River Medina, Isle of Wight. Cowes Harbour Commission notified the Marine Accident Investigation Branch (MAIB) on 10 November, and an investigation into the causes of the accident began 2 days later.

Wightstone was on passage from Newport, Isle of Wight to Southampton. At the time of the accident she was carrying no cargo, and visibility was good. When about 100m north of the Folly pontoon, her master noticed he was exceeding the local speed limit. In an effort to reduce his speed, he pulled the fuel control back. The engine stopped, power steering failed, and *Wightstone* suddenly veered to port and hit the yacht *Rose Ryal*, which was moored to a pontoon. The yacht sustained significant damage to her bow, but there were no injuries.

When inspected, no mechanical fault was found with *Wightstone*'s main engine, and fuel starvation was considered unlikely. The cause of the collision, therefore, can only be speculated.

Possible causes are:

- The steering gear failed when the engine stopped;
- The small amount of port helm that existed at the time to steer the port curve in the narrow channel.

This report makes a number of recommendations to the owner of *Wightstone* to improve the safety of the vessel.

VESSEL AND ACCIDENT PARTICULARS

Name : *Wightstone*
Type : Cargo ship
Port of registry : Portsmouth, UK
Official number : 723647
IMO number : 6727117
Built : 1967
Construction : Steel
Owner : Northwood (Fareham), Westminster House,
Crompton Way, Segensworth West,
Fareham, PO15 5SS

Gross tonnage : 439
Length overall : 48.37m
Breadth : 8.16m
Depth : 3.4m
Propulsion : Anglo Belgian Corp. 6 MDXS 4 stroke diesel
Power : 386.0kW
Crew : 3
Injuries : Nil
Damage : None

Name : *Rose Ryal*
Type : Pleasure yacht
Length : 13m
Construction : Glass reinforced plastic (GRP)
Injuries : None - vessel unoccupied
Damage : Badly damaged around bow section



Figures 1 and 2 - MV *Wightstone*



SECTION 1 - FACTUAL INFORMATION

1.1 DESCRIPTION OF VESSEL

Wightstone was a single hold general cargo vessel used to carry cargoes of aggregate in the Solent and Spithead areas of Southampton Water. Belgian-built in 1967 for Belgian owners, she was generally well maintained and held the following valid certificates:

- Cargo Ship Radio Certificate
- United Kingdom Oil Pollution Prevention Certificate
- Safety Equipment Certificate
- Germanischer Lloyd Tonnage Certificate

The vessel was propelled by a six-cylinder 4-stroke diesel engine, with a single screw turning anticlockwise in the ahead position. The engine had a “dry-lubricating oil sump”: an engine-driven pump supplied oil to the engine from a separate tank, into which the sump drained.

An engine-driven pump supplied main engine fresh water cooling through a keel cooled closed circulation system. There was no temperature control in either the cooling water or lubricating oil systems. The maximum temperature of the engine cooling water was 72°C which would normally be achieved only when the engine was on load. A two-lever arrangement controlled the speed and direction of the main engine. The left lever, graduated 0-10, controlled the fuel pump on the engine through a bowden cable, and was used to increase or decrease speed. The right lever controlled ahead and astern through a bowden cable to the reversible gearbox.

The single rudder was controlled from the wheelhouse by power or manual operation of two hydraulic rams. Under power, the rams were supplied with hydraulic oil from a main engine-driven pump, and steering was controlled by a joystick. The rams were operated manually by turning a large diameter wheel, after opening two valves either side of the wheel. Full lock could be obtained by turning the wheel port or starboard 13 times. In addition, emergency steering could be applied by fitting a tiller bar directly on top of the rudder stock.

1.2 BACKGROUND TO VOYAGE

Wightstone's crew worked a rotation of three weeks on and one week off. During the one week off, the vessel was laid up and repairs were carried out. The master held a Boat Master's Licence, and had 20 years experience working on board similar vessels. He joined *Wightstone* as master in September 2000, but had previously sailed as her relief master.

The engineer had a Marine Engine Operator's Licence, with 4½ years experience, 2½ years of which were on *Wightstone*.

The vessel discharged her cargo of aggregate at Newport, Isle of Wight and left at 1015 on 9 November for Southampton to reload. Her main engine had been run for 10 minutes prior to departure and the engineer was in the engine room. After letting go the mooring ropes, the deckhand went forward to act as lookout on the passage down the River Medina.

The privately owned yacht *Rose Ryal* was moored, unoccupied, alongside a pontoon on the western side of the channel, opposite the Folly pontoon.

The wind was light, south to south-west, and visibility was good. The weather was cold and dry, and the tide was in the first hour of ebb.

1.3 NARRATIVE

After following the curve of the river to port and passing the Folly Inn at approximately 1030 on 9 November, *Wightstone* was making 7.2 knots according to the GPS. Since the speed limit at that point was 6 knots and *Wightstone* was producing some wash, the master pulled back the fuel lever in an effort to slow down. At this point the engine stopped suddenly and the power steering failed.

Wightstone then veered in a curve to port, and it became obvious to the master that she was going to hit the yacht, *Rose Ryal*, which was moored to a pontoon to port of the channel. The narrow confines of the river allowed no time to change over to manual wheel steering to regain the correct course. The ship's whistle was blown to alert anybody on board the yacht of the approaching danger, and *Wightstone* struck the yacht's port bow. *Rose Ryal* heeled with the impact, then floated free with her mooring ropes trailing. About 30 seconds after *Wightstone's* engine stopped, and at the moment of collision, the engineer restarted the engine. The master then put the engine astern and backed off.

The master informed Cowes' harbourmaster of the incident immediately on VHF channel 69, requesting assistance for *Rose Ryal*. However, *Folly Launch*, a 5.2m dory from the Folly pontoon on the starboard side of the channel, informed *Wightstone* that she was almost alongside the yacht, and had a line on before *Wightstone* was turned. Since *Wightstone* could not render assistance in the narrow confines of the river, she continued on passage to Southampton.



SECTION 2 - ANALYSIS

It is unclear why *Wightstone's* main engine stopped suddenly, and her master and engineer were not aware of this having happened before. There is no evidence to indicate that the engineer might have stopped the engine accidentally, while carrying out other duties.

No mechanical fault was found, so this possibility was dismissed. It is possible that, for some reason, the engine was starved of fuel oil. This is unlikely, however, if, as was reported to the inspector, the engine was restarted almost immediately after it had stopped.

If indeed the engine did stop, the engine was probably operating well below the normal operating temperature of 72°C.

It was usual practice to start the engine 30 minutes before leaving the berth, to allow it time to warm through. In this instance, however, the engine was started only 10 minutes before departure. However, although the engine was running on very low load, because *Wightstone* was sailing without cargo with a tidal current, it could be presumed that the total warming-through period of 25 minutes would have been sufficient, albeit 5 minutes less than normal.

It is possible, therefore, that the engine's working temperature was not achieved because the main engine cooling system was not fitted with any cooling-water control to compensate for the sea and air temperatures, which at the time were low.

As a result, had the engine been well below operating temperature, its governor might have over-reacted in response to a demand by the bridge control to reduce speed. Consequently, the engine could have stalled.

The veering to port, which resulted in the collision with the yacht, could have been caused by a combination of factors:

- steering gear power failure when the engine stopped;
- the small amount of port helm that existed at the time to steer the port curve in the narrow channel.

SECTION 3 - CONCLUSIONS

3.1 FINDINGS

1. The causes of the accident are a matter of speculation, but possible causes are:
 - a. steering gear power failure when the engine stopped; and
 - b. the small amount of port helm that existed at the time to steer the port curve in the narrow channel.

SECTION 4 - RECOMMENDATIONS

The owners of *Wightstone* are recommended to:

1. Either fit a freshwater cooler bypass controller to the main engine to enable a higher temperature to be achieved more quickly; or

taking account of the vessel's age, issue specific instructions to engineers to warm the main engine to near operating temperature before departure.
2. Consider fitting an additional electrically-driven hydraulic pump into the steering system to enable the vessel to be steered without interruption in the event of main engine failure, during confined river passages.
3. Issue instructions to masters regarding the procedures for aborting passage after an incident, until the extent of any injuries or damage has been established.

**Marine Accident Investigation Branch
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