

Report on the investigation into the fire on board
Z.98 Op Hoop Van Zegen off the coast of
Cherbourg on March 11th, 2019



Extract from the European Directive 2009/18/EC

(26) Since the aim of the technical safety investigation is the prevention of marine casualties and incidents, the conclusions and the safety recommendations should under no circumstances determine liability or apportion blame.

FEBIMA Copyright. You may re-use this publication, excluding the bureau logos, free of charge in any format or medium. It can only be used accurately and in not-misleading context. The material must be acknowledged as Febima copyright and must be given the title of the source publication. Where third-party copyrights have been identified in the report, permissions from the third-party copyright holders need to be obtained.

This page is intentionally left blank

Contents:

1	List Of Illustrations	4
2	Glossary of Abbreviations and Acronyms	5
3	Marine Casualty Information	6
3.1	Classification of Accident	6
3.2	Accident Details	6
4	Synopsis	7
4.1	The way of the water to the fuse box	8
5	Factual Information	11
5.1	Particulars of fv Z.98 OP HOOP VAN ZEGEN	11
6	Analyses	12
6.1	Opening of the access panel	12
6.2	Open door between winch room and engine room	12
7	Cause of the Accident	13
8	Conclusion	13
8.1	Safety Issues	13
9	Recommendations	15

1 List Of Illustrations

<i>Figure 1 - Voyage from Le Havre.....</i>	<i>7</i>
<i>Figure 2- Wave heights Channel</i>	<i>7</i>
<i>Figure 3 – Access panel to winch room on main deck.....</i>	<i>8</i>
<i>Figure 4 - Opened access panel of winch room.....</i>	<i>8</i>
<i>Figure 5- Detailed drawing of main deck</i>	<i>9</i>
<i>Figure 6– View from the stairs leading to engine room equipment.....</i>	<i>9</i>
<i>Figure 7- Welded hole from winch room to engine room</i>	<i>10</i>
<i>Figure 8 – View from inside the engine room.....</i>	<i>10</i>
<i>Figure 9 – Fv Z.98 OP HOOP VAN ZEGEN.....</i>	<i>11</i>
<i>Figure 10- Ventilation opening in front of the engine room</i>	<i>13</i>
<i>Figure 11- Closing panel for ventilation opening inside the winch room.....</i>	<i>13</i>

2 Glossary of Abbreviations and Acronyms

BMI	Belgian Maritime Inspectorate
BVBA	Besloten vennootschap met beperkte aansprakelijkheid (limited company)
fv	fishing vessel
IMO	International Maritime Organization
kW	kiloWatt
m	meter
MRCC	Maritime Rescue Coördination Centre
NE	northeast
nm	nautical miles
SB	starboard
Sig.	Significant
UK	United Kingdom
V	Volt

3 Marine Casualty Information

3.1 Classification of Accident

According to Resolution A.849(20) of the IMO Assembly of 27 November 1997, Code for the investigation of Marine Casualties and Incidents, a *serious marine casualty* means a marine casualty involving a fire, explosion, grounding, contact, heavy weather damage, ice damage, hull cracking suspected hull defect, etc., resulting in:

- structural damage rendering the ship unseaworthy, such as penetration of the hull underwater, immobilization of main engines, extensive accommodation damage etc.;
- or pollution (regardless of quantity);
- and/or a breakdown necessitating towage or shore assistance.

According to this definition, the accident was classified as

SERIOUS

3.2 Accident Details

Time and Date	11 March 2019
Location	3.8 nm NE of Cherbourg (France)
Deceased	0
Type of accident	Fire in the engine room

4 Synopsis

Fishing vessel fv Z.98 OP HOOP VAN ZEGEN had left the port of Le Havre on 10 March 2019, around 2030, bound for fishing in UK waters.



Figure 1 - Voyage from Le Havre

During the night, the weather was found to be rough with gale warnings and waves up to 5 m.

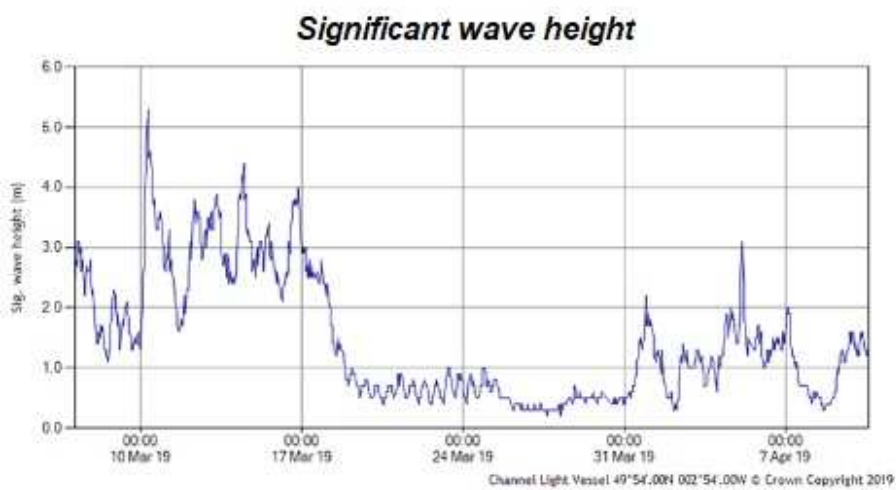


Figure 2- Wave heights Channel

Source : Wavenet.cefas.co.uk

On 11 March, around 0400, huge waves came on deck and moments later there was an interruption of the 220V bridge equipment.

Subsequently, the engineer descended to the engine room to check the fuse box. Upon opening the door leading to the engine room, he noticed that water was entering the engine room through the opened door between the winch room and the engine room, located at the front of the engine room.

The main engine control was put on stop position. Smoke, reportedly coming from the fuse box was detected inside the engine room.

The fuses for lightning, rudder and bridge equipment were being switched on again.

Around 0401, contact was made with MRCC Jobourg. It was decided that the Fv Z.98 OP HOOP VAN ZEGEN would sail towards Cherbourg in order to check and repair the damage. No assistance was needed at that moment.

The deckhand on board checked the access panels of the winch room on the main deck and reportedly, one hatch was found opened but no visible damage was observed. Water had entered the engine room through the open ventilation board.

Underway to Cherbourg, the engineer had replaced the fuse of the winch. Reportedly, subsequently, a sudden flash was coming out of the fuse box, followed by a total loss of power on board. Reportedly, eight fuses had been damaged and some wires were fused together.

MRCC Jobourg was contacted again and towing assistance to bring the vessel to Cherbourg was offered. Towing vessel mv ABAILLE LIBERTE was dispatched and arrived around 0530. The fv Z.98 OP HOOP VAN ZEGEN entered Cherbourg around 0830. The vessel left Cherbourg on March, 12th, after the necessary repairs had been carried out.

4.1 The way of the water to the fuse box

On March 11th 2019, around 0400, huge waves came on deck of the fv Z.98 OP HOOP VAN ZEGEN. As the SB access panel of the winch room was not properly closed and secured, the water entered the winch room, through the aforementioned opening.

In figures 3 and 4 the position of the access panels of the winch room in front of the accommodation is shown



Figure 3 – Access panel to winch room on main deck



Figure 4 - Opened access panel of winch room

Opposite of the access panels, on the other side of the winch room, there was a door leading to the engine room and a ventilation opening.

Figure 5 and Figure 6 show the location of said door.

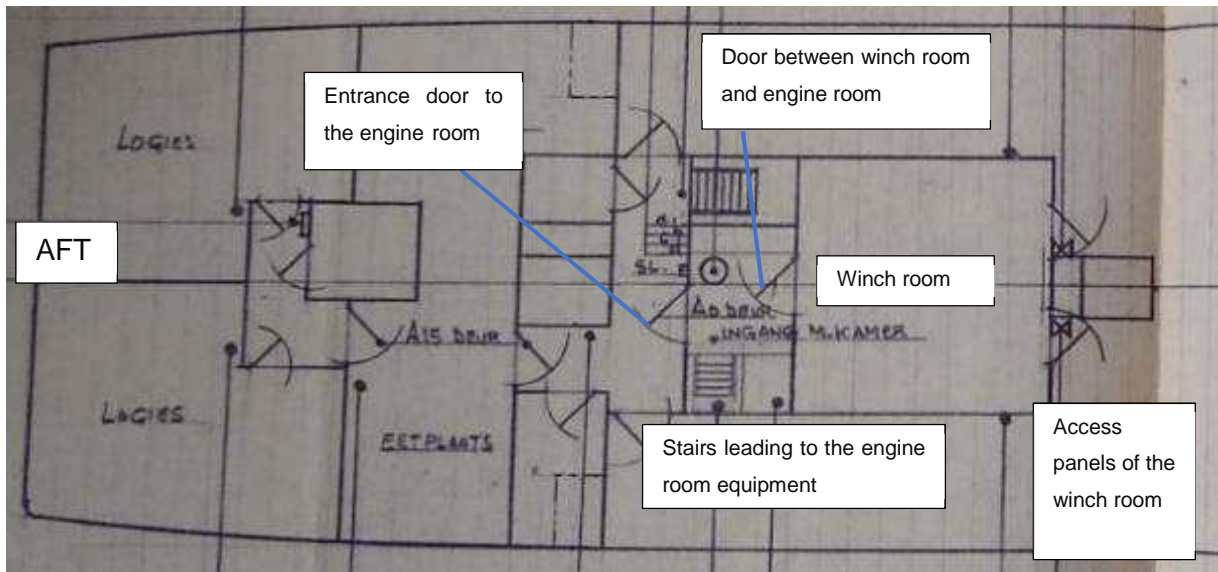


Figure 5- Detailed drawing of main deck

Inside the engine room, in front of this door, a staircase was leading down to the engine room equipment as shown in Figure 6.



Figure 6– View from the stairs leading to engine room equipment

Water ran down in the engine room through the door opening between the winch room and the engine room.

The water had also found its way through a hole in the bulkhead between the winch room and the engine room. This hole originated from a removed pipe, as seen in Figure 7. The hole was detected during inspection of the bulkhead after the incident had taken place.



Figure 7- Welded hole from winch room to engine room

This water had found its way guided by pipes and a cable tray on the ceiling into the fuse box, as seen in Figure 8.

Inside the fuse box, the water had caused an electrical shortcut leading to a breakdown.

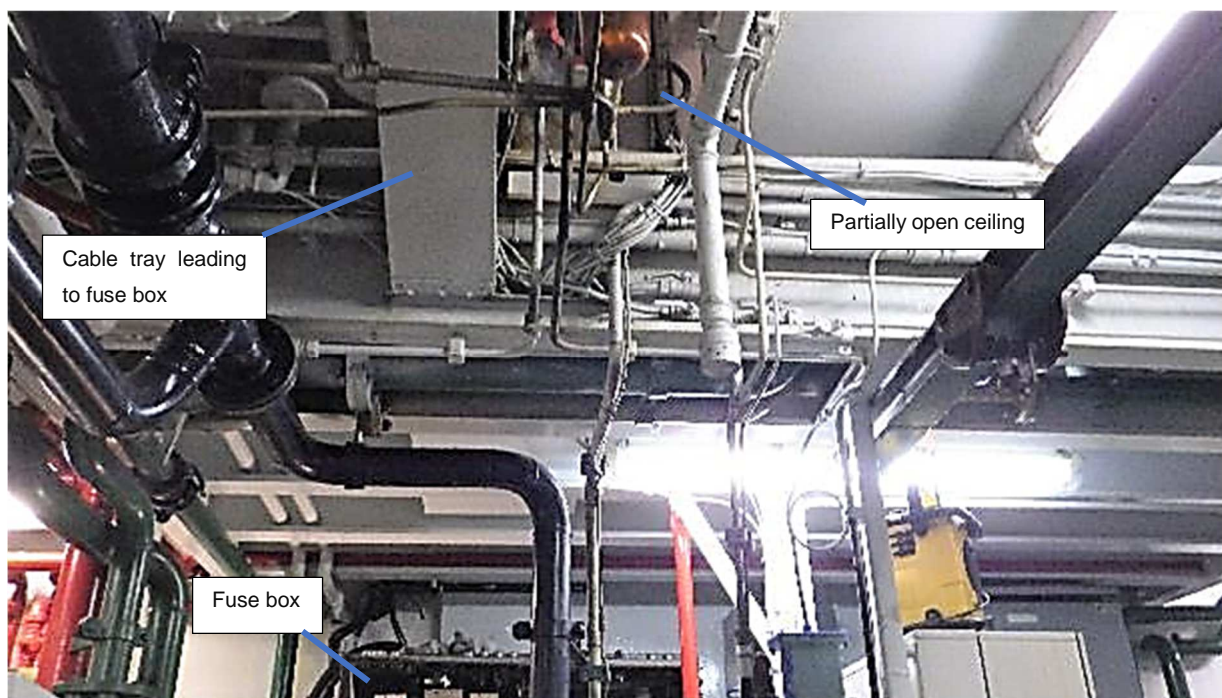


Figure 8 – View from inside the engine room

5 Factual Information

5.1 Particulars of fv Z.98 OP HOOP VAN ZEGEN



Figure 9 – Fv Z.98 OP HOOP VAN ZEGEN

Source: VLIZ photo gallery

Name of ship	Fv Z.98 OP HOOP VAN ZEGEN
IMO number	9019456
MMSI nr.	205160000
Call sign	OPDT
Flag State	BELGIUM
Ship / craft type	Fishing vessel
Gross tonnage	273
Date keel laid	1991
Company name	BVBA Rederij Aris
Propulsion type	Internal combustion
Max. engine power	750 kW
Nr. main engines	1
Length overall	33,67 m
Breadth	7,91 m
Hull material	Steel

6 Analyses

6.1 Opening of the access panel

There were two access panels that could be closed by means of a clamp. The access panels gave access to the winches. See Figure 3 and Figure 4.

Entering the winch room through the hatches was possible, but it was not possible to pass from one side of the winches to the other, to opposite sides of the winch room.

As both access panels were outer access points, they needed to be wind- and weather tight.

Well locked, no overcoming waves or rain could have entered the winch room.

During the voyage, the starboard access panel was opened. As there was no damage to the clamp or doorframe, it was concluded that the hatch had not been properly secured before leaving port.

There was no tell-tale system installed nor any indication that the hatch was well/not properly secured.

6.2 Open door between winch room and engine room

The engine room of a power driven vessel are known to be subject to an increased risk of fire. In the engine room of the fv Z.98 OP HOOP VAN ZEGEN, a gaseous or clean agent fire suppression system had been installed.

To prevent fire from spreading from the engine room and in order to keep the fire extinguishing gasses inside (in case of a fire) and oxygen outside, all openings into the engine room should be able to be closed off from outside the engine room.

The only access to the door and ventilation panel of the winch room was through the engine room.

The door between the winch room and engine room was kept open most of the time to allow ventilation of the engine room.

There was no reason to keep this door closed with respect to the possibility of water ingress, as the door did not give access to an outside deck.

7 Cause of the Accident

The starboard front panel of the winch room was not properly secured and was opened when overcoming waves smashed onto this panel.

There was no monitoring system on board (checklist, signal, camera,...) to verify whether or not the outer hatches were properly closed and secured.

With the door between engine room and winch room kept open, water could run freely into the engine room (and fuse box) once inside the winch room.

There was also an opening in the bulkhead between the winch room and the engine room, originating from a removed pipe, see Figure 7. Water also found its way through this opening into the engine room.

8 Conclusion

8.1 Safety Issues

The door between the winch room and the engine room was always kept open allowing for extra ventilation of the engine room.

A ventilation opening in the bulkhead between winch room and engine room was kept open, as seen in Figure 10.

As this bulkhead was part of the structural fire protection of the engine room, all openings needed to be able to be closed from outside the engine room in case of fire in the engine room.

As the door between the engine room and the winch room was the only access to the closing-panel of the ventilation opening in front of the engine room as seen in Figure 10 and Figure 11,

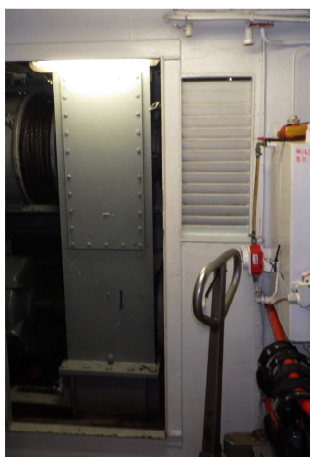


Figure 10- Ventilation opening in front of the engine room



Figure 11- Closing panel for ventilation opening inside the winch room

it was necessary to cross the engine room to enter the winch room in order to close the ventilation panel.

The by the Belgian Maritime Inspectorate approved general arrangement plan did not reflect the actual situation but indicated that there were two outside doors at the winch room.

Other by the Belgian Maritime Inspectorate approved, more detailed drawings, however not the general arrangement plan, reflected the actual situation.

9 Recommendations

1. BVBA Rederij Aris is recommended to adapt the general arrangement plan in order to reflect the actual situation and to have it approved by the Belgian Maritime Inspectorate.
2. The Belgian Maritime Inspectorate is recommended to compare the actual structural situation on board with the BMI approved drawings.
3. BVBA Rederij Aris is recommended to label doors/access panels/ventilation panels on board to indicate whether or not they need to be closed and/or secured (weathertight for sailing, fire door, fire flap,...) during sea passage or in case of fire.
4. BVBA Rederij Aris is recommended to put a barrier in place that limits the consequences if a weathertight access panel is not properly closed and secured, such as:
 - a documented procedure with extra controls before sailing; or
 - an auditory or visual indication that the door is not properly closed and secured; or
 - an extra physical barrier (a closed door between winch room and engine room) that prevents water ingress into the engine room.

Federal Bureau for the Investigation of Maritime Accidents

Vooruitgangstraat 56 – B1210 Brussels – Belgium

Tel: +32 2 277.43.43 email: secretariat@febima.fgov.be