

Report on the investigation of
the collision between

Scot Isles

and

Wadi Halfa

Dover Strait

29 October 2008

CONTENTS

	Page
GLOSSARY OF ABBREVIATIONS AND ACRONYMS	
SYNOPSIS	1
SECTION 1 - FACTUAL INFORMATION	3
1.1 Particulars of <i>Scot Isles</i> , <i>Wadi Halfa</i> and accident	3
1.2 Background	6
1.3 Narrative	6
1.3.1 <i>Scot Isles</i>	6
1.3.2 <i>Wadi Halfa</i>	9
1.4 Actions following the collision	10
1.4.1 <i>Scot Isles</i>	10
1.4.2 <i>Wadi Halfa</i>	14
1.5 <i>Scot Isles</i> – bridge personnel	15
1.5.1 Master	15
1.5.2 Chief officer	16
1.5.3 Second officer	17
1.5.4 Lookout	17
1.6 <i>Wadi Halfa</i> – bridge personnel	17
1.6.1 Master	17
1.6.2 Chief officer	18
1.6.3 Lookout	18
1.6.4 Cadet	18
1.7 Safety management systems	19
1.7.1 <i>Scot Isles</i>	19
1.7.2 <i>Wadi Halfa</i>	19
1.8 Environmental conditions	20
1.9 Channel Navigation Information Service (CNIS)	20
1.10 Keeping a safe navigational watch	21
1.10.1 COLREGS	22
1.11 Previous incidents	22
1.12 Bridge resource management	23
SECTION 2 - ANALYSIS	24
2.1 Aim	24
2.2 <i>Scot Isles</i>	24
2.2.1 Master	24
2.2.2 Chief officer's watchkeeping	25
2.3 <i>Wadi Halfa</i>	27
2.3.1 Master	27
2.3.2 Chief officer's watchkeeping	28
2.4 Lookout	28
2.4.1 Use of lookouts	28
2.4.2 Requirement to maintain a lookout	29

2.5	Actions following collision	29
2.5.1	<i>Scot Isles</i>	29
2.5.2	<i>Wadi Halfa</i>	30
2.6	Assessment of damage caused to both vessels	31
2.7	Hours of work and rest records and fatigue	32
2.7.1	<i>Scot Isles</i>	32
2.7.2	<i>Wadi Halfa</i>	32
2.8	Safety management system	32

SECTION 3 - CONCLUSIONS **33**

3.1	Safety issues directly contributing to the accident which have resulted in recommendations	33
3.2	Safety issues identified during the investigation which have not resulted in recommendations but have been addressed	34

SECTION 4 - ACTION TAKEN **35**

4.1	The Marine Accident Investigation Branch	35
4.2	Intrada Ships Management Limited	35
4.3	National Navigation Company, Egypt	35

SECTION 5 – RECOMMENDATIONS **36**

FIGURES

Figure 1	-	Extract from chart BA 2449, with passages of both vessels
Figure 2	-	Radar replay screen shot from CNIS, 0449 29 October 2008
Figure 3	-	<i>Scot Isles</i> – interior of wheelhouse
Figure 4	-	<i>Wadi Halfa</i> – interior of wheelhouse
Figure 5	-	<i>Scot Isles</i> - damage to starboard bridgewing
Figure 6	-	<i>Scot Isles</i> – photograph of damage to the hull
Figure 7	-	<i>Scot Isles</i> – damage overview
Figure 8	-	<i>Wadi Halfa</i> – shell plate damage to number one port wing ballast tank
Figure 9	-	Dover Strait TSS – mandatory reporting area
Figure 10	-	<i>Scot Isles</i> - wheelhouse, location of AIS receiver
Figure 11	-	<i>Scot Isles</i> – view looking forward from wheelhouse
Figure 12	-	<i>Scot Isles</i> and <i>Wadi Halfa</i> – comparison of damage

ANNEXES

- Annex A** - *Scot Isles* – SMS post collision checklist
- Annex B** - Extract from MGN 364(M+F) Guidance on use of Sandettie deep water route
- Annex C** - *Scot Isles* – Fleet directive re watchkeeping
- Annex D** - *Scot Isles* – Fleet circular re watchkeeping
- Annex E** - *Wadi Halfa* – SMS procedure re watchkeeping
- Annex F** - MGN 315 (M) – keeping a safe navigational watch
- Annex G** - COLREGS – Rules 7, 8, 10, 16 and 17
- Annex H** - *Wadi Halfa* – master's night orders, 27 and 29 October 2008
- Annex I** - MAIB Safety Flyer

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

AB	-	Able seaman
AIS	-	Automatic Identification System
ARPA	-	Automatic Radar Plotting Aid
Cable	-	0.1 nautical mile
CEC	-	Certificate of Equivalent Competency
CNIS	-	Channel Navigation Information Service
CoC	-	Certificate of Competency
COLREGS	-	International Regulations for the Prevention of Collisions at Sea 1972 (as amended)
DOC	-	Document of Compliance
DPA	-	Designated Person Ashore
GPS	-	Global Positioning System
GT	-	Gross tonnage
kW	-	Kilowatt
MCA	-	Maritime and Coastguard Agency
MGN	-	Marine Guidance Note
PEC	-	Pilotage Exemption Certificate
SMS	-	Safety Management System
SOLAS	-	International Convention for the Safety of Life at Sea
STCW	-	International Convention on Standards of Training, Certification and Watchkeeping 1978 (as amended)
TSS	-	Traffic Separation Scheme
VHF	-	Very High Frequency
VTs	-	Vessel Traffic Services

Times: All times used in this report are UTC+1, unless otherwise stated

SYNOPSIS



At 0449 on 29 October 2008, the UK registered general cargo vessel *Scot Isles* was in collision with the Egyptian bulk carrier *Wadi Halfa* in the Dover Strait.

The watchkeeping officer on *Scot Isles*, which was on passage from Rochester to Antwerp and crossing the NE traffic lane of the Dover Strait Traffic Separation Scheme, did not detect *Wadi Halfa* before the collision.

The watchkeeping officer on *Wadi Halfa*, which was on a NE course in the NE traffic lane, saw *Scot Isles* when she was very close but, despite taking evasive action, could not prevent the collision.

Scot Isles suffered extensive shell plate damage on her starboard side which resulted in the loss of 60 tonnes of marine gas oil into the sea. *Wadi Halfa* was damaged, less severely, on her port side and was able to resume her passage to Bremen.

The vessels were within French coastguard jurisdiction when the accident was reported and, once the extent of damage and pollution was realised, the French authorities directed *Scot Isles* to proceed to Dunkirk to facilitate repairs and an investigation into the accident.

As a result of a complacent attitude to bridge watchkeeping on both vessels, safety barriers, which would have warned the bridge watchkeeping officers of the risk of a collision, were not in place. No lookout was present on either bridge at the time of the collision, and the vessels' radars and other bridge equipment were not used effectively.

A Safety Flyer has been published which identifies the key safety lessons from this investigation. Recommendations have been made to the International Chamber of Shipping, the UK Chamber of Shipping, The Nautical Institute and the International Federation of Shipmasters' Associations designed to promulgate the contents of the Safety Flyer to those organisations' membership to highlight to ship operators and seafarers the importance of effective bridge teams and the maintenance of proper navigational lookouts.



Scot Isles

SECTION 1 - FACTUAL INFORMATION

1.1 PARTICULARS OF SCOT ISLES, WADI HALFA AND ACCIDENT

Vessel details	Scot Isles
Registered owner	: Hohebank Shipping Limited
Manager	: Intrada Ships Management Limited
Port of registry	: Rochester, England
Flag	: United Kingdom
Type	: General cargo vessel
Built	: 2001, Tille Scheepsbouw Kootstertille B.V, Netherlands
Classification society	: Germanischer Lloyd
Construction	: Steel
Length overall	: 89.95 metres
Gross tonnage	: 2595
Engine type and power	: Wartsila 6L26A, 7950kW
Service speed	: 10.5 knots
Other relevant info	: 1 x bow thruster, 205kW
Accident details	
Time and date	: 0449, 29 October 2008
Location of incident	: Dover Strait
Persons on board	: 8
Injuries/fatalities	: 0
Damage	: Extensive damage to starboard side shell plating, frames and bridge wing.
Pollution	: 60 tonnes marine gas oil spilled into the sea



Wadi Halfa

Vessel details***Wadi Halfa***

Registered owner	:	National Navigation Company, Egypt
Port of registry	:	Alexandria, Egypt
Flag	:	Egypt
Type	:	Bulk carrier/general cargo vessel
Built	:	Hyundai Heavy Industries, Korea, 1984
Classification society	:	Lloyd's Register
Construction	:	Steel
Length overall	:	184.9 metres
Gross tonnage	:	22895
Engine type and power	:	Hyundai-Sulzer 5RTA58, 1950kW
Service speed	:	14.2 knots

Accident details

Time and date	:	0449, 29 October 2008
Location of incident	:	Dover Strait
Persons on board	:	41
Injuries/fatalities	:	0
Damage	:	Material damage to port side shell plating

1.2 BACKGROUND

Scot Isles, a UK registered, single hold general cargo vessel, operated in NW European waters and was engaged primarily to carry timber and timber products from Scandinavia. On the morning of the collision, she was crossing the Dover Strait Traffic Separation Scheme (TSS) from the Thames estuary to Antwerp.

Wadi Halfa, an Egyptian registered, bulk/general cargo vessel, traded worldwide. She was in ballast, on passage from Egypt to Germany, in the NE traffic lane when the collision occurred.

1.3 NARRATIVE

1.3.1 *Scot Isles*

Scot Isles arrived in Rochester at 0100 on 28 October 2008 to discharge her cargo of timber. Cargo discharge began at 0800 and was completed by 1530. The chief and second officers shared the cargo watches in port. The chief officer was on duty from 0800 - 1200 when he was relieved by the second officer.

During the day, the vessel's classification society was changed and the surveys and documentation associated with this process occupied much of the master's time from 0900 until the required cargo and related clearance documentation was completed at 1900. The vessel then awaited the tide before sailing.

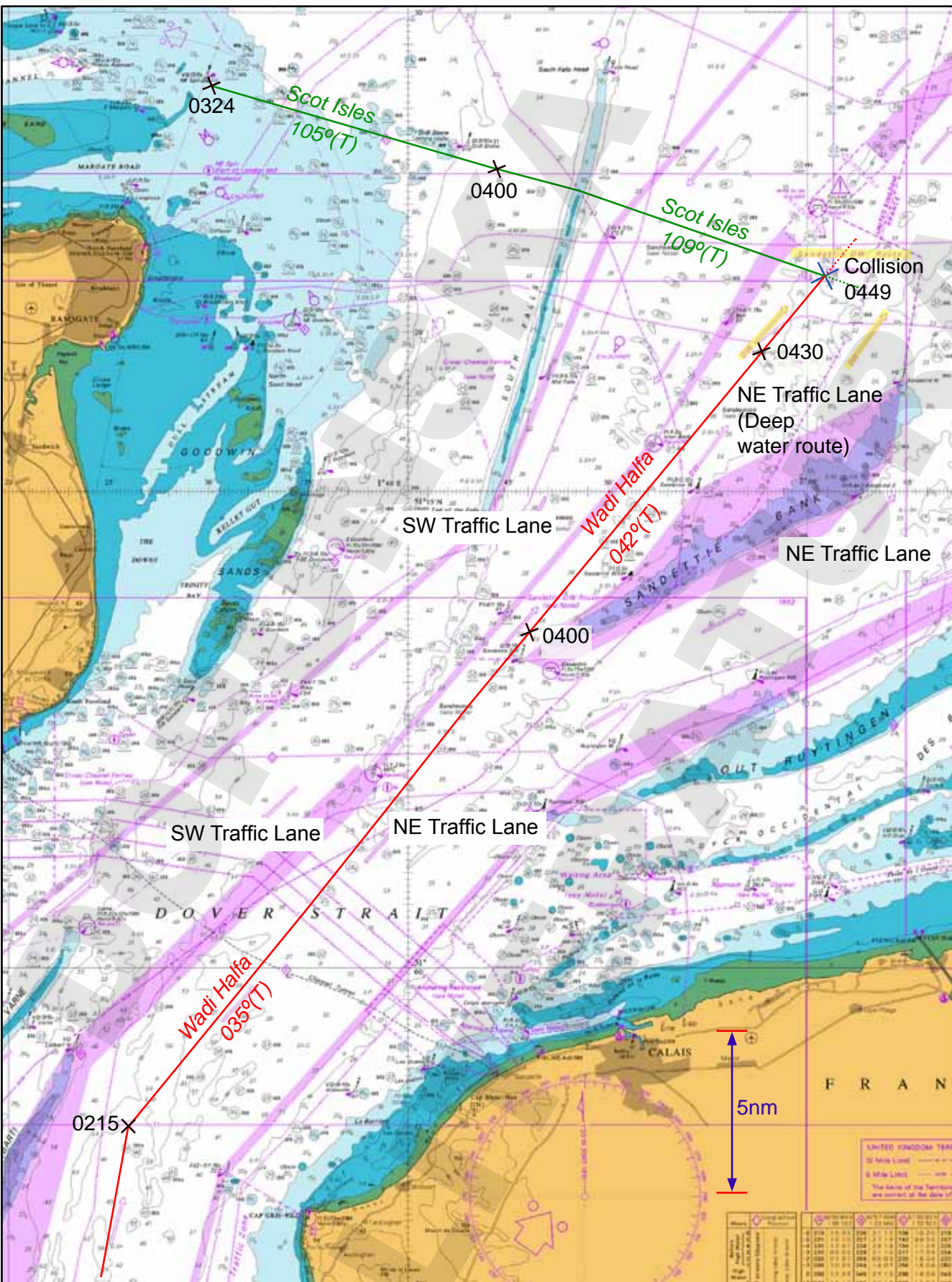
The vessel sailed at midnight, in ballast, bound for Antwerp. The master held a pilotage exemption certificate (PEC) for the Medway and took the conn of the vessel for departure. On the bridge with him were the second officer, who was the 0000 - 0400 watchkeeping officer and a lookout, who kept the 0000 - 0600 watch.

At 0150 on 29 October, the vessel left the Medway pilotage area and entered the Thames estuary. The master then handed over the conn to the second officer and left the bridge. The bridge watch alarm was not activated.

Scot Isles cleared the Thames estuary and at 0324 the second officer set a course of 105°(T) as the vessel approached the northern Dover Strait (**Figure 1**).

At 0400, the vessel was 4 miles from the SW traffic lane of the Dover Strait TSS, when the chief officer took over as the bridge watchkeeping officer. He adjusted the set up of the starboard radar, which was equipped with an Automatic Radar Plotting Aid (ARPA), to the 6 mile range scale, ship's head up, relative motion. He offset the centre of the radar display to provide a range of about 9 miles ahead. The port radar was not in use.

Although there were several targets on the radar screen, none of them was acquired on ARPA to assess whether a risk of collision existed.



Extract from chart BA 2449, with passages of both vessels

The Automatic Identification System (AIS), located beside the starboard radar and which provided the names and relative positions of the six nearest vessels to *Scot Isles*, was not being monitored.

At 0410, *Scot Isles* altered course to 109°(T), and at 0421 she began to cross the SW traffic lane of the TSS. The vessel's position was not plotted on the chart after 0400, so this reconstruction is based on radar replay information obtained from the Channel Navigation Information Service (CNIS) at Dover following the accident (**Figure 2**).

AIS data courtesy of the MCA

Figure 2



Radar replay screen shot from CNIS, 0449 29 October 2008

At about 0435 the lookout reported to the chief officer, who was sitting in the wheelhouse chair (**Figure 3**), the red navigation light of a vessel at about 3 points (34°) to starboard of *Scot Isles*. The lookout then advised the chief officer, who made no comment, that he was leaving the bridge to undertake his safety rounds. The chief officer had not registered the lookout's report of the other vessel.

At 0443 *Scot Isles* began to cross the NE traffic lane (**Figure 1**).

The chief officer became aware of the accommodation lights of a vessel very close on *Scot Isles*' starboard quarter. He moved towards the wheel, intending to put the helm to port, when at 0449, the collision occurred.



Scot Isles - interior of wheelhouse

1.3.2 Wadi Halfa

Wadi Halfa sailed from Alexandria, Egypt, on 17 October. She was in ballast with a draught of 5.29m bound for Bremen, Germany.

At about 0215 on 29 October, the master arrived on the bridge, as previously arranged, to be present as the vessel passed Cap Griz Nez and entered the Dover Strait, in the NE traffic lane (**Figure 1**). At 0345, as the vessel entered the Sandettie deep water route, the master left the bridge.

The chief officer relieved the second officer as the bridge watchkeeping officer at 0400. Also on the bridge for the 0400 - 0800 watch were a cadet and an able seaman (AB). The cadet was being trained in navigation and the AB was the designated lookout for the watch.

At 0430 the vessel altered course to 041°(T) and, at about 0435, the chief officer allowed the lookout to leave the bridge for a toilet break. The cadet had remained in the chart room area, which was curtained off from the wheelhouse (**Figure 4**) to prevent light pollution, from 0400. He is reported to have been recording the vessel's position every 10 minutes using the vessel's Global Positioning System (GPS) display.

The chief officer was in the wheelhouse, occasionally looking at the starboard side radar (**Figure 4**). He had set up this radar, which had ARPA, on the 6 mile range scale, in relative motion, north-up with the centre offset to give a range of about 9 miles ahead. Although there were targets on the radar, none of them were acquired to assess whether a risk of collision existed.

The lights of vessels on reciprocal courses in the SW traffic lane were seen from the wheelhouse of *Wadi Halfa*. However, no vessel was observed approaching from the port side until, at 0448, the chief officer saw the white masthead navigation lights and green sidelight of a vessel very close on the port bow.

The chief officer then put the helm (**Figure 4**) hard to starboard and called out to the cadet to come out from the chart room to call the master. *Wadi Halfa* had started to turn to starboard when, at 0449, the collision occurred.

1.4 ACTIONS FOLLOWING THE COLLISION

1.4.1 *Scot Isles*

The master, woken by the sounds and vibration caused by the collision dressed and went to the bridge; he did not hear the general alarm, although the chief officer is reported to have sounded it.

The second officer, who had also been woken by the sound of the collision, dressed and went to the master's cabin to report that he could see smoke through his cabin window and thought the vessel was on fire.

They both then went to the bridge, where they found the chief officer standing beside the starboard bridgewing door, in an apparent state of shock. Smoke was billowing outside the wheelhouse.

Looking around the wheelhouse, the master saw that the vessel was in autopilot, with the engine full ahead. On the radar he observed a target, about 6 cables astern, which he assumed was the other vessel involved in the collision.

The master asked the chief officer what had happened and was informed that an overtaking vessel had collided with *Scot Isles*, causing damage to the starboard bridgewing. The master looked at this damage (**Figure 5**) and realised that the smoke, which the second officer had initially thought to be a fire, was in fact from the bridgewing smoke float which had been activated by the collision.

From the wheelhouse, the master could see no other damage to the vessel. He then reduced the vessel's speed, maintained her course and began to assess the situation. He referred to the post collision checklist, Card 10, of the vessel's Safety Management System (SMS) (**Annex A**).



Wadi Halfa - interior of wheelhouse



Scot Isles - damage to starboard bridging

He instructed the second officer and AB to check for damage. They checked the accommodation and engine room and returned to the bridge to advise the master that there was no damage in those areas. They did not carry out a check of the main deck or of the cargo hold.

At 0501, the master responded to a VHF radio call from *Wadi Halfa*. The vessels exchanged details and confirmed that both crews were unharmed and that neither vessel appeared to have suffered any significant damage as a result of the collision.

At 0542 Dover coastguard called *Scot Isles* on VHF radio, having been advised by the French coastguard that the vessel had been involved in a collision. The master confirmed that there were no injuries, pollution, or water ingress and that there was only minor damage to the starboard bridging high above the waterline.

At about 0550, the French coastguard contacted *Scot Isles* and instructed her to remain in her current position, within French jurisdiction, pending an inspection by the French authorities.

The master contacted the company's designated person ashore (DPA) at about 0555 and reported the collision and the damage to the bridging.

At 0630 a French naval helicopter arrived overhead of *Scot Isles* and carried out a searchlight inspection of the hull. The extensive damage to the starboard side shell plating, amidships, was now illuminated (**Figure 6**).

Image courtesy of French Navy

Figure 6



Scot Isles - photograph of damage to the hull

The master then sent the second officer and an AB to carry out a full inspection of the main deck and hold. They reported that the bulkhead in the hold was buckled, but intact, in way of the damage and that there was no water ingress.

At twilight, about 0645, the master saw evidence of oil in the water beside the vessel, emanating from number two starboard wing fuel tank, which had been ruptured by the collision. He then instructed the engineers to list the vessel to port and to transfer oil from the damaged tank into another fuel tank to prevent further pollution.

At 0850, two French marine officials boarded *Scot Isles* to inspect the damage and assess the pollution. They informed the master that, due to the extent of the damage (**Figure 7**), all the oil in the tank had been lost into the sea and that he should cease transferring from the tank.

The vessel was then directed to proceed to Dunkirk for repairs and further inspection, where she arrived at 1400 the same day.



Scot Isles - damage overview

1.4.2 *Wadi Halfa*

Immediately after the collision the chief officer, who was still on the wheel, instructed the cadet to call the master and stop the engine. In fact, the master had already been woken by the vibrations and sounds of the collision and he arrived on the bridge while the cadet was still calling him on the telephone.

The master then took the conn and was informed by the chief officer that *Wadi Halfa* had been overtaking the other vessel when the latter had suddenly and unexpectedly altered course to starboard in front of *Wadi Halfa*.

Other off duty officers soon arrived on the bridge and the master instructed one of them to identify the other vessel's name from AIS and to contact her on VHF radio. At 0501, the two vessels exchanged details, confirmed that no one had been injured and that neither vessel was seriously damaged.

The master then informed the crew, over the tannoy system, of the collision and advised them to standby for further instructions.

The chief officer was sent to carry out a check of the vessel for damage, while the other officers were instructed to maintain the logbook and undertake VHF radio communications.

At 0505 the master reported the collision to the French coastguard and advised that he had exchanged details with *Scot Isles* and had confirmed that the other vessel did not require assistance.

The chief officer returned to the bridge and told the master that the only apparent damage to *Wadi Halfa* was a small hole in number one port wing ballast tank, approximately 25cm long and about 50cm below the main deck level (**Figure 8**).

The French coastguard then gave approval for *Wadi Halfa* to resume her passage to Bremen, where she arrived on 30 October.

Figure 8



Wadi Halfa - shell plate damage to number one port wing ballast tank

1.5 SCOT ISLES – BRIDGE PERSONNEL

1.5.1 Master

The master was a Polish national. He held a Polish International Convention on Standards of Training, Certification and Watchkeeping 1978 (as amended) (STCW) II/2 certificate of competency (CoC) as master (unlimited), issued in 2000 and a UK certificate of equivalent competency (CEC). He also held a PEC for the Medway, issued in October 2008.

He had been a master for 14 years, had been employed by the manager, Intrada Ship Management Limited, since 2005 and was appointed to *Scot Isles* in 2006, when the vessel had been acquired for trading in NW European waters. He had been master of the vessel since then and worked cycles of 10 weeks on duty, followed by 5 weeks leave.

The master was the 0800 - 1200 and 2000 - 2400 bridge watchkeeping officer when the vessel was at sea. He did not keep a watch in port.

On 28 October, he went to bed at about 0200 and woke at 0800. He was occupied for most of the day with the vessel's change of classification society, although two of the manager's superintendents were on board to supervise the process. At 1900 the master went ashore to a nearby shop, returning at 2000. He then got some rest, before the vessel sailed at midnight.

On 29 October, when the vessel had cleared the Medway pilotage area, he left the bridge and went to bed at about 0200. As was his custom, he wrote no night orders for the passage to Antwerp. He considered it was safe to leave the bridge as the vessel was in a Vessel Traffic Services (VTS) area, and assumed that Thames VTS and CNIS would provide guidance to the second officer if required.

1.5.2 Chief officer

The chief officer was a Polish national. He held a Polish STCW II/2 CoC as chief mate (unlimited) and had applied for a UK CEC. He had been a chief officer since 1984 and had sailed on many vessels of similar size and engaged on similar trades to *Scot Isles*.

He had joined the vessel 2 weeks before the accident; this was the first time he had worked for the manager. At sea he kept the 0400 - 0800 and 1600 - 2000 bridge watches and in port worked the 0600 - 1200 and 1800 - 2400 cargo watches.

During the evening of 27 October, he had about 3 hours sleep before the vessel arrived in Rochester. On 28 October he went to bed from 0130 until he woke at 0700, when he had breakfast and was on cargo watch from 0800 – 1200.

During the afternoon, he did some paperwork and took some rest, though did not get to sleep. He was not required to keep a cargo watch at 1800 and so he walked ashore to a local shop. He returned at 2000 and then rested until being called for sailing at 2345. He returned to his cabin at 0015 on 29 October and slept until 0345 when he was called for his bridge watch.

1.5.3 Second officer

The second officer was also a Polish national. He held a Polish CoC as an officer of the watch and had applied for a UK CEC. He first went to sea in 1985, serving as a bridge watchkeeping officer until 1996 when he then worked on an oil drilling rig until resuming his seagoing career at the beginning of 2008.

He had joined *Scot Isles* in September 2008, and this was his first trip with the manager. He kept the 0000 - 0400 and 1200 -1600 bridge watches at sea and in port worked the 0000 - 0600 and 1200 - 1800 cargo watches.

1.5.4 Lookout

The lookout was a Filipino national. He had been an AB for 15 years and had joined *Scot Isles* in February 2008 on a 10 month voyage contract. This was his second contract with the manager, having served on a similar sized vessel, trading in the same area, for 10 months in 2007.

He kept the 0000 - 0600 and 1200 - 1800 watches, as the lookout when the vessel was at sea, and assisting with cargo operations or keeping a gangway security watch when the vessel was in port. When working as the bridge lookout he was required to undertake safety rounds of the vessel's accommodation space and engine room every hour.

On 28 October, he was called for the vessel's departure from Rochester at 2345 and went forward for unmooring. He arrived on the bridge, to act as lookout, once the vessel had left the berth, at about 0015 on 29 October.

He was on the bridge at 0400 when the chief officer relieved the second officer. He did not comprehend or listen to the conversation between the officers as they always communicated with each other in Polish. When on lookout duties he tended to move around the bridge in order to maintain a full appreciation of the surrounding environment, but he did not look at the radar, and was not encouraged to do so. He did not converse with the watchkeeping officers, other than to report ships.

At about 0435 he reported to the chief officer the presence of a red light at about 3 points to starboard, and then left the bridge to conduct safety rounds. He was in the engine room when he felt the collision; he then returned to the bridge. He did not hear the general alarm.

1.6 WADI HALFA – BRIDGE PERSONNEL

1.6.1 Master

The master was an Egyptian national and held a CoC as master (unlimited). He had been in command for 6 years and had served exclusively as master of either *Wadi Halfa* or her sister vessel during that period.

On 29 October, he was on the bridge from 0215 - 0345, as the vessel proceeded through the Dover Strait, and left the bridge as the vessel entered the Sandettie deep water route. He was confident that CNIS would alert the vessel to any potentially hazardous situations. He had elected to use the deep water route (**Figure 1**) despite the fact that *Wadi Halfa*'s draught was less than 6m and the deep water route is recommended for use by vessels with a draught of 16m and above (**Annex B**).

Although he normally wrote night orders, he omitted to do so on this occasion.

1.6.2 Chief officer

The chief officer, an Egyptian national, held a CoC as master (unlimited), which he had obtained in 2007. This was his first trip as a chief officer, having joined the vessel in May 2008. He had been employed by the owners since first going to sea in 1999.

He kept the 0400 - 0800 and 1600 - 2000 bridge watches at sea. The vessel had been on passage for 12 days before the collision and the chief officer had maintained a settled watchkeeping routine during that period.

1.6.3 Lookout

The lookout was an Egyptian national and a qualified AB (STCW II/4). He had been an AB for 8 years and had joined the vessel 5 months before the accident. He kept the 0400 - 0800 and 1600 - 2000 watches.

On 29 October he was on the bridge, as lookout, from 0400. He had observed and reported several vessels to the chief officer. He was not encouraged to use the radar to assist him in his duties as lookout. At 0435, he was given permission by the chief officer to leave the bridge and went to his cabin to use the toilet. He was still in his cabin when the collision occurred.

1.6.4 Cadet

The cadet who was on the bridge at the time of the collision was on his fourth trip at sea. He kept the 0400 - 0800 and 1600 - 2000 watches as part of his training programme.

He was at the chart table, which was curtained off from the wheelhouse, (**Figure 4**) from 0400. He remained there, and is reported to have recorded the vessel's position every 10 minutes from the GPS, until the chief officer called him into the wheelhouse. When he entered the wheelhouse he saw the green sidelight of a vessel very close on the port bow just before the two vessels collided.

1.7 SAFETY MANAGEMENT SYSTEMS

1.7.1 *Scot Isles*

Scot Isles held a safety management certificate which was issued in April 2007. The manager's Document of Compliance (DOC) was issued by the Maritime and Coastguard Agency (MCA) in October 2007.

An internal audit of the vessel's Safety Management System (SMS) was carried out on 22 February 2008, when no defects were found. The last external audit was completed on 31 May 2008; this found four deficiencies, none of which related to bridge operations.

In the SMS, the company had issued guidance on responding to emergencies. Card 10 (**Annex A**) listed the actions required following a collision, with tick boxes for ease of use. These included the requirement to place the crew on 'stand-by'.

Also in the SMS were instructions which required the master to maintain a night order book to amplify his standing orders and to ensure that the bridge watch alarm was used when the vessel was on passage.

In October 2005, the manager issued Fleet Directive B-Deck-2 Keeping a Safe Navigational Watch (**Annex C**); this required navigational watch ratings to be fully familiar with bridge and basic equipment and that they be actively encouraged to become part of the bridge team.

In September 2008, the manager issued a safety circular (**Annex D**) referring to fleet directives and reminding bridge watchkeepers of the principles of good watchkeeping practice.

1.7.2 *Wadi Halfa*

Wadi Halfa's safety management certificate was issued in October 2007. The owner's DOC was issued in December 2007.

The external renewal audit undertaken in October 2007 identified seven non-compliances; these mainly related to poor standards of maintenance.

An internal audit of the SMS was carried out in May 2008; this identified non-compliances relating to voyage passage planning, port checklists and maintenance standards in the engine room.

In November 2003, the owner issued a procedure (**Annex E**) for bridge organisation with the objective of providing "*guidance to masters and watchkeeping officers to ensure the safe navigation of its vessels and compliance with the applicable International Rules and Regulations (SOLAS, STCW and COLREGS)*" (sic).

1.8 ENVIRONMENTAL CONDITIONS

Wind:	Northerly, Force 3 (Beaufort scale)
Sea:	Slight to Moderate
Visibility:	Good
Weather:	Occasional rain showers
Tide:	Slack water

1.9 CHANNEL NAVIGATION INFORMATION SERVICE (CNIS)

Dover Strait is one of the busiest shipping lanes in the world. Vessels are tracked and recorded by both radar and AIS. Shipping movements in the area are monitored by the English and French coastguard from radar stations located at Dover and Cap Gris Nez respectively.

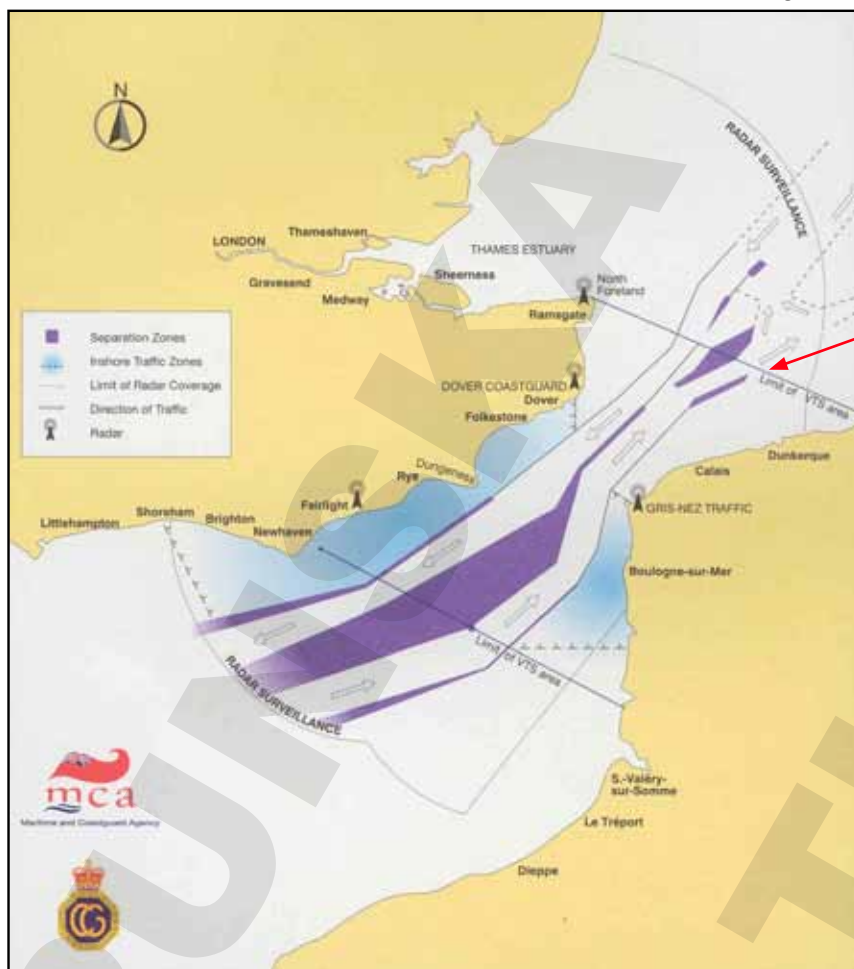
Dover and Cap Gris Nez provide a coastal vessel traffic information service. Each station broadcasts information on VHF radio about weather and navigational hazards as part of the joint CNIS. Their broadcasts also include information on deep draught vessels, vessels under tow and on vessels engaged in special operations. A broadcast is also transmitted for any vessel that appears to be in contravention of the COLREGS to warn other vessels that a potentially hazardous situation exists in a particular part of the TSS.

A mandatory reporting scheme for vessels over 300GT using the TSS was introduced in 1999. SW bound vessels are required to report to Dover coastguard and NE bound vessels report to Cap Gris Nez.

To assist mariners transiting Dover Strait, the MCA published Marine Guidance Note (MGN) 364 (M+F), which contains specific reference to the Sandettie deep water route (**Annex B**).

Wadi Halfa reported to Cap Gris Nez when she entered the NE bound traffic lane, while *Scot Isles* was not required to make a report as her passage was conducted outside of the mandatory reporting area (**Figure 9**).

The tracks of both vessels were recorded on radar by CNIS at Dover and the radar plot for 0449, 29 October (**Figure 2**) shows their historic tracks at the time of the collision.



Northern limit of mandatory reporting area

Dover Strait TSS - mandatory reporting area

1.10 KEEPING A SAFE NAVIGATIONAL WATCH

A number of publications contain relevant advice for masters and watchkeeping officers on the essentials of keeping a safe navigational watch. Among these are:

- MGN 315 (M) – Keeping a safe navigational watch on merchant vessels
- MGN 137 (M+F) – Lookout during periods of darkness and reduced visibility
- STCW Chapter 8 – Standards regarding watchkeeping.

All of the above publications emphasise the need to maintain a proper lookout at all times. MGN 315 (M) (**Annex F**) provides detailed guidance on both the requirements for posting a lookout and the relationship between the bridge watchkeeping officer and the lookout.

1.10.1 COLREGS

Rule 5 defines the duty to maintain a proper lookout:

Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

Rule 15 defines the action to be taken in a crossing situation:

When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.

The other rules considered relevant to this accident are included in full at **Annex G**.

1.11 PREVIOUS INCIDENTS

In 2004 the MAIB published a Bridge Watchkeeping Safety Study¹ which reviewed 1,647 collisions, groundings, contacts and near collisions involving merchant vessels over 500GT reported to the MAIB between 1994 and 2003.

In relation to collisions, the study found that:

- 65% of vessels involved in collisions were not keeping a proper lookout
- 33% of all accidents that occurred at night involved a sole watchkeeper on the bridge
- on 19% of the vessels involved in the collisions, the bridge watchkeeping officers were completely unaware of the other vessel until or, in some cases, after the collision.

In November 2004 *Scot Explorer*, which was also managed by Intrada Ships Management Limited, collided with the fishing vessel *Dorthe Dalsoe*.

The MAIB carried out a full investigation of this accident (report 10/2005 refers)².

The report concluded that, while the fishing vessel was the give-way vessel and should have kept clear, *Scot Explorer* did not maintain a proper lookout and should have made better use of her radar, including ARPA, to facilitate an earlier determination that a risk of collision existed. At the time of the collision the designated lookout on *Scot Explorer*, who was also the ship's cook, was in the galley preparing a meal.

¹ MAIB Safety Study 1/2004,
http://www.maib.gov.uk/publications/safety_studies/bridge_watchkeeping_safety_study.cfm

² MAIB Investigation Report,
http://www.maib.gov.uk/publications/investigation_reports/2005/scot_explorer.cfm

A recommendation was made to the International Chamber of Shipping to highlight to ship owners that the accident could have been avoided if a dedicated lookout had been on the bridge during hours of darkness.

In September 2008, *Scot Venture*, managed by Intrada Ships Management Limited, collided with the fishing vessel *Golden Promise*. The MAIB carried out a Preliminary Examination into the accident³ and Intrada issued a safety circular (**Annex D**) reminding bridge officers of the principles of good watchkeeping practice.

1.12 BRIDGE RESOURCE MANAGEMENT

The need to maintain an effective bridge team at all times is one of the key themes of the Bridge Procedures Guide, issued by the International Chamber of Shipping⁴. The guide states that, inter alia:

At all times, ships need to be navigated safely in compliance with the COLREGS and also to ensure that protection of the marine environment is not compromised.

An effective bridge organisation should manage efficiently all the resources that are available to the bridge and promote good communication and teamwork.

The need to maintain a proper look-out should determine the basic composition of the navigational watch. There are, however, a number of circumstances and conditions that could influence at any time the actual watchkeeping arrangements and bridge manning levels.

Effective bridge resource and team management should eliminate the risk that an error on the part of one person could result in a dangerous situation.

³ MAIB Preliminary Examination,
http://www.maib.gov.uk/publications/completed_preliminary_examinations/completed_preliminary_examinations_2008/scot_venture.cfm

⁴ ICS Bridge Procedures Guide, Fourth Edition, 2007

SECTION 2 - ANALYSIS

2.1 AIM

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents occurring in the future.

2.2 SCOT ISLES

2.2.1 Master

At 0150 on the morning of the collision, when the vessel had cleared the Medway pilotage area, the master left the second officer as the sole watchkeeping officer for the passage in the Thames estuary. He considered that Thames VTS and CNIS would alert the vessel to any potentially hazardous situations and would provide advice on collision avoidance situations.

It is not the role of a VTS to relieve vessels of their duties under the COLREGS to maintain a proper lookout and to take proper action to prevent collision. VTS provides navigational safety information to vessels in its area, but the service should not be regarded as a substitute for maintaining a safe navigational watch at all times.

The master did not leave night orders, and did not normally do so. It was his assumption that, because the bridge watchkeeping officers all held certificates of competency, they did not require any further guidance.

Night orders were required to be completed by the vessel's SMS and are an effective way of alerting watchkeepers to specific hazards at any stage of a passage. They provide an additional safety barrier to prevent unsafe practices and act as a stimulus to bridge watchkeeping officers by raising their awareness of the risks likely to be encountered and by providing guidance on how to mitigate those risks.

In this case night orders could have been used to identify key areas of concern relating to the passage across the traffic lanes of the Dover Strait TSS. In this respect the master's requirements with reference to: maintaining a proper lookout, desired interval for position fixing on the chart, use of ARPA for radar plotting, safe passing distances from other vessels and navigational marks, as well as the effective use of AIS could have been listed.

Evidence also indicates that it was the master's custom not to post a lookout during his bridge watches and that he did not require the bridge watch alarm to be used.

The manager had issued a fleet directive on keeping a safe navigational watch and a safety circular to bridge watchkeepers referring to the Bridge Procedures Guide. The MCA provides guidance in MGN 315(N) on maintaining a safe navigational watch.

Despite his knowledge and experience, the specific requirements contained in the manager's SMS and the national and international recommendations with respect to bridge watchkeeping, the master had become complacent. This factor, which had not been identified by the manager, set a low benchmark for others on board *Scot Isles* to follow.

2.2.2 Chief officer's watchkeeping

The chief officer took over as the bridge watchkeeping officer at 0400 on a dark night in relatively benign weather conditions. The vessel was clear of the Thames estuary and there were only a few other vessels in the vicinity.

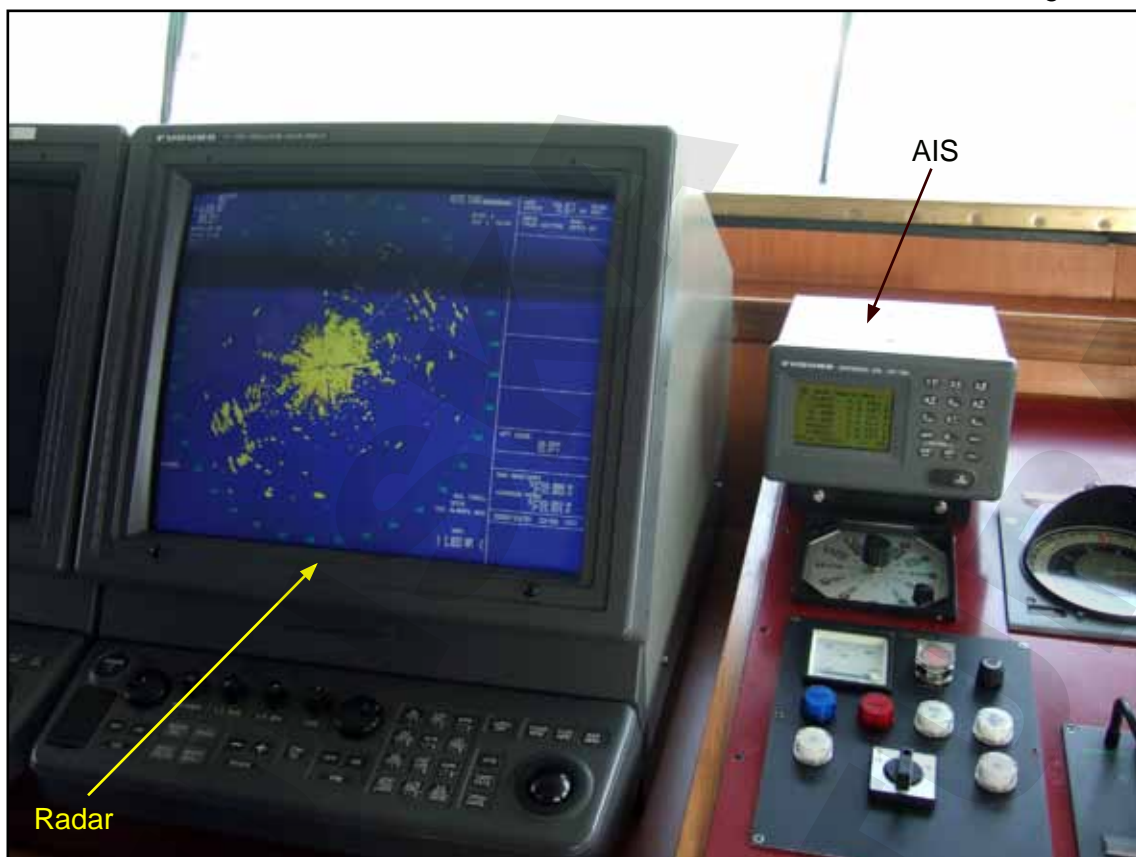
As the vessel proceeded towards the SW traffic lane, in open water, the chief officer was faced with no immediate risks to the safe passage of the vessel. The Filipino lookout was on the bridge, but it was not customary for the watchkeeping officers to talk to the lookouts. When the lookout reported a red light to starboard, and then advised that he was leaving the bridge to undertake safety rounds, the chief officer made no comment. As this was not abnormal, the lookout was unaware that the chief officer had not registered his report.

The absence of a lookout demonstrated a complacent attitude to watchkeeping when the vessel was crossing the traffic lanes of a TSS.

Safe crossing of a traffic lane in a TSS requires the bridge team to be alert and to maintain situational awareness. This is achieved by effective bridge resource management, which was lacking in this case. The lookout should not have been allowed to leave the bridge when he did.

The chief officer was sitting in front of a radar fitted with ARPA, but this facility was not used to acquire and plot any of the radar targets, which could have enabled an early assessment of risk of collision to be made. The information displayed on the AIS receiver (**Figure 10**), located beside the starboard radar, giving the names and relative positions of the closest six vessels, was also not used.

The chief officer failed to maintain a proper lookout by sight or use of the navigational equipment available to him. This was contrary to Rule 5 of the COLREGS.



Scot Isles - wheelhouse, location of AIS receiver

The vessel's position was not plotted on the chart after 0400. The GPS display was monitored to ensure the vessel remained within the tram lines displayed on screen. This was poor navigational practice, as reference to a chart would have helped the chief officer to maintain situational awareness. Regular use of the chart provides the watchkeeper with a stimulus from the essential information it contains to assist the conduct of a safe passage.

Analysis of the damage caused to both vessels indicates that the chief officer probably did not see *Wadi Halfa* before *Scot Isles* was struck amidships.

He first became aware of the other vessel when he looked out of the starboard aft facing wheelhouse window and saw the accommodation lights of *Wadi Halfa* just before the second impact, when she struck the starboard bridgework of *Scot Isles*.

There is no evidence to conclude that the chief officer was unduly fatigued or that he fell asleep during the period leading up to the collision. However, it is likely that his apparent lethargic approach to his watchkeeping responsibilities was due to a lack of stimuli because of the following:

- There was no routine interaction between him and his dedicated lookout, who, in any case, had been allowed to leave the bridge over 10 minutes before the collision
- There were no night orders left by the master to alert the watchkeeper to the risks of the passage across the TSS and the requirement to be extra vigilant
- ARPA was not used to acquire and plot targets
- Positions were not plotted on the chart
- The AIS was not monitored
- The bridge watch alarm was not activated
- He remained seated throughout his period of watch
- He had become complacent in his approach to watchkeeping.

2.3 **WADI HALFA**

2.3.1 **Master**

The vessel's passage through the Sandettie deep water route to the NW of the Sandettie bank was contrary to the advice given on the chart (BA 2449) and in the Admiralty Sailing Directions for the Dover Strait (NP 28), which states that the deep water route is for the use of vessels with a draught of 16m or more.

Wadi Halfa's draught was less than 6m, and the decision to use the deep water route was inappropriate. Masters should not disregard the advice provided in approved navigation publications as this sets a poor example to bridge watchkeeping officers.

The master left the bridge before the chief officer took over the watch. Although he left no night orders on this occasion, he did so the night before and the night following the accident (**Annex H**). These required that all officers kept a sharp lookout, gave a wide berth to all ships, and frequently checked the vessel's position.

However, these orders were not significantly different from those he wrote when the vessel was in open waters. The night orders should be used to provide an additional stimulus to the bridge watchkeeping officers by amplifying the need for vigilance when navigating in areas where greater densities of traffic and/or other navigational hazards are expected. In this case, rather than provide explicit guidance to his watchkeeping officers, the master assumed that the CNIS would alert the vessel to any potentially hazardous situations.

Despite his knowledge and experience, the owner's required procedures and the recommendations promulgated internationally with respect to bridge watchkeeping, *Wadi Halfa's* master, like *Scot Isles*, had become complacent. This was a factor that had not been identified by the owner, and which did not engender best practice in his bridge watchkeeping personnel.

2.3.2 Chief officer's watchkeeping

The chief officer took over as the bridge watchkeeping officer at 0400. The vessel was heading NE in the Sandettie deep water route and there were no other vessels in the immediate vicinity. It was a dark, clear night and conditions were calm. A cadet and lookout were also on the bridge.

The chief officer allowed the lookout to leave the bridge, for a toilet break, at about 0435, and allowed the cadet to remain in the chart room area from 0400.

The chief officer was then the sole lookout and, in similar circumstances to those occurring simultaneously on the bridge of *Scot Isles*, the ARPA was not used to assess the risk of collision and the AIS display was not monitored. A proper lookout by sight and by using all available means was not maintained, contrary to the requirements of Rule 5 of the COLREGS.

Just before the collision, the chief officer saw the green sidelight of *Scot Isles* close to port. He put the helm hard to starboard and *Wadi Halfa* had started to swing to starboard when contact occurred. Although this action was too late to avoid collision, it probably prevented *Wadi Halfa* striking *Scot Isles* in the latter's accommodation area, with serious potential consequences.

The increased risks when the lookout left the bridge were not appreciated. There is no evidence to conclude that the chief officer was unduly fatigued. However, he demonstrated a complacent attitude to his bridge watchkeeping responsibilities and could have made better use of available resources.

2.4 LOOKOUT

2.4.1 Use of lookouts

Neither vessel made best use of manpower available to form an effective bridge team. It was not customary, on either vessel, for the watchkeeping officers to discuss the navigation plan with their lookouts. In an area of high navigational risk this represents an individual, and a systemic failure, of bridge resource management on both vessels.

When the lookouts were allowed to leave their respective bridges, ironically at almost exactly the same time, there was no realisation that a significant safety barrier had been removed and that the risk of collision had increased accordingly.

Although bridge equipment was available to assist both chief officers in keeping a proper lookout in the absence of a dedicated lookout, this was not used effectively. In any event the use of such equipment should complement, and not replace, the requirement to maintain a proper lookout by sight.

2.4.2 Requirement to maintain a lookout

The need to maintain a proper lookout should determine the basic composition of the navigational watch. A dedicated lookout should be an integral part of the bridge team, as promoted by MGN 315 (M) and the Bridge Procedures Guide.

2.5 ACTIONS FOLLOWING COLLISION

2.5.1 *Scot Isles*

On arrival in the wheelhouse, the master presumed that the crew were awake, as he had seen some of them on his way to the bridge. Although he had not heard the General Alarm being sounded, he did not sound it or carry out a full muster.

If the point of impact had been further aft or if the bulkhead in the hold had been breached, *Scot Isles* and her crew would have been at great and immediate risk. A prompt muster, using the General Alarm, should have been carried out to ensure everyone was accounted for and alert to the vessel's predicament.

The vessel's SMS Emergency Response Card, Card 10, for collisions at sea (**Annex A**), required the crew to be placed on 'stand-by'. Clear advice to sound the General Alarm at an early stage after a collision should be included in such checklists.

After the collision, the master arranged for the engine room and accommodation spaces to be checked for damage and was advised that there was none in those areas. However, the deck and hold were not checked and the full extent of the damage, to the hull on the starboard side amidships, was not realised until illuminated by a helicopter more than an hour after the collision.

In assuming that only *Scot Isles*' starboard bridgewing had been damaged during the collision, the master relied on information provided to him by the chief officer, who was in a state of shock, and on what could be seen from the wheelhouse (**Figure 11**). A thorough inspection of the entire vessel, which should have included sounding all tanks and spaces, should have been undertaken following the collision.

The vessels' details were exchanged by VHF radio a short time after the collision, when it was established that neither vessel required assistance. However, *Scot Isles* made no contact with the nearest Coastal State until an hour after the accident, when she was called by the French coastguard.



Scot Isles - view looking forward from wheelhouse

A prompt, which required the master to inform the nearest coastal state in the event of a collision, was not included on the relevant SMS checklist. Early notification of all accidents and incidents to the nearest coastal state will ensure appropriate shore resources can be briefed and placed on standby, thereby allowing a more effective response, should the situation worsen. Without such a prompt, it is entirely understandable that masters will, in the heat of the moment, not be focused on the need to inform the coastal authorities of a developing problem. It is therefore essential that the requirement should be formally incorporated into the shipboard contingency plans.

2.5.2 Wadi Halfa

The master arrived on the bridge very soon after the collision. He quickly made a public address broadcast to inform the crew of the accident and was confident that this had been heard throughout the vessel and that his crew were all alert to the situation. As with *Scot Isles*, it would have been more prudent to sound the General Alarm at this stage and to carry out a full muster of the crew to verify that no-one was missing, or had been injured, in the accident.

The master was soon joined on the bridge by off-duty officers whom he organised to undertake checks of the vessel in accordance with a checklist from the vessel's SMS. The checks included taking soundings of tanks and visual

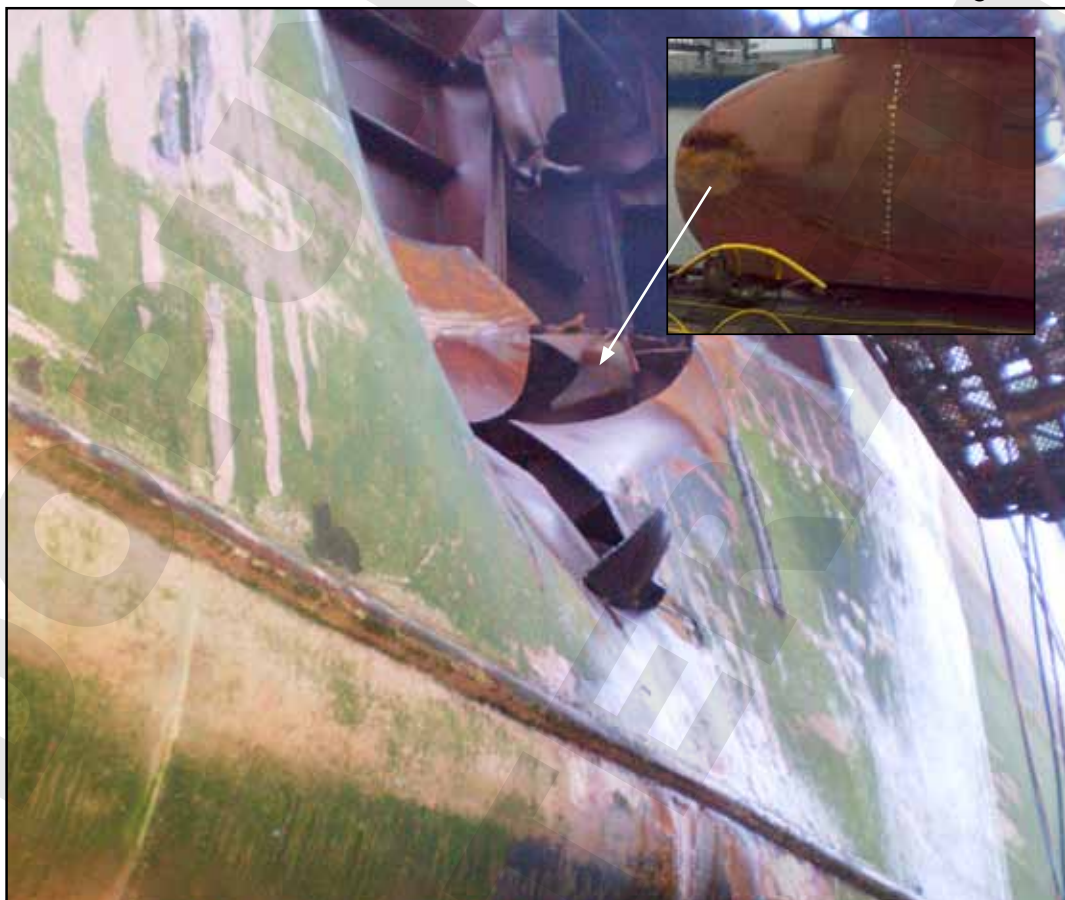
inspections to assess the extent of the damage caused by the collision. He also instructed an officer to maintain a log of events and to use the AIS to identify and contact the other vessel involved in the collision.

Once contact had been made with *Scot Isles*, the French coastguard was informed of the accident. This aspect of the response was very effective and demonstrates the benefit of following a well prepared checklist in such situations.

2.6 ASSESSMENT OF DAMAGE CAUSED TO BOTH VESSELS

The shape of the damage caused to the shell plating of *Scot Isles* (**Figure 12**) matched the profile of *Wadi Halfa*'s bulbous bow. The distance, measured from the bulbous bow to the hole in number one port wing ballast tank on *Wadi Halfa*, corresponds with that from the hull damage on *Scot Isles* to her starboard bridge wing.

Figure 12



Scot Isles and *Wadi Halfa* - comparison of damage

From this evidence it can be seen that the initial point of contact was between the port side of *Wadi Halfa*'s bulbous bow and the starboard hull, amidships, of *Scot Isles*. The two vessels then came together bodily, which resulted in the secondary damage to *Scot Isles*' starboard bridgework and to *Wadi Halfa*'s shell plating in way of number one port wing ballast tank.

2.7 HOURS OF WORK AND REST RECORDS AND FATIGUE

Analysis of the hours of work and rest records for both vessels indicated that they were accurately and reliably completed.

2.7.1 *Scot Isles*

The records for the chief officer show that he had 15 hours of rest in the 24 hour period before the accident. However, his periods of rest were interrupted by the operational requirements of the vessel's arrival and departure from Rochester. As such, his sleep pattern, in the hours preceding the accident, was also disrupted to the extent that the MAIB's fatigue analysis tool indicated there was a moderate risk that he was fatigued at the time of the accident.

2.7.2 *Wadi Halfa*

The chief officer had kept the 0400 - 0800 and 1600 - 2000 bridge watches for the previous 12 days. In addition to his watchkeeping duties, he normally worked from 0900 - 1100 on administrative duties. On this evidence, he averaged 14 hours rest each day and there is nothing to suggest that he was fatigued at the time of the collision.

2.8 SAFETY MANAGEMENT SYSTEM

Both vessels held approved safety management systems but on both there was evidence of ingrained non conformities in relation to the formation of effective bridge teams and the use of lookouts. These deficiencies had not been identified during SMS audits.

Companies should ensure that the importance of effective bridge resource management is reflected in their SMS documentation, that their employees receive training and guidance to establish and maintain such systems on board, and that internal audits adequately measure the extent of compliance.

SECTION 3 - CONCLUSIONS

3.1 SAFETY ISSUES DIRECTLY CONTRIBUTING TO THE ACCIDENT WHICH HAVE RESULTED IN RECOMMENDATIONS

1. The masters of both vessels were complacent, a factor that had not been identified by the respective ship managers and which did not engender best practice in either bridge team. [2.2.1, 2.3.1]
2. It is likely that *Scot Isles*' chief officer's apparent lethargic approach to his watchkeeping responsibilities was due to a lack of stimuli:
 - There was no routine interaction between him and his dedicated lookout, who, in any case, had been allowed to leave the bridge over 10 minutes before the collision.
 - There were no night orders left by the master to alert the watchkeeper to the risks of the passage across the TSS and the requirement to be extra vigilant.
 - ARPA was not used to acquire and plot targets
 - Positions were not plotted on the chart
 - The AIS was not monitored
 - The bridge watch alarm was not activated
 - He remained seated throughout
 - He had become complacent in his approach to watchkeeping [2.2.2]
3. The chief officer of *Wadi Halfa* demonstrated a complacent attitude to his bridge watchkeeping responsibilities and could have made better use of available resources. [2.3.2]
4. When the lookouts were allowed to leave their respective bridges, neither chief officer realised that a significant safety barrier had been removed. On both vessels, available navigational equipment was not used effectively and provided an inadequate substitute for maintaining a proper lookout by sight. [2.4.1]
5. Safety management system non conformities on each vessel with respect to the formation of effective bridge teams and the use of lookouts had not been identified during internal company audits. [2.8]

3.2 SAFETY ISSUES IDENTIFIED DURING THE INVESTIGATION WHICH HAVE NOT RESULTED IN RECOMMENDATIONS BUT HAVE BEEN ADDRESSED

1. An instruction to sound the General Alarm was not included in the SMS post collision checklist on *Scot Isles*. [2.5.1]
2. *Scot Isles* did not advise the nearest Coastal State of the accident. [2.5.1]
3. The post collision checks carried out on *Scot Isles* were not sufficient to identify the major damage to the hull. [2.5.1]

SECTION 4 - ACTION TAKEN

4.1 THE MARINE ACCIDENT INVESTIGATION BRANCH

The MAIB has issued a Safety Flyer (**Annex I**) providing details of the accident and highlighting the dangers of complacency in bridge watchkeeping officers and the importance of establishing an effective bridge team.

4.2 INTRADA SHIPS MANAGEMENT LIMITED

Following the accident, the manager carried out an internal investigation and has taken or intends to take the following action to prevent recurrence:

1. The post collision shipboard checklist has been revised to include requirements to:
 - sound the General Alarm and ensure that all crew are mustered
 - contact the nearest Coastal State and report the accident.
2. Watchkeepers have been reminded to follow the instructions from the Bridge Procedures Guide and fleet directives more diligently.
3. The use of the watchkeeper alarm will be enforced by fleet directives.
4. Ratings are to be better trained to be part of the bridge team.
5. Proper instructions (night orders etc) will be given by the master to watchkeepers, especially in busy areas.
6. Damage control drills will be better rehearsed.
7. Internal audits will ascertain that proper navigational watches are being maintained.
8. Company emergency response checklists will be revised to ensure that masters are reminded to make a thorough assessment of damage.

4.3 NATIONAL NAVIGATION COMPANY, EGYPT

The National Navigation Company carried out an internal investigation into the accident and has taken or intends to take the following action to prevent recurrence:

1. The details of the accident have been circulated to the vessels in its fleet to ensure that lessons are learned to prevent recurrence.
2. The bridge management training needs of its employees are being reviewed.
3. The details of the accident will be briefed to the company's masters when joining its vessels.

SECTION 5 – RECOMMENDATIONS

The **International Chamber of Shipping, UK Chamber of Shipping, The Nautical Institute** and the **International Federation of Shipmasters' Associations** are recommended to:

2009/124 Promulgate to their respective members the MAIB Safety Flyer accompanying this report to highlight the dangers of complacency in bridge watchkeeping officers and the importance of establishing an effective bridge team capable of maintaining a proper lookout, using all available means, at all times.

May 2009
Marine Accident Investigation Branch

Safety recommendations shall in no case create a presumption of blame or liability

Scot Isles - SMS post collision checklist

Card 10 - COLLISION @ SEA

Immediate Actions	Check
1 Call the Master.	<input type="checkbox"/>
2 Check for personal injuries, damage to ship and cargo. Check for possible leakages, take soundings of tanks and bilges.	<input checked="" type="checkbox"/>
3 Crew 'stand-by'.	<input checked="" type="checkbox"/>
4 Prepare life-boats and life-saving equipment.	<input type="checkbox"/>
5 Keep the radio station or 'stand-by' – with current and updated position available.	<input checked="" type="checkbox"/>
6 Show applicable signal from the International Code of Signals. (VHF could also be used to indicate distress).	<input checked="" type="checkbox"/>
7 Fix time for and position of the collision.	<input checked="" type="checkbox"/>
8 Take necessary actions to minimise further damages to personnel, environment & ships. (SOPEP Manual to be used in case of oil spill).	<input checked="" type="checkbox"/>
9 Contact the other ship:	
• State your ship's name, call sign, port of registry	<input checked="" type="checkbox"/>
• Nationality, owners name and your destination	<input checked="" type="checkbox"/>
• Request the same information from the other ship	<input checked="" type="checkbox"/>
• If interlocked – agree with the other ship whether you should separate the ships or not, considering the risk (for any of the two ships) of, oil spill, sparks, ignition of fire, spread between the ships, sinking and manoeuvrability	<input checked="" type="checkbox"/>
• Maintain contact on VHF as long as needed	<input checked="" type="checkbox"/>
10 Report to the Company by the fastest and most efficient way. Keep them continuously informed	<input checked="" type="checkbox"/>
11 Enter continuously any actions taken in ship's log book.	<input type="checkbox"/>

Extract from MGN 364 (M+F)
Guidance on use of Sandettie deep water route

MGN 364 (M+F)

Navigation: Traffic Separation Schemes - Application of Rule 10 and Navigation in the Dover Strait

Notice to all Shipowners, Masters and all concerned with the navigation of Seagoing vessels

This notice replaces Marine Guidance Notes 128 and 200

PLEASE NOTE:-

Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel and you should consider seeking independent legal advice if you are unsure of your own legal position.

Summary

- The International Regulations for Preventing Collisions at Sea (COLREGs) 1972 as amended, govern the conduct of all vessels in and near Traffic Separation Schemes (TSSs) which have been adopted by the International Maritime Organisation (IMO).
- This notice draws attention to mariners on the mandatory reporting regime and the recommendations for navigating within the Dover Strait.

4.10 The deep-water route to the NW of the Sandettié Bank is intended for use by vessels with a draught of 16 metres or more. Masters considering using this route should take into account the proximity of traffic using the SW-bound lane. Through traffic to which this consideration does not apply should, if practicable, avoid using the deep-water route.

Scot Isles - Fleet directive re watchkeeping

General Description

This Directive defines the Master's responsibility to give clear instructions to the Officer of the Watch for the conduct of the ship, with particular regard to the safety of the ship, her crew and the environment.

1.0 Responsibilities

The Master is responsible for giving clear, written instructions to the Officer of the Watch in accordance with this directive.

2.0 References

Company's Standing Orders to Masters, Bridge Procedures Guide and STCW Code (Chapter VIII).

3.0 Familiarisation

3.01 When a new OOW joins a vessel the Master will ensure that he is fully familiarised with the bridge, all of its equipment and the vessels handling characteristics both in Autopilot and hand steering. The familiarisation is to include alterations of course on hand steering in both light and loaded conditions, operation of the ships main engine controls and where applicable the procedure for disengaging the shaft generator so that engine movements may be made without causing a blackout or damage to electrical equipment.

3.02 Navigational Watch Ratings are to be fully familiarised with the bridge and basic equipment. This should include but is not restricted to, the ability to change over from Autopilot to hand steering, regular periods hand steering the vessel, being able to locate and operate navigation lights, deck lights and the Aldis lamp. They must be actively encouraged to become a part of the bridge team reporting lights, daymarks, obstructions, other vessels, floating objects or anything else that causes them concern.

4.00 Directive

4.01 Master's Standing Orders are to contain detailed instructions to the Officer of the Watch for the conduct of his watch, whether underway, at anchor or in port.

Such orders are to pay particular attention to the safe navigation of the ship, the safety of the ship, her crew and the environment.

Full details of the requirements for Master's Standing Orders are contained in the Company's Standing Orders to Masters.

Every Officer of the Watch (OOW) shall upon joining the vessel read and understand the Masters Standing Orders signing an acknowledgement to this effect.

Further amplification of the Master's Standing Orders to the Officer of the Watch, pertinent to each voyage are to be given in the Master's Night Order Book. This is to be read and signed by each Officer of the Watch before taking over his watch.

- 4.02 It should be emphasised to the OOW that the Master is always available and that he should not hesitate to call him to the bridge immediately in any situation or circumstance he feels it necessary. The OOW should always call the Master in good time so that he can adequately assess the situation before making any decision.
- 4.03 The Master must always, taking into account the OOW experience and familiarity with an area insist on being called to bridge for any part of the voyage where he considers density of traffic or navigational problems may cause uncertainty.
- 4.04 A Navigational Watch Rating is to be on the bridge not just during the hours of darkness but as circumstances dictate, i.e. restricted visibility, heavy commercial traffic, concentrations of fishing vessels or pleasure craft and narrow or busy channels.

Due consideration must be given to all the prevailing circumstances before releasing the lookout at any time.

The bridge must never be left unattended at sea and only duties pertinent to navigation are to be carried out whilst on watch.

- 4.05 The Officer of the watch shall make use of all the information available to him when planning voyages or making alterations of course this will include, NAVTEX, Admiralty Sailing Directions, Tidal Stream Atlas, Charts, Almanac and any other relevant Nautical Publications. The Master shall in turn inform the OOW of any local anomalies or dangers.

Consideration will be given to marking no go areas and escape routes on charts during passage planning.

The OOW will at all times avoid altering course to port in restricted visibility except in the most exceptional circumstances.

5.0 Taking over a Navigational Watch

- 5.01 Prior to taking over the watch, relieving officers must satisfy themselves as to the ship's position and confirm its intended track, course speed and status of controls as appropriate. They will also be made aware of other traffic in the proximity and any developing situations.

They shall particularly note any dangers to navigation expected to be encountered during their watch or approaching a port or pilot station.

The Officer going off watch shall generally, but especially in narrow channels or port approaches stay on the bridge until they are completely satisfied their relief is aware of the prevailing situation and that the vessel is continuing to maintain a safe course.

If at any time the officer in charge of the navigational watch is to be relieved when a manoeuvre or other action to avoid any hazard is taking place, the relief of that officer shall be deferred until such action has been completed.

Scot Isles - Fleet circular re watchkeeping


Intrada Ships Management Limited

COMPANY STANDING ORDERS TO BRIDGE WATCH KEEPERS

1. The bridge must never be left unattended at sea
2. Only duties pertinent to safe navigation are to be carried out at sea
3. A Navigational Watch Rating is to be on the bridge as a look out, not only during the hours of darkness but as circumstances dictate, i.e. restricted visibility, heavy commercial traffic, concentrations of fishing vessels or pleasure craft and narrow or busy channels
4. Passage Planning must always be from berth to berth not pilot to pilot
5. **Masters Standing Orders & the Night Order Book are to be signed as read by all Navigating Officers**
6. **Procedures in both the Company Fleet Directives & Bridge Procedures Guide are to be adhered to when handing over the watch**
7. **Always keep a good lookout**

By order of the Directors
Intrada Ships Management Limited

Wadi Hafa - SMS procedure re watchkeeping

 NNC	Integrated Management Procedures	IP 05- 20	
	Vessels Operation Management Bridge Operations	Section 01	Page 1 of 2
	Bridge Organisation	Revision 0	Date 01/11/2003

1. Application

- 1.1 This procedure is applicable onboard all the company's ships.

2. Objective

The objective of this procedure is to provide guidance to Masters and deck officers in order to ensure safe navigation of ships and the compliance with the applicable International Rules & Regulations (SOLAS, STCW & COLREGS).


3. Responsibilities

- 3.1 The Master is responsible for the proper organisation of bridge operations to be in accordance with ship's features & voyage requirements and without contradiction with the QSMS requirements or the International Rules & Regulations.
- 3.2 OOW (Officer On Watch) is responsible for the proper implementation of the requirements of this procedure.

4. Method

- 4.1 The general principles of safe manning should be used to establish the levels of manning that are appropriate to ship and the intended voyages.
- 4.2 At all times, ship is to navigate safely in compliance with COLREGS and also to ensure the protection of the marine environment.
- 4.3 An effective bridge organisation should manage all the resources that are available to the bridge and promote good communication & teamwork.
- 4.4 Navigational watch under STCW Convention:
In order to ensure the effectiveness of watch activities, the following factors are to be taken into consideration by the Master for deciding level of bridge personnel: -
 -) Visibility, state of weather & sea.
 -) Traffic density.
 -) The attention necessary when navigating in or near traffic separation schemes.
 -) The additional workload caused by the nature of the ship functions and anticipated manoeuvres.
 -) The fitness for duty and knowledge of the ship's officers and crew.
 -) The experience of each OOW and the familiarity of the OOW with the ship's equipment and navigational procedures.
 -) The operational status of bridge equipment and controls, including alarm systems.
 -) Rudder & propellers control and ship manoeuvring characteristics.
 -) The size of the ship and the field of vision available for the conning position.
 -) Operational condition of navigational aids such as radar or electronic position indicating devices.
 -) Whether the ship is fitted with automatic steering.



 NNC	Integrated Management Procedures	IP 05- 20	
	Vessels Operation Management Bridge Operations	Section 01	Page 2 of 2
	Bridge Organisation	Revision 0	Date 01/11/2003

-) Whether there are radio duties to be performed by OOW.
-) The OOW may be the sole look out in day light conditions only.

4.5 Master's standing orders:

4.5.1 The shipboard operational procedures are supported by Master's standing orders that should be written to reflect the Master's own particular requirements and circumstances particular to the ship, her trade and the experience of the bridge team.

4.5.2 Standing orders and instructions should operate without conflict with the SMS.

4.5.3 Standing orders should be read by all officers before the commencement of the voyage and signed accordingly. A copy of the orders should be available on the bridge for reference.

4.5.4 An example for Master's standing orders was prepared as guidance; refer to Appendix 1 to this procedure.

4.6 Night Orders:

4.6.1 At night the Master should write in the bridge order book what is expected for the OOW. These orders must be signed by each OOW when going to watch.

4.7 Calling Master:

The OOW should notify the Master immediately in the following circumstances: -

-) Restricted visibility is encountered or suspected.
-) If the traffic conditions or the movement of other ships are causing concern.
-) Difficulty is experienced in maintaining course.
-) If unexpectedly land or a navigation mark is sighted.
-) In case of break down of Main Engine, Steering Gear or any essential navigational equipment.
-) In heavy weather and the possibility of changing weather to the worst.
-) In any other emergency or situation in which he is in doubt.

4.8 New personnel familiarisation:

4.8.1 Newly assigned personnel that have direct involvement in watch keeping, a reasonable period of time must be allocated for them to be acquainted with bridge equipment and any other associated equipment.

4.8.2 The above familiarisation may be assigned to the chief officer or to one of the deck officers and to be carried out as per a check list, refer to Appendix 2 to this procedure.

= END =



MGN 315 (M) - Keeping a safe navigational watch

MGN 315 (M)

KEEPING A SAFE NAVIGATIONAL WATCH ON MERCHANT VESSELS

Notice to Owners, Operators, Managers, Masters and Officers of Merchant Vessels

This notice should be read in conjunction with MGN 137 (M+F) and MGN 202 (M+F)

Summary

This Merchant Guidance Notice (MGN) gives guidance on the application of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended (**STCW 95**)¹ regarding the keeping of a safe navigational watch.

Key Points

This notice gives information and guidance on the keeping and maintaining of a safe navigational watch in accordance with the requirements of STCW 95 and its associated code (**STCW Code**).

The areas that this notice covers are:

General application for Masters and officers in charge of a navigational watch;

Fitness for duty;

Performing the navigational watch;

Watch arrangements, handing over the watch and taking over the watch;

Maintaining a safe look-out and relationship with the look-out;

Restricted visibility, safe speed, stopping distance and vessel at anchor;

Certification.

1.0 Introduction

- 1.1 This notice contains guidance for officers in charge of a navigational watch, which Masters are expected to supplement as they consider appropriate. It is essential that officers of the watch (**OOW**) appreciate that the proper performance of their duties is necessary in the interests of the safety of life and property at sea and the prevention of pollution to the marine environment.

¹ Available from the Publications Department, International Maritime Organisation, 4 Albert Embankment, London SE1 7SR

- 1.2 It is the responsibility of Masters, and companies owning or operating UK registered seagoing vessels, to ensure that the principles applying to the keeping of a safe watch, as detailed in STCW 95 are followed.
- 1.3 The Master shall not be constrained by the shipowner, charterer or any other person from taking any decision which, in the Master's professional judgment, is necessary for safe navigation. It is the duty of the Master of every vessel to ensure that watchkeeping arrangements are adequate for maintaining a safe navigational watch at all times.
- 1.4 The International Chamber of Shipping (ICS) Bridge Procedures Guide is established as the principle guide to best watchkeeping practice and includes additional guidance on bridge resource management and the conduct of the bridge team including the use of passage planning, integrated electronic navigation systems and the use of GMDSS.
- 1.5 This notice, which should be read in conjunction with STCW 95 and ICS Bridge Procedures Guide, highlights the Maritime and Coastguard Agency (MCA) concerns and interpretations with respect to what constitutes the 'Keeping of a Safe Navigational Watch' in the light of recent maritime accidents and incidents.
- 1.6 The Annex to this notice lists relevant publications.

2.0 General

- 2.1 The OOW is the Master's representative and is primarily responsible at all times for the safe navigation of the vessel and for complying with the International Regulations for Preventing Collisions At Sea (**ColRegs**).
- 2.2 It is of special importance that the OOW ensures that at all times an efficient look-out is maintained and that ColRegs are complied with.
- 2.3 Officers and Masters are reminded that the vessel must at all times proceed at a safe speed.
- 2.4 The vessel's engines are at the disposal of the OOW and there should be no hesitation in using them in case of need. Where possible, timely notice of intended variations of engine speed should be given to the duty engineer. The OOW should know the handling characteristics of the vessel, including the stopping distance, and should appreciate that other vessels may have different handling characteristics.
- 2.5 Officers in charge of a navigational watch are responsible for navigating the vessel safely during their periods of duty with particular concerns for avoiding collision and stranding. The OOW shall also be aware of the serious effects of operational or accidental pollution of the marine environment and shall take all possible precautions to prevent such pollution.
- 2.6 Masters, owners and operators are reminded that the MCA considers it dangerous and irresponsible for the OOW to act as sole look-out during periods of darkness or restricted visibility.
- 2.7 The factors to be considered before the dedicated bridge look-out can be dispensed with are detailed in paragraph 8.3. It is implicit in STCW 95 that at all times when a ship is underway a separate dedicated look-out must be kept in addition to the OOW.

3.0 Fitness for Duty

- 3.1 The Merchant Shipping (Hours of Work) Regulations 2002 (**the Regulations**) apply to all seafarers employed or engaged in any capacity on board a seagoing vessel and includes officers and ratings assigned to bridge watchkeeping duties.
- 3.2 In summary, and unless covered by an exception, the Regulations provide for a minimum of 10 hours rest in any 24 hour period and 77 hours in any seven day period.

Hours of rest may be divided into no more than two periods, one of which should be at least six hours long, and the intervals in between should not exceed 14 hours.

- 3.3 The watch system shall be such that the efficiency of watchkeeping personnel is not impaired by fatigue. The Master shall take into account the quality and quantity of rest taken by the watchkeepers when determining fitness for duty.
- 3.4 It is the overall responsibility of the Master and the responsibility of every watchkeeping officer and rating to ensure that they are sufficiently rested prior to taking over a navigational watch. It is the responsibility of the owner or operator to ensure that the vessel is manned with a sufficient number of personnel so that a safe navigational watch can be maintained at all times by appropriately qualified and rested personnel in all foreseeable circumstances.
- 3.5 In circumstances where the Regulations cannot be met there should be established procedures and contingencies in place to ensure that the vessel is brought to or remains in a place of safety until a safe navigational watch can be established. In some circumstances this may require delay to a vessel's departure.
- 3.6 Watchkeepers should ensure they remain alert by moving around frequently and ensuring good ventilation. Marine Accident Investigation Branch (**MAIB**) reports have shown that it is all too easy to fall asleep, especially while sitting down in an enclosed wheelhouse.
- 3.7 The OOW shall be free from the effects of alcohol and any other substance, including prescription drugs or other medication that may have a detrimental effect on the officer's judgments.

4.0 Performing the Navigational Watch

4.1 The officer of the navigational watch shall:

- keep the watch on the bridge
- in no circumstances leave the bridge until properly relieved by an appropriate officer
- continue to be responsible for the safe navigation of the vessel despite the presence of the Master on the bridge until informed specifically that the Master has assumed the con and this is mutually understood
- notify the Master when in any doubt as to what action to take in the interests of safety
- continue to be responsible for the safe navigation of the vessel despite the presence of a pilot on board
- if in any doubt as to the pilot's actions or intentions, seek clarification from the pilot; if doubt still exists, they should notify the Master immediately and take whatever action is necessary until the Master arrives
- not undertake any other duties that would interfere or compromise the keeping of a safe navigational watch
- ensure there are no distractions caused by the use of domestic radios, cassettes, CD players, personal computers, television sets, mobile phones, etc
- have available at all times, the services of a qualified helmsman

- in areas of high traffic density, in conditions of restricted visibility and in all hazardous navigational situations ensure the vessel is in hand steering
- keep in mind that the perceptions of watchkeeping officers on different types and sizes of vessels may vary considerably when assessing a close quarter situation and the time in which avoiding action should be taken
- keep a proper record during the watch on the movement and activities relating to the navigation of the vessel
- station a person to steer the vessel and to put the steering into manual control in good time to allow any potentially hazardous situation to be dealt with in a safe manner. Officers are further reminded that when the vessel is in automatic steering it is highly dangerous to allow a situation to develop to the point where the OOW is without assistance and has to break the continuity of the look-out in order to take emergency action
- use the radar at all times in areas of high traffic density and whenever restricted visibility is encountered or expected and shall have due regard to its limitations. Radar should be available for use at all times to enable the officers to use the equipment in clear weather so as to fully appreciate the limitations of the equipment
- at sufficiently frequent intervals during the watch check the vessel's position, course and speed using all appropriate navigational aids and means necessary to ensure that the vessel follows the planned track
- take fixes at frequent intervals. These fixes shall be carried out by more than one method whenever circumstances allow. The largest scale chart on board, suitable for the area and corrected with the latest available information shall be used. This includes local navigation warnings, and temporary and preliminary notices to mariners

Mariners are also reminded of the requirement to use the latest editions of all supporting navigational publications such as charts, list of lights, list of radio signals, pilot books etc. Such publications should be fully corrected.

5.0 Watch Arrangements

- 5.1 The composition of a navigational watch should comprise one (or more) qualified officers supported by appropriately qualified ratings. The actual number of officers and ratings on watch at a particular time will depend on the prevailing circumstances and conditions.
- 5.2 At no time shall the bridge be left unmanned without a qualified watchkeeping officer.
- 5.3 Factors to be taken into account when composing a bridge watch:
 - fatigue
 - weather conditions and visibility
 - proximity of navigational hazards which may make it necessary for the officer in charge of the watch to carry out additional navigational duties
 - use and operational condition of navigational aids
 - whether the vessel is fitted with automatic steering
 - whether there are radio duties to be performed

- unmanned machinery space (UMS) alarms, controls and indicators provided on the bridge, procedures for their use and limitations
- any unusual demands on the navigational watch that may arise as a result of special operational circumstances

In circumstances where a single man bridge is considered permissible support personnel should be readily and immediately available should assistance be required. There should be an established and continuously available means of communications for the watchkeeper to summon such assistance at all times.

6.0 Handing Over the Watch

6.1 The OOW shall:

- ensure that the members of the relieving watch are fully capable of performing their duties
- ensure that the vision of the relieving watch is fully adjusted to the light conditions
- ensure that all standing orders and the Master's night orders are fully understood

6.2 The OOW shall not hand over the watch:

- if there is reason to believe that the relieving officer is not capable of carrying out the watchkeeping duties effectively, in which case the Master should be notified
- when a manoeuvre is in progress until such action has been completed

7.0 Taking Over the Watch

7.1 The relieving officer shall:

- prior to taking over the watch verify the vessel's estimated or true position
- confirm the vessel's intended track, course and speed
- note any dangers to navigation expected to be encountered during the watch
- be aware of prevailing and predicted tides, currents, weather, visibility and the effect of these factors upon course and speed
- note any errors in gyro and magnetic compasses
- note the status of all bridge equipment
- note the settings of bridge/engine controls and manning of engine room
- be aware of the presence and movement of vessels in sight or known to be in the vicinity
- give watchkeeping personnel all appropriate instructions and information which will ensure the keeping of a safe navigational watch, including maintenance of a proper look-out

8.0 Look-out

- 8.1 The ColRegs require that every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of risk of collision.
- 8.2 The look-out must be able to give full attention to the keeping of a proper look-out and no other duties shall be undertaken that could interfere with that task. The duties of the look-out and helmsman are separate and the helmsman should not be considered to be a look-out except in small vessels where an un-obstructed all round view is provided at the steering position and there is no impairment of night vision or other impediment to the keeping of a proper look-out.
- 8.3 In certain circumstances of clear daylight conditions the Master may consider that the OOW may be the sole look-out. On each occasion the Master should ensure that:
- The prevailing situation has been carefully assessed and it has been established without a doubt that it is safe to do so;
 - Full account has been taken of all relevant factors including but not limited to:
 - state of the weather
 - visibility
 - traffic density
 - proximity of dangers to navigation
 - the attention necessary when navigating in or near traffic separation schemes
 - design and layout of the bridge
 - arcs of visibility
 - radar equipment fitted and their limitations with respect to navigation
 - other duties that the officer may have to engage in and which could be a distraction from the keeping of a proper look-out such as:
 - operation of GMDSS and other communications equipment such as cell phones and email systems
 - navigational maintenance such as completion of logs and other record keeping and correction of charts and publications
 - routine testing and maintenance of bridge equipment

In any event, an OOW acting as sole look-out should always be able to fully perform both the duties of a look-out and those of keeping a safe navigational watch. Assistance must be immediately available to be summoned to the bridge when any change in the situation so requires.

- 8.4 It is of special importance that at all times the officer in charge of the navigational watch ensures that a proper look-out is maintained. In vessels with a separate chartroom the officer in charge of the navigational watch may visit the chartroom, when essential, for a short period for the necessary performance of navigational duties, but shall first ensure that it is safe to do so and that a proper look-out is maintained.

9.0 Relationship Between the OOW and Look-out

- 9.1 The OOW should consider the look-out as an integral part of the Bridge Team and utilise the look-out to the fullest extent.
- 9.2 As a way of fully engaging the look-out's attention consideration should be given to keeping the look-out apprised of the current navigational situation with regard to expected traffic, buoyage, weather, landfall, pilotage and any other circumstance relevant to good watchkeeping.

10.0 In Restricted Visibility

- 10.1 When restricted visibility is encountered or expected, the first responsibility of the OOW is to comply with the ColRegs with particular regard to the keeping of a look-out, sounding of fog signals, proceeding at a safe speed and having the engines ready for immediate manoeuvre.
- 10.2 In addition the OOW shall:
- inform the Master
 - ensure that a dedicated look-out is posted at all times
 - exhibit navigation lights
 - operate and use the radar
 - put the engines on standby

11.0 Safe Speed and Stopping Distance

- 11.1 The ColRegs require that every vessel shall at all times proceed at a safe speed so that proper effective action can be taken to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.
- 11.2 In cases of need, the OOW shall not hesitate to use the engines to reduce speed further and allow more time for consideration and assessment of a developing situation. However, timely notice of the intended variations of engine speed shall be given to the engineers where possible or effective use made of UMS engine controls.
- 11.3 Whatever the pressure on Masters to make a quick passage or to meet the wishes of owners, operators, charterers or port operators, it does not justify vessels and those on board them being unnecessarily put at risk. The MCA is concerned that proper standards be maintained and will take appropriate action against officers who jeopardize their vessels or the lives and property of others. Such action may lead to fines and/or the suspension or cancellation of their certificates.
- 11.4 In the well known case of THE LADY GWENDOLEN, the Court of Appeal stated that "excessive speed in fog is a grave breach of duty and vessel owners should use their influence to prevent it." Because of their failure to do so, it was held in that case that the owners could not limit their liability.

12.0 Vessel at Anchor

- 12.1 The OOW shall:
- determine and plot the vessel's position on the appropriate chart as soon as practicable

- when circumstances permit, check at sufficiently frequent intervals whether the vessel is remaining securely at anchor by taking bearings of fixed navigation marks or readily identifiable shore objects. The use of carefully chosen transits can give an almost instant indication as to whether the vessel's position has changed
- ensure that a proper look-out is maintained
- ensure that inspection rounds are made periodically
- observe meteorological and tidal conditions and state of sea, notify the Master and undertake all necessary measures if the vessel drags anchor
- ensure the state of readiness of the main engines and other machinery complies with the Masters requirements
- ensure the vessel exhibits the appropriate lights and shapes and that appropriate ColRegs sound signals are made
- avoid placing reliance on guard zones when using radar in lieu of a look-out as this is not considered acceptable practice.

In all the above circumstances it remains the Master's responsibility to ensure that the anchor watch to be kept is appropriate to the prevailing conditions.

13.0 Certification

- 13.1 The Regulations require that any officer in charge of a navigational watch shall be duly qualified in accordance with the requirements of STCW 95. It is the responsibility of the owner or operator, and Master to ensure that every navigational watchkeeping officer is appropriately qualified with respect to the size of the vessel and limitations in area of operation. Under no circumstances is it permitted for an un-qualified person to take charge of a navigational watch.
- 13.2 Similarly STCW 95 Section A-II/4 requires that every rating forming part of a navigational watch on a seagoing vessel of 500gt or more shall be required to demonstrate competence in the duties associated with the keeping of a safe navigational watch at the support level. This competence is evidenced by the issue of a Navigational Watch Rating Certificate. No rating should be assigned to navigational watchkeeping duties unless suitably qualified.
- 13.3 A qualification demonstrates that the holder has reached a minimum level of competence as defined in STCW 95. However, it does not imply that the holder has achieved all the necessary management or operational experience particular to a vessel, its operation or operational area. In considering an officer's or rating's qualifications due consideration should also be given to an individual's experience with respect to the vessel type and/or area of operation(s). In some circumstances it may be prudent to 'double-up' a watch or provide additional supervision to a qualified watchkeeper whilst particular operational experience is achieved.

Further Information

Further information on the contents of this Notice can be obtained from:

Seafarer Training and Certification Branch
Maritime and Coastguard Agency
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel : +44 (0) 23 8032 9231
Fax : +44 (0) 23 8032 9252
e-mail: exams.section@mcga.gov.uk

General Inquiries: 24 Hour Infoline
infoline@mcga.gov.uk
0870 600 6505

MCA Website Address: www.mcga.gov.uk

File Ref: MC 049/044/0010

Published: February 2006

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*An executive agency of the
Department for
Transport*

Mariner's attention is drawn to the following publications relating to this notice:

- International Regulations for Preventing Collisions at Sea 1972 (ColRegs)
- STCW 95, Code Sections A-VIII/2 Part 3, 3-1,3-2 and A-II/4
- ICS Bridge Procedures Guide

COLREGS - Rules 7,8,10,16 and 17

Rule 7

Risk of collision

- (a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.
- (b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.
- (c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information.
- (d) In determining if risk of collision exists the following considerations shall be among those taken into account:
 - (i) such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change;
 - (ii) such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a tow or when approaching a vessel at close range.

Rule 8

Action to avoid collision

- (a) Any action taken to avoid collision shall be taken in accordance with the Rules of this Part and shall, if the circumstances of the case admit, be positive, made in ample time and with due regard to the observance of good seamanship.
- (b) Any alteration of course and/or speed to avoid collision shall, if the circumstances of the case admit, be large enough to be readily apparent to another vessel observing visually or by radar; a succession of small alterations of course and/or speed should be avoided.
- (c) If there is sufficient sea-room, alteration of course alone may be the most effective action to avoid a close-quarters situation provided that it is made in good time, is substantial and does not result in another close-quarters situation.
- (d) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance. The effectiveness of the action shall be carefully checked until the other vessel is finally past and clear.
- (e) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion.
- (f) (i) A vessel which, by any of these Rules, is required not to impede the passage or safe passage of another vessel shall, when required by the circumstances of the case, take early action to allow sufficient sea-room for the safe passage of the other vessel.
- (ii) A vessel required not to impede the passage or safe passage of another vessel is not relieved of this obligation if approaching the other vessel so as to involve risk of collision and shall, when taking action, have full regard to the action which may be required by the Rules of this Part.
- (iii) A vessel the passage of which is not to be impeded remains fully obliged to comply with the Rules of this Part when the two vessels are approaching one another so as to involve risk of collision.

Rule 10

Traffic separation schemes

- (a) This Rule applies to traffic separation schemes adopted by the Organization and does not relieve any vessel of her obligation under any other Rule.
- (b) A vessel using a traffic separation scheme shall:
 - (i) proceed in the appropriate traffic lane in the general direction of traffic flow for that lane;
 - (ii) so far as practicable keep clear of a traffic separation line or separation zone;
 - (iii) normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from either side shall do so at as small an angle to the general direction of traffic flow as practicable.
- (c) A vessel shall, so far as practicable, avoid crossing traffic lanes but if obliged to do so shall cross on a heading as nearly as practicable at right angles to the general direction of traffic flow.
- (d) (i) A vessel shall not use an inshore traffic zone when she can safely use the appropriate

traffic lane within the adjacent traffic separation scheme. However, vessels of less than 20 metres in length, sailing vessels and vessels engaged in fishing may use the inshore traffic zone.

(ii) Notwithstanding sub-paragraph (d) (i), a vessel may use an inshore traffic zone when en route to or from a port, offshore installation or structure, pilot station or any other place situated within the inshore traffic zone, or to avoid immediate danger.

(e) A vessel other than a crossing vessel or a vessel joining or leaving a lane shall not normally enter

a separation zone or cross a separation line except:

(i) in cases of emergency to avoid immediate danger;

(ii) to engage in fishing within a separation zone.

(f) A vessel navigating in areas near the terminations of traffic separation schemes shall do so with particular caution.

9

(g) A vessel shall so far as practicable avoid anchoring in a traffic separation scheme or in areas near its terminations.

(h) A vessel not using a traffic separation scheme shall avoid it by as wide a margin as is practicable.

(i) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.

(j) A vessel of less than 20 metres in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.

(k) A vessel restricted in her ability to manoeuvre when engaged in an operation for the maintenance of safety of navigation in a traffic separation scheme is exempted from complying with this Rule to the extent necessary to carry out the operation.

(l) A vessel restricted in her ability to manoeuvre when engaged in an operation for the laying, servicing or picking up of a submarine cable, within a traffic separation scheme, is exempted from complying with this Rule to the extent necessary to carry out the operation.

Rule 16

Action by give-way vessel

Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear.

Rule 17

Action by stand-on vessel

(a) (i) Where one of two vessels is to keep out of the way the other shall keep her course and speed.

(ii) The latter vessel may however take action to avoid collision by her manoeuvre alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.

(b) When, from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessel alone, she shall take such action as will best aid to avoid collision.

(c) A power-driven vessel which takes action in a crossing situation in accordance with sub-paragraph (a)(ii) of this Rule to avoid collision with another power-driven vessel shall, if the circumstances of the case admit, not alter course to port for a vessel on her own port side.

(d) This Rule does not relieve the give-way vessel of her obligation to keep out of the way.

Wadi Halfa - master's night orders, 27 and 29 October 2008

From ALEXANDRIA Towards BREMEN

Wednesday day 29.10.08

Course to Steer 071° T

All OFFICERS pls kindly

- KEEP SHARP LOOK OUT.
- KEEP ALWAYS wide Berth for the other SHIPS in all Time.
- KEEP ALWAYS vessel on COURSE.
- CHECK COMPASS ERROR Frequently. AT least on Time every watch.
- CHECK SHIP'S POSITION Frequently.
- CALL ME IF ANY DOUBT.
- Report in UTS all Time.

MASTER

CH. OFF;
2nd OFF;
3rd OFF;
3rd OFF;



NIGHT ORDER BOOK

From ALEXANDRIA

Towards BREMEN

Monday day 27-10-08

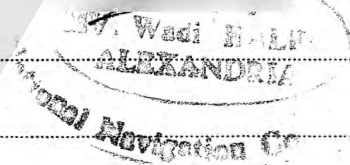
Course to Steer 027 T

All OFFICERS PLS kindly.

- KEEP SHARP LOOK OUT.
- KEEP ALWAYS wide Berth for the other SHIP in all Time.
- KEEP V/L ALWAYS on COURSE.
- CHECK COMPASS ERROR frequently. AT least 0 Time every watch.
- CHECK SHIP'S POSITION frequently.
- CALL ME IF ANY DOUBT.

MASTER.

CH. OFF :
2nd OFF :
3rd OFF :
3rd OFF :



MAIB

MARINE ACCIDENT INVESTIGATION BRANCH

FLYER TO THE SHIPPING INDUSTRY *Scot Isles* collision with *Wadi Halfa*

On 29 October 2008 at 0449 (UTC+1), *Scot Isles*, a 2,600gt, UK registered general cargo vessel was on passage from the Thames estuary to Antwerp. She was crossing the NE traffic lane of the Dover Strait TSS when she was in collision with *Wadi Halfa*, a 22,900gt, Egyptian registered, bulk carrier which was heading NE in the Sandettie deep water route.

No lookout was posted on either bridge at the time of the collision. The vessels both had fully operational radars, fitted with Automatic Radar Plotting Aids, although no radar targets had been acquired by either vessel before the collision.

Scot Isles was the give way vessel in accordance with the COLREGS but, on a clear, dark night with good visibility neither vessel saw the other until moments before the collision. The watchkeeping officer on *Wadi Halfa* saw *Scot Isles* when she was very close to port, and he put the helm hard to starboard just before the collision occurred.

Image courtesy of French Customs



Image courtesy of French Customs



Damage to *Scot Isles*

Scot Isles was struck amidships and a fuel tank was breached, causing pollution, but the full extent of the damage was not discovered for some time due to ineffective post collision checks. The Coastal State subsequently directed the vessel to proceed to Dunkirk for a full damage survey and repairs, which kept the vessel out of service for several weeks.

Damage to *Wadi Halfa*, although less severe, took more than a week to repair on arrival at her next port in Germany.



Damage to *Wadi Halfa*

This accident occurred because of complacency on both vessels:

- The lookouts on both vessels were allowed to leave the bridge in an area of high navigational risk.
- In the absence of a dedicated lookout, neither OOW made best use of the available navigational aids (radar, AIS) visually to maintain an effective appreciation of the traffic situation.
- *Wadi Halfa* was using a deep water route, recommended for vessels with a draught of 16m or more, despite having a draught of less than 6m.
- Although neither master was on the bridge, standing/night orders were not used to alert the watchkeepers to the risks they were likely to encounter during their bridge watch.
- There was no encouragement for the lookout to become an integral part of the bridge team of either vessel.

Lessons learned:

- Complacency continues to be a recurring safety issue in accidents investigated by the MAIB. Shipowners should recognise the risks posed by complacency and ensure that their vessels operate with effective bridge teams at all times.
- Masters should make best use of standing/night orders to set operational benchmarks and heighten bridge watchkeepers' awareness of risk when appropriate.
- Masters must lead by example. Ships' crews are unlikely to apply the high professional standards demanded if these are not observed by the officer in overall command.
- The use of designated lookouts is an essential requirement for safe navigation, but continues to be regarded as a low priority on some vessels.
- The use of navigational aids is not a substitute for maintaining a visual lookout.

This accident was the subject of an MAIB Investigation, which can be found on MAIB's website at: www.maib.gov.uk

A copy of the report and/or the flyer will be sent, on request, free of charge.

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May 2009