INTERNATIONAL MARITIME ORGANIZATION

IMO

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CASUALTY STATISTICS AND INVESTIGATIONS

Information concerning the listing of the vessel "Cougar Ace"

Submitted by Singapore

SUMMARY	
Executive summary:	This document summarizes an investigation into the listing of the car carrier **Cougar Ace**, off the coast of Alaska on 24 July 2006
Action to be taken:	Paragraph 2
Related documents:	MSC.1/Circ.1145; resolution A.868(20) and resolution MEPC.124(53)

Introduction

1 Attached as annex is the summary of the investigation report into the listing of the Singapore registered car carrier MV **Cougar Ace** in the Pacific Ocean, as prepared by the Maritime and Port Authority of Singapore.

Action requested of the Sub-Committee

2 The Sub-Committee is invited to note the above information and take action as appropriate.

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ANNEX

SUMMARY REPORT OF THE INVESTIGATION INTO THE LISTING OF THE SINGAPORE-REGISTERED VEHICLE CARRIER COUGAR ACE IN THE PACIFIC OCEAN, SOUTH OF THE ALEUTIAN ISLANDS ON 24 JULY 2006

NAME OF SHIP	**MV "COUGAR ACE"**
IMO Number	9051375
Flag	Singapore
Type of ship	Car Carrier
Gross Tonnage	55,328
Length	199.53 metres
Year Built	29 Jan 1992
Classification Society	Nippon Kaiji Kyokai
Registered Manager	SSC Ship Management Pte Ltd
Registered Owners	MOB Cougar (Pte) Ltd, Singapore
P & I Club	Japan Ship Owners' P&I Association
SMS Certified by	Nippon Kaiji Kyokai

Background

1 On 24 July 2006 at about 18:45 hrs, the MV **Cougar Ace** (CA) experienced severe listing to its port side and transmitted the distress signal, requesting for immediate assistance, while en route from Japan to Canada. At the time of the incident, the ship was carrying out ballast water exchange (BWE) operations, in compliance with the Canadian Shipping Act, Ballast Water Control and Management Regulations before it entered Canadian waters. All the 23 crew members on board were rescued safely by the United States Coast Guard (USCG) using helicopters. There was no pollution as a result of the incident. Mitsui O.S.K. Line, the operator of CA, arranged for salvage operations. The USCG set up a Unified Command to co-ordinate the salvage operations. On 2 August 2006, tug **Sea Victory** began towing the listed CA towards the Bering Sea in Alaska. On 8 August 2006, CA arrived at Unalaska Island's Wide Bay and was secured to a mooring buoy where she was brought fully upright.

Sequence of events

2 CA departed Yokohama on 19 July 2006. The crew had not encountered any problem in the ballast water pump and piping system after leaving the dry-dock and calling at several ports. The Chief Officer planned for the ballast water exchange as summarized below:

S/N	**Date**	**WBT (Remarks)**
1	21 Jul 06 (GMT +1200)	No.2 Centre (Deballast, then ballast)
2	22 Jul 06 (GMT +1200)	No.1 Centre and Aft Peak Tank (Deballast, then ballast)
3	23 Jul 06 (GMT +1200)	No.3 Port and Starboard; and No.5 Port and Starboard (Deballast simultaneously until halfway and stop)
4	24 Jul 06 (GMT +1200)	No.3 Port and Starboard; and No.5 Port and Starboard (Deballast remaining then ballast by gravity)
5	24 Jul 06 (After retardation of 1 day)	No.3 Port and Starboard; and No.5 Port and Starboard (Ballast by pump)
6	25 Jul 06	No.4 Port and Starboard (Deballast, then ballast)

3 According to the Master, the Chief Officer informed him that, in the worst case scenario i.e. if four tanks, Nos. 5P&S and 3P&S, were to be deballasted together till they were empty, the GM would be 0.5 metre positive. The Master had advised him to conduct the ballast exchange of the ballast tanks one pair at a time. On 21, 22 and 23 July 2006, the deballasting and ballasting operations went as planned. However, the ballast order book records revealed that No. 4S tank was deballasted twice for about 80 minutes on 23 July 2006 in order to correct the list.

4 On 24 July 2006, Nos. 3P&S tanks were deballasted till they were empty and then deballasting of Nos. 5P&S tanks commenced. Towards the evening, No. 4P tank was also deballasted to bring the vessel to an upright position. When the vessel was upright, the Chief Officer instructed to stop deballasting No. 4P tank and continue deballasting No. 5S. At about the same time, the vessel started to list to port and within minutes was almost lying on its portside with about 80° list.

5 The following day, at about 1730 hrs, 3 helicopters came and winched the crew onboard. All the 23 crew members arrived safely at the shore base 'Capt Pat Kelly Air Terminal' in Alaska, at about midnight local time.

Findings

6 The investigation revealed that the sequential exchange of water ballast would result in the ship having 4 of its 9 water ballast tanks empty. This, together with additional water ballast being pumped out for the adjustment of list, and the consumption of fuel from the ship's double bottom tanks, resulted in the ship becoming unstable and developing an angle of loll to the port side of about 80°.

7 The investigation revealed the following inadequacies in the ship's ballast water exchange (BWE) operations:

.1 there was improper planning and execution of BWE operations, leading to insufficient weights being present in the water ballast tanks below the ship's waterline;

.2 the officer-in-charge of the BWE operations, failed to ensure that the ship's stability was to be maintained throughout the operations; and

.3 the shipboard procedures concerning BWE operations did not have sufficient safety guidelines or procedures specific to the CA **Cougar Ace** on the safe operations of the BWE operations in accordance with the recommendations of IMO. Considering the potential consequence of vessel capsizing, such instructions should be such as to be clearly understood and complied with by the Master, Chief Officer and persons involved in the BWE operations.

Follow-up actions

8 MPA has issued a Shipping Circular (SC No 3 of 2007 dated 26 January 2007) advising Singapore-flag ships to comply with resolution A.868(20), supplemented by MEPC.124(53). The circular is attached as appendix.
(http://www.mpa.gov.sg/circulars_and_notices/shipping_circulars/sc07-03.htm)

9 We have informed the vessel's owners to provide guidance to the ship's staff on the stability criteria to be maintained at various stages of ballast water exchange operations and the Ballast Water Exchange Management Plan should contain stability details specific to the ship. Every officer in charge of BWE serving on a particular ship would therefore carry out BWE operations in accordance with the plan(s) in which the stability calculations have been fully worked out and endorsed.

10 We have also informed the owners to systematically establish and assign the tasks involved in ballast water exchange operations to qualified shipboard personnel, and such tasks, roles and responsibilities of the assigned shipboard personnel should be clearly defined and documented in the vessel's Safety Management System (SMS), within the context of ballast water exchange operations, or in any shipboard manual/documentation fulfilling the same function.

Recommendations

11 Going forward, IMO could consider promulgating an MSC circular to remind ships to comply with the minimal stability criteria stated in the Intact Stability Code and for guidance. This circular could complement resolution A.868(20) and also could be based on resolution MEPC.124(53) on Guidelines for Ballast Water Exchange (G6), developed by the Ballast Water Working Group as guidelines under the Ballast Water Management (BWM) Convention.

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APPENDIX

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PRECAUTIONARY ADVICE TO MASTERS WHEN CONDUCTING BALLAST WATER EXCHANGE OPERATIONS

Applicable to: Shipowners, shipmanagers, ship operators, shipmasters of Singapore ships and the shipping community:

1 At times, ships are required to conduct ballast water exchange (BWE) operations. Such BWE operations can be safely carried out when they are properly conducted and in compliance with minimal stability criteria stated in the Intact Stability Code.

2 The International Maritime Organization (IMO) has sent out a circular, MSC/Circ.1145 dated 13 December 2004, giving precautionary advice to masters regarding the conduct of BWE operations. Entitled 'Precautionary Advice to Masters when undertaking Ballast Water Exchange Operations', the details are attached as **Annex 1**.

3 The IMO had also developed Guidelines for Ballast Water Exchange (G6) under the Ballast Water Management (BWM) Convention. Although the Convention has yet to come into force, the guidelines are useful and should be complied with when conducting BWE operations. The details are attached in **Annex 2** and entitled Guidelines for Ballast Water Exchange (G6).

4 Shipowners, managers and operators are requested to take note and bring the contents of this circular to the attention of their masters and crew. Any queries regarding this circular should be addressed to Capt Sanjay Varma (Tel: 6375 6209) or Capt Mohd Harun Jaaffar (Tel: 63756256).

5 This circular supersedes Shipping Circular 3 of 2005 dated 19 Jan 2005.

KHONG SHEN PING
DIRECTOR OF MARINE
MARITIME AND PORT AUTHORITY OF SINGAPORE