

Subject :

Means for Rapid and Safe Recovery of
Rescue Boats of Hong Kong Registered Ships

NKTECHNICAL INFORMATION

No. : 207

Date : 21st February 1997

To Shipowners and Shipyards concerned,

The Hong Kong Government has specified the requirements for means for rapid and safe recovery of a lifeboat which is also a rescue boat (hereinafter referred to as a "rescue boat".) on board Hong Kong registered ships.

In this respect, the Society has developed the instructions for tests and inspections for relevant equipment based on the requirements of the Government, and has decided to apply them immediately. Any application for such tests and inspections should be submitted to one of the nearest surveying office of the Society.

For information and/or possible actions, the requirements of the Government and the instructions of the Society are shown below :

1. Requirements

1.1 Technical Requirements

- (1) "Except in the case where a rescue boat is fitted with a single point suspension, every rescue boat shall be provided with a means for facilitating the attachment of the lower fall blocks to the lifting arrangements of the boat when the boat is recovered from the sea in adverse weather conditions. For this purpose a recovery strop of adequate strength and suitable length shall be provided for each davit, and one end of the strop shall be attached to the lower fall block and the other end to the lifting arrangement on the boat. In addition, means (for hanging off pendants etc.) shall be provided for hanging off the boat after hoisting to enable the lower fall block to be attached directly to the lifting hook."
(Extract from Hong Kong Merchant Shipping (Safety) (Lifesaving Appliances) (Ships Built On or After 1 July 1986) Regulations 1991). An example of the means complying with these requirements is attached hereto.

ClassNK NIPPON KAIJI KYOKAI
4-7, KIOI-CHO, CHIYODA-KU,
TOKYO 102, JAPAN.

TELEX : 22975 CLASSNKJ
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CABLE : CLASSNK TOKYO

- (2) Rescue boats need not be fitted with special recovery arrangements if a chain or wire of adequate strength and flexibility is fitted between the lower fall block and the attachment to the lifting hooks. For this purpose the length of the chain or wire, including the link for attachment to the lifting hook, should be at least 1.25 meters.
- (3) Where the recovery arrangements entail disembarkation at a deck other than the embarkation deck, bowing arrangements should be provided for both decks.
- (4) The strength of recovery strops, hanging off pendants and davit structure should be in accordance with the following. A "working load" referred to should be the "weight of the rescue boat, equipment and provisions plus one ton".
 - (a) Recovery strops (which may be of nylon or other suitable materials accepted) and hanging off pendants should have a factor of safety of at least 6 based on the breaking strength of the strop and of the pendant respectively.
 - (b) Hanging off pendant lugs on the davits should be designed with a factor of safety of at least 4.5 based on the ultimate tensile strength of the material. The davit structures should maintain the factor of safety of 4.5 when hanging off the working load with the ship trimmed up to 10 degrees and listed up to 20 degrees either way.

1.2 Application

All ships constructed on and after 1 July 1986 should comply with the requirements of 1.1 above. Ships of which building contracts have already been made or which are in service should comply with the requirements by the dates of next periodical safety equipment surveys.

2. Instructions for Tests and Inspections

2.1 Plan/Document Review

Prior to the tests and inspections of the equipment, the following plans/documents should be reviewed by Material and Equipment Department. Accordingly, those who wish the Society to test and inspect the respective equipment should submit the following plans/documents in three copies :

- (a) General arrangements for means for rapid and safe recovery, including recovery strops, hanging off pendants, hanging off pendant lugs on davits and auxiliary lifting lugs of rescue boats

- (b) Materials of hanging off pendant lugs on davits, and welding details of the lugs to the davits
- (c) Materials and strength calculations of recovery strops and hanging off pendants
- (d) Materials and strength calculations of auxiliary lifting lugs of rescue boats

2.2 Tests and Inspections

- (1) The equipment should be subjected to the following tests and inspections in accordance with the plans/documents approved at the respective manufacturers in the presence of the Surveyor :

- (a) Recovery Strops and Hanging Off Pendants

Each recovery strop and hanging off pendant should be subjected to a load test at " $2.2 \times \text{working load} / 2$ " with satisfactory results.

- (b) Hanging Off Pendant Lugs of Davits

Each lug should be subjected to a load test at " $2.2 \times \text{working load} / 2$ " with satisfactory results. For ships in service, such a test may be conducted on board ships.

- (c) Auxiliary Lifting Lugs of Rescue Boats

Each auxiliary lifting lug should be subjected to a load test at " $2.5 \times \text{working load} / 2$ " with satisfactory results.

For ships in service of which rescue boats are retroactively fitted with an auxiliary lifting lug, the auxiliary lifting lug after being fitted should be subjected to a load test at " $1.1 \times \text{weight of the lifeboat, equipment and provision plus full complement of persons as the lifeboat} / 2$ " with satisfactory result.

- (2) Subsequent to the tests and inspections at the manufacturers, the equipment being installed on board ship should be subjected to further tests and inspections in the presence of the Surveyor on board to ascertain :

- (a) operations and functions of the means for rapid and safe recovery
 - (b) that the recovery strops, hanging off pendants and davits are subjected to the tests and inspections required under 2.2(1) at the manufacturers
 - (c) that operating instructions for the means for rapid and safe recovery are posted on or in the vicinity of the rescue boat launching and recovery stations.
 - (d) that training manuals and instructions for on-board maintenance are added/corrected as appropriate.

Attachment : An Example of the Means for Rapid and Safe Recovery of Rescue Boats

Department in Charge : Material and Equipment Department

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VOID

RECOVERY OF RESCUE BOAT USING RECOVERY STROPS

POSITION 1

- 1.1) Manoeuvre boat under falls, recovery strop will hang down from main suspension link.
- 1.2) Fit recovery strop link into boat suspension gear, signal deck operator to hoist.

POSITION 2

- 2.1) Deck operator to release hanging off pendants attached to davit arms so that they hang freely.
- 2.2) Boat to be hoisted to a position where boat crew can attach hanging off pendants to the auxiliary lifting lugs on the boat suspension gear. (Do not overhoist to a point where the davit arms start to turn in).

POSITION 3

- 3.1) Deck operator to raise brake lever on winch and lower boat slowly until the full weight is taken by the hanging off pendants.

POSITION 4

- 4.1) Disengage recovery stropps from boat lifting hooks.
- 4.2) Pay out falls at winch until it is possible to re-engage main suspension link.

POSITION 5

- 5.1) Hoist boat until it is possible to remove hanging off pendants from auxiliary lifting lugs.
- 5.2) Continue to hoist boat normally and stow.

N.B Ensure that hanging off pendant is secured to davit arm and the recovery stropps are stowed on the boat so as not to impede release of the boat during the next launch.

ENSURE BLOCK DOES NOT COME INTO
CONTACT WITH STOP WHILST HOISTING
ON RECOVERY STROPS

POSITION 2

- 2.1) DECK OPERATORS TO RELEASE HANGING OFF
PENDANTS SO THEY HANG FREE
- 2.2) HOIST BOAT TO A POSITION WHERE HANGING
OFF PENDANTS CAN BE ATTACHED TO
AUXILLARY LIFTING LUG ON BOAT
SUSPENSION GEAR.

MAIN SUSPENSION GEAR

AUXILLARY LIFTING LUG

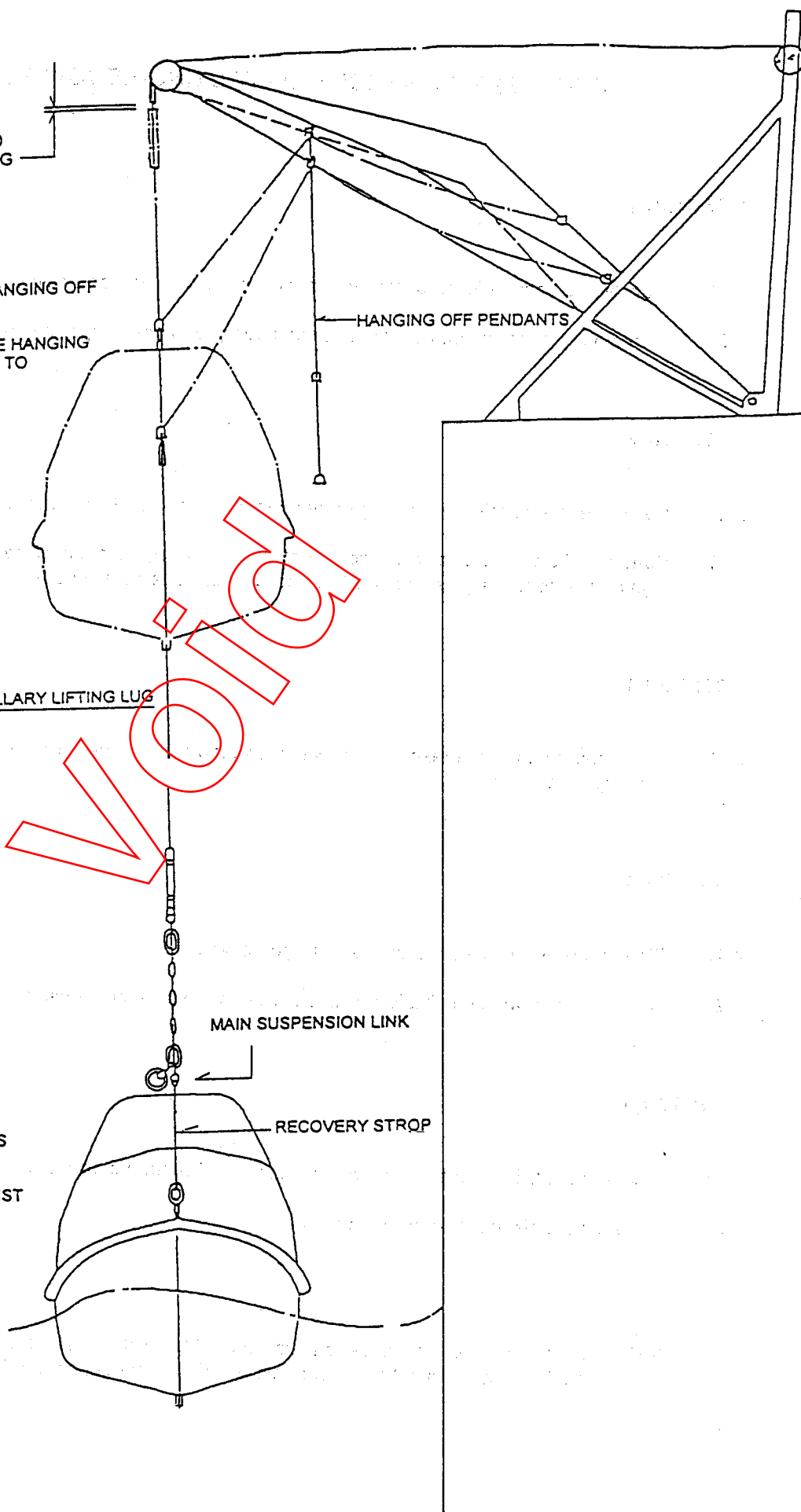
HANGING OFF PENDANTS

MAIN SUSPENSION LINK

POSITION 1

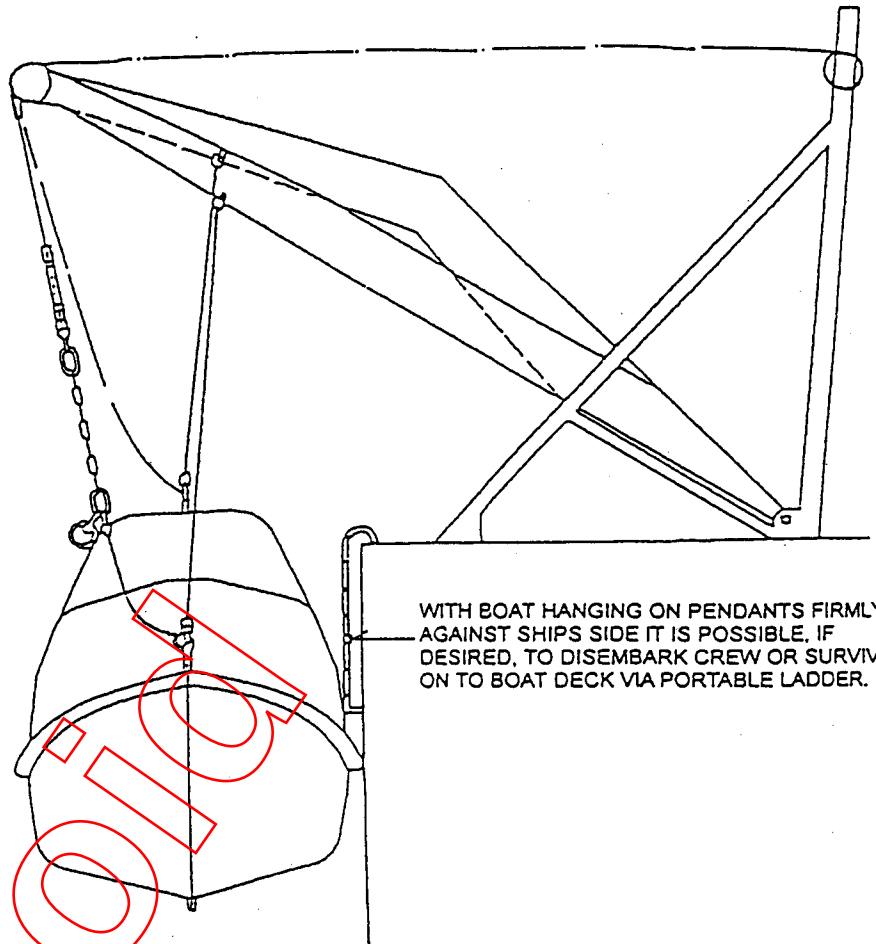
- 1.1) MANOEUVRE BOAT UNDER FALLS
- 1.2) FIT RECOVERY STROP LINK
INTO BOAT SUSPENSION GEAR
SIGNAL DECK OPERATOR TO HOIST

RECOVERY STROP



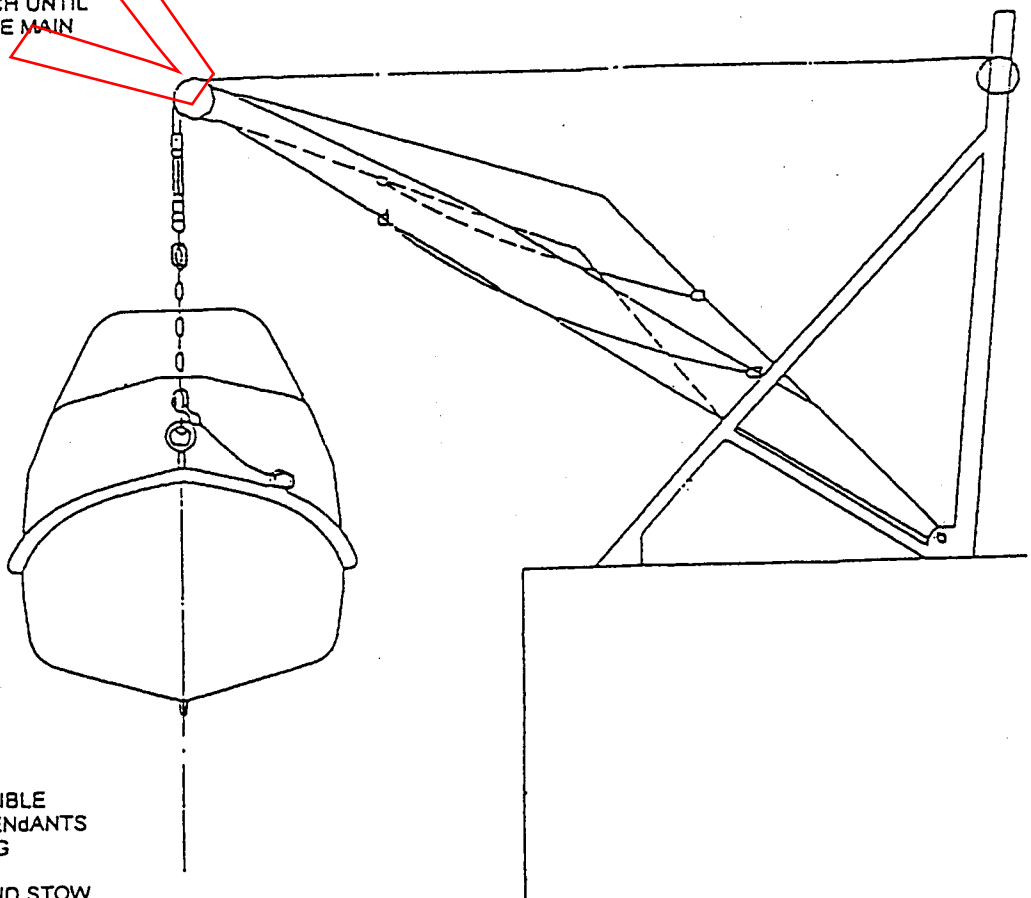
POSITION 3

- 3.1) DECK OPERATOR TO LOWER BOAT UNTIL IT HANGS FULLY ON HANGING OFF PENDANTS.



POSITION 4

- 4.1) DISENGAGE RECOVERY STROPS FROM BOAT LIFTING HOOKS
4.2) PAY OUT MAIN FALLS AT WINCH UNTIL IT IS POSSIBLE TO RE-ENGAGE MAIN SUSPENSION LINK



POSITION 5

- 5.1) HOIST BOAT UNTIL IT IS POSSIBLE TO REMOVE HANGING OFF PENDANTS FROM AUXILIARY LIFTING LUG
5.2) CONTINUE TO HOIST BOAT AND STOW NORMALLY