#### AMPEK 8

# RESOLUTION MEPC. 3(XII)

# RECOMMENDATION ON THE STANDARD FORMAT OF THE CRUDE OIL WASHING OPERATIONS AND EQUIPMENT MANUAL

## Adopted on 30 November 1979

#### THE MARINE ENVIRONMENT PROTECTION COMMITTEE.

NOTING Resolution A.297(VIII) by which the Assembly designated the Committee as the appropriate body to perform such functions as are or may be conferred upon the Organization under international conventions for the prevention and control of pollution from ships,

NOTING FURTHER Regulation 13B of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 which provides that every tanker operating with crude oil washing system shall be provided with an Operations and Equipment Manual detailing the system and equipment and specifying operational procedures,

NOTING ALSO that the said Manual is not only to provide guidance to the crew of the ship for proper operation of the system, but also to provide information on the system and its operational procedures for the inspectors going on board for inspection in ports,

HAVING CONSIDERED proposals of the Member Governments for standardization of the Manual,

- 1. ADOPTS the standard format for the Crude Oil Washing Operations and Equipment Manual appearing in the Annex hereto,
- 2. INVITES the Member Governments:
  - (a) to use the Standard Format of the Crude Oil Washing Operations and Equipment Manual when approving the Manual as called for by Regulation 13B of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973; and
  - (b) to ensure that if the language of the Manual is neither English nor French, the Manual shall include a translation into one of these languages.

#### ANNEX

# STANDARD FORMAT OF CRUDE OIL WASHING OPERATIONS AND EQUIPMENT MANUAL

(The Standard Format consists of introduction, index and 17 sections)

#### INTRODUCTION

- 1. This Manual is written in accordance with the requirements of Regulation 13B of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973.
- 2. The purpose of this Manual is to meet the requirements for Crude Oil Washing in accordance with the Revised Specifications for the Design, Operation and Control of Crude Oil Washing Systems (INCO Assembly Resolution  $\Lambda.446/\overline{\text{XI}}$ ). It provides standard operational guidance in planning and performing a Crude Oil Washing programme and a safe procedure to be followed.
- 3. Part 1 of this Manual contains all information and operational instructions required by the Specifications. Part 2 of this Manual contains additional information and operational instructions required by the Administration.\*
- 4. This Manual has been approved by the Administration and no alteration or revision shall be made to any part of it without first advising and receiving approval of the Administration.

<sup>\*</sup> If the Administration is to require information and operational instructions in addition to those provided for by the Specifications, they should be included in Part 2 of the Manual. If no such additional information or operating instructions are required by the Administration, the Manual will consist of one part only, and paragraph 3 should read "This Manual contains all the information and operational instructions required by the Specifications".

# CRUDE OIL WASHING

# OPERATIONS AND EQUIPMENT MANUAL

			Relevant
	INDEX OF SECTIONS	PAGE	<pre>paragraph(s) of the Revised</pre>
			Specifications
1.	Text of the Specifications		(7.1)
2.	Drawings of the crude oil washing system		(7.2)
3.	Description of the crude oil washing system and operational and equipment parameters		(7.3, 7.4(viii) and 7.6)
4.	The dangers and precautions against oil leakage		(7.5)
5.	Use and control of inert gas		(6.6)
6.	Precautions against electrostatic hazards		(6.7)
7.	Personnel requirements		(7.7)
8.	Nethods of communication		(7.0)
9.	List of crude oils unsuitable for crude oil washing		(7.12)
10.	Crude oil washing checklists		(7.10)
11.	Approved methods and programes for crude oil washing		(7.4(i))
12.	Typical crude oil washing programmes		(7·4(v))
13.	The method of draining cargo tanks		(7.4(iii))
14.	The method and procedures of draining cargo pumps and lines		(7.4(iv & vi))
15.	Typical procedures for ballasting and the nethod of preventing hydrocarbon emission		(7.4(ii), 7.9)
16.	Compliance procedures for Regulation 9 of Annex 1 to MARPOL 1973		(7.4(vi, vii & ix))
17.	Inspection and Maintenance of equipment		(7.11)

### SECTION 1. TEXT OF THE SPECIFICATIONS

This Section contains the complete text of the Revised Specifications for the Design, Operation and Control of Crude Oil Washing Systems and the agreed interpretations of certain of the Provisions of the Specifications (INCO Assembly Resolution  $\Lambda_0446$  (KI)).

### SECTION 2. DRAWINGS OF THE CRUDE OIL WASHING SYSTEM

This Section contains line drawing(s) of,

- (1) crude oil washing lines and valves,
- (2) cargo pumps, lines and valves,
- (3) ballast systems (where fitted)
- (4) stripping systems,
- (5) position of tank washing machines,
- (6) position of holes for handdipping and tank gauges,
- (7) inort gas deck distribution system.

# SECTION 3. DESCRIPTION OF THE GRUDE OIL WASHING SYSTEMS AND OPERATIONAL AND EQUIPMENT PARAMETERS

This Section contains a description of the cargo, ballast, washing and stripping system and in addition specifies,

- (1) the type of tank washing machine and its length inside the tank,
- (2) the revolution of the machines.
- (3) the methods of checking the operation of the tank washing machines,
- (4) the minimum operation pressure for crude oil washing,
- (5) the maximum permitted oxygen level in the cargo tanks,
- (6) the duration of tank washing machine cycles,
- (7) the results of the tests performed in accordance with paragraph 4.2.10(ii) of the Specifications and the method of computation,
- (8) the method of preventing entry of oil into the engineroom.

## SECTION 4. THE DANGERS AND PRECAUTIONS AGAINST OIL LEAKAGE

This Section contains information on the dangers of leakage from the crude oil washing system and the precautions necessary to prevent leakage and the action to be taken in the event of leakage.

# SECTION 5. USE AND CONTROL OF INERT GAS

This Section contains information on the inert gas requirements and the instructions to cover those periods when the inert gas pressure is released for reasons of cargo operation. In addition it should contain the method and procedures to be used for taking samples of the tank atmosphere.

# SECTION 6. PRECAUTIONS AGAINST ELECTROSTATIC HAZARDS

This Section contains the procedures for minimising electrostatic generation.

## SECTION 7. PERSONNEL REQUIREMENTS

This Section contains the numbers of persons to be associated with the crude oil washing process and their necessary qualification. Their names and rank may be provided on separate documents.

# SECTION 8. METHODS OF COMMUNICATION

This Section gives the details of communication between the watchkeeper on deck and the cargo control position so that in the event of a leak or malfunctioning of the crude oil washing system the washing may be stopped as soon as possible.

# SECTION 9. LIST OF CRUDE CILS UNSUITABLE FOR CRUDE OIL WASHING

This Section contains a list of crude oils unsuitable for crude oil washing.

### SECTION 10. CRUDE CIL WASHING CHECKLISTS

This Section contains operational checklists for the use of the crew at each discharge which shall include the checking and calibration of all instruments.

#### SECTION 11. APPROVED METHODS AND PROGRAMMES FOR CRUDE OIL WASHING

This Section contains those details which form the basis of crude oil washing in the tanker and which are necessary to formulate a washing programme which will accord with all foreseeable circumstances of cargo discharge restraints. It includes information on.

- (1) the minimum number of tanks to be washed in accordance with paragraph 6.1 of the Specifications,
- (2) the nethod of washing each tank, either single or multistage,

- (3) the number of tankwashing machines to be used simultaneously.
- (4) the crude oil washing pressure and means to maintain the required pressure,
- (5) the duration of the crude oil wash,
- (6) the preferred order in which tanks are to be washed.
- (7) the minimum trim during completion of washing and draining tanks,
- (8) when draining and stripping of tanks is to commence.

# SECTION 12. TYPICAL CRUDE OIL WASHING PROGRAMMES

This Section contains some typical washing programmes under various conditions of discharge such as single or multiport discharge and single and multigrade cargoes.

## SECTION 13. THE METHOD OF DRAINING CARGO TANKS

This Section contains the method of draining cargo tanks and should include the parameters which indicate when the tank is dry and which will be at least all of those required by Section 4.4.8 of the Specifications. The minimum trim conditions must be stated.

### SECTION 14. THE METHOD AND PROCEDURES OF DRAINING CARGO PUMPS AND LINES

This Section contains the method and procedures for draining cargo pumps, cargo lines, crude oil washing lines and stripping lines and will include information on the use of the small diameter line.

# SECTION 15. TYPICAL PROCEDURES FOR BALLASTING AND THE METHOD OF PREVENTING HYDROCARBON EMISSION

This Section contains typical procedures for ballasting and shall include:

- (1) the procedure for draining and stripping before loading ballast,
- (2) the procedures for preventing hydrocarbon emission into the atmosphere.

#### SECTION 16. COMPLIANCE PROCEDURES FOR REGULATION 9 OF ANNEX 1 TO MARPOL 1973

This Section contains information and procedures for water washing tanks and lines, discharge of departure ballast and the decanting of slops at sea to ensure compliance with Regulation 9.

# SECTION 17 INSPECTIONS AND MAINTENANCE OF EQUIPMENT

This Section contains information on procedures to be followed at recommended intervals for on-board inspections and maintenance of crude oil washing equipment.