API Manual of Petroleum Measurement Standards
Chapter 17.12

EI Hydrocarbon Management
HM 51

Procedures for bulk liquid chemical cargo inspections

2nd edition, August 2015

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PROCEDURES FOR BULK LIQUID CHEMICAL CARGO INSPECTIONS

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FOREWORD

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1 SCOPE

1.1 GENERAL

This document provides cargo measurement procedures for use primarily by inspectors and specifies procedures directed at minimising cargo contamination and losses. In the absence of, or in conjunction with, specific instructions from principal(s), this document should be considered a summary of good practice used within the industry.

Where the term 'measurement' is used in a general sense, it should be taken to include all aspects of cargo inspection including (but not limited to) tank inspection, sampling, laboratory analysis and testing and other superintending activities, as required by the inspector's principals.

The points at which inspectors are required to make their measurements are described and definitions of the terms used throughout this document are provided in section 3. Where possible terms approved by API, EI and ISO/TC28 have been adopted.

The document also considers the purpose of a cargo survey and summarises the responsibilities of those involved. These procedures may become contractual if reference to them is made in either a nomination or acknowledgement.

Safety matters and related responsibilities are defined and emphasis is placed on the need for inspectors to be continually conscious that safety requirements take precedence over all other considerations.

The document describes the procedures which inspectors should follow and provides references to analytical test methods and calculations. Reference is made to alternative methods since it is recognised that opinions may vary regarding the use of test methods, and that different methods may be specified by the parties involved.

1.2 MEASUREMENT STAGES

When a cargo is transported by vessel from one shore terminal to another, measurements are normally made at four locations, as shown in Figure 1 for the purpose of establishing:

(a) the quantity of cargo delivered (i.e. to confirm the quantity of cargo shown on the Bill of Lading);

(b) the quantity of cargo loaded by the vessel;

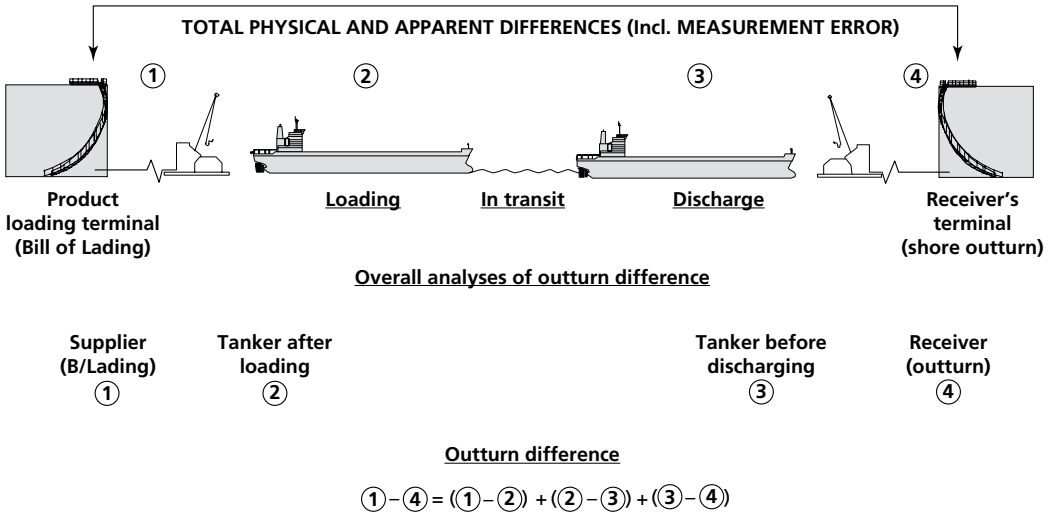
(c) the quantity of cargo discharged by the vessel;

(d) the quantity of cargo received by the receiving terminal, and

(e) the difference between the quantities established under (a) to (d) above.

Note: for a particular voyage involving more than one loading port or discharge port, measurements should be made at all such additional ports in order that a reliable comparison can be made between the quantities shown on the Bill of Lading, the cumulative outturn and ship's figures.

Note 2: For ship to ship (STS) transfer operations please refer to Annex D.



Shore to shore difference, (4-1) = (2-1) + (3-2) + (4-3)
Note: by convention, losses have a negative sign

Figure 1: Marine transfer measurement points

1.3 QUALITY CONTROL

It is recognised that contamination may occur during the various transfer and transportation stages of cargo movement.

Procedures and recommendations for a testing schedule are given which can help to minimise such contamination risk.

1.4 SUMMARY OF DATA TO BE REPORTED

Due to the reporting requirements of each cargo inspection company and their clients (principals), specific reporting formats are not recommended in this document. However, a listing of the typical information sufficient to define a cargo loading or discharge operation is provided in section 4. This listing represents a consensus of a number of cargo inspection companies and their principals. The detailed format of these forms should be agreed with principals when contracts are being arranged.