

Vessels on Terminals - Cleaning of Tanks

Procedure

This Standard replaces and cancels its previous revision.

The CONTEC - Authoring Subcommittee provides guidance on the interpretation of this Standard when questions arise regarding its contents. The Department of PETROBRAS that uses this Standard is responsible for adopting and applying the sections, subsections and enumerates thereof.

Technical Requirement: A provision established as the most adequate and which shall be used strictly in accordance with this Standard. If a decision is taken not to follow the requirement ("non-conformity" to this Standard) it shall be based on well-founded economic and management reasons, and be approved and registered by the Department of PETROBRAS that uses this Standard. It is characterized by imperative nature.

Recommended Practice: A provision that may be adopted under the conditions of this Standard, but which admits (and draws attention to) the possibility of there being a more adequate alternative (not written in this Standard) to the particular application. The alternative adopted shall be approved and registered by the Department of PETROBRAS that uses this Standard. It is characterized by verbs of a nonmandatory nature. It is indicated by the expression: **[Recommended Practice]**.

Copies of the registered "non-conformities" to this Standard that may contribute to the improvement thereof shall be submitted to the CONTEC - Authoring Subcommittee.

Proposed revisions to this Standard shall be submitted to the CONTEC - Authoring Subcommittee, indicating the alphanumeric identification and revision of the Standard, the section, subsection and enumerate to be revised, the proposed text, and technical/economic justification for revision. The proposals are evaluated during the work for alteration of this Standard.

"This Standard is exclusive property of Petróleo Brasileiro S. A. - PETROBRAS, internal application and PETROBRAS Subsidiaries and shall be used by its suppliers of goods and services under contracts or similar under the conditions established in Bidding, Contract, Agreement or similar.

The use of this Standard by other companies / organizations / government agencies and individuals is the sole responsibility of the users.."

CONTEC

Comissão de Normalização
Técnica

SC - 40

Maritime Transportation of
Petroleum, Derivatives, and
Bio-Fuels

Introduction

PETROBRAS Technical Standards are prepared by Working Groups - WG (consisting specialized of Technical Collaborators from Company and its Subsidiaries), are commented by Company Units and its Subsidiaries, are approved by the Authoring Subcommittees - SCs (consisting of technicians from the same specialty, representing the various Company Units and its Subsidiaries), and ratified by the Executive Nucleus (consisting of representatives of the Company Units and its Subsidiaries). A PETROBRAS Technical Standard is subject to revision at any time by its Authoring Subcommittee and shall be reviewed every 5 years to be revalidated, revised or cancelled. PETROBRAS Technical Standards are prepared in accordance with PETROBRAS Technical Standard [N-1](#). For complete information about PETROBRAS Technical Standards see PETROBRAS Technical Standards Catalog.

Foreword

This Standard is the English version (issued in 05/2016) of PETROBRAS N-2673 REV. C 05/2016. In case of doubt, the Portuguese version, which is the valid document for all intents and purposes, shall be used.

1 Scope

11.1 This Standard establishes procedures for the cleaning of load tanks on tankers, taking into account the product to be transported in respect to the last one off-loaded.

1.2 This Standard applies to both owned and chartered ships.

1.3 This Standard does not apply to gas tankers and chemical tankers, except for the latter, when transporting ethanol and oil derivatives.

1.4 This Standard applies to procedures initiated as of its date of issuance.

1.5 This Standard contains Technical Requirements and Recommended Practices.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies.

IMO - [MARPOL 73/78](#) - Convenção Internacional para a Prevenção da Poluição por Navios;

OCIMF - International Safety Guide for Oil Tanker and Terminals (ISGOTT);

CT COMB 015/14 CENPES/PDAB/COMB - Avaliação do Impacto na Qualidade dos Produtos Transportados por Barcaças.

NOTE For documents referred in this Standard and for which only the Portuguese version is available, the PETROBRAS department that uses this Standard should be consulted for any information required for the specific application.

3 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1

freshening

additional pouring with fresh water to remove salinity from inside the tank

3.2

pouring

operation which consists in washing with water the ship's tank, using fixed or portable cleaning machines

3.3**COW ("Crude Oil Washing")**

operation which consists in washing load tanks with crude oil

3.4**drainage and removal of residue**

operation which consists in removing solid and liquid built-up residue on the bottom of tanks, lines and pumps

3.5**Aromatic Residue (RARO)**

product obtained on the bottom of the catalytic cracking unit's splitter tower, with high aromatics content. It is also called "carbon black" or "feed stock"

3.6**Atmospheric Residue (RAT)**

product performed by the oil fractions which arise from the process of atmospheric distillation at temperatures higher than 420 °C

3.7**drying**

operation which consists in the removal of remaining water or product by forced or natural ventilation/exhaustion

3.8**ragging**

operation which consists in the removal of remaining water or product using rags, tow, recyclable industrial towels or similar ones

4 General Conditions

4.1 When scheduling for transport, compatibility of the scheduled cargo with the tank coating, the materials of pumps, grids, valves, coils and elastomers shall be checked.

4.2 During cleaning of tanks, all safety procedures shall follow the OCIMF - International Safety Guide for Oil Tanker and Terminals (ISGOTT).

4.3 In order to dispose of water used in the cleaning of tanks, the rules of Annex I on [MARPOL 73/78](#) and its respective amendments shall be adhered to.

5 Cleaning of Tanks

5.1 The cleaning procedures required to ensure the quality of products are listed on Tables A.1 and A.2 of Annex A.

5.2 The number of operating cycles of the machines shall be enough to ensure that the load tanks are ready to receive the scheduled load.