

PART III

GOOD PRACTICES GUIDE

Partie III - Guide pour le transport du vin en vrac

GOOD PRACTICES GUIDE FOR BULK WINE TRANSPORTATION

1. USE OF THE GUIDE

This Guide of Good Practices has been developed by the International Wine Office (OIV) and adopted by its members States during its 80th General Assembly, the 23rd of June 2000.¹⁴ It incorporates procedures to which Suppliers and Purchasers on the one hand and Freight Forwarders and Ship Owners on the other, should refer when negotiating contracts concerning bulk wine transport operations.

The Guide is advisory in nature, but all the practices proposed, subject to their conformity with the applicable regulations in the various regions concerned, are in actual and successful use. With proper application, they contribute to the quality of the wine during transit and to guaranteeing its authenticity.

2. SCOPE

The Guide of Good Practices applies to the handling of wine (both table wine and quality wine) in bulk. It contains the minimum requirements to ensure acceptable cleanliness and freedom from any defect or contaminant which could adversely affect the characteristics or quality of the wine being carried, including its authenticity

3. INTRODUCTION

3.1 GENERAL

¹⁴ The OIV acknowledges with gratitude that this Guide is based to a large extent on "A Guide of Practice Relating to the Transportation of Wines, Spirits and Concentrated Grape Must in Bulk", published by the Wine and Spirit Association of Great Britain and Northern Ireland in 1994.

Two types of alteration can occur in wine during the operations dealt with in this Guide; oxidation and contamination. The susceptibility of wine to alteration depends upon several factors including the type and characteristics of wine under consideration. These should be considered when transporting the wine.

3.1.1 Oxidation

Contact of wine with oxygen, present in the atmosphere, causes chemical changes in the wine which change its quality. Much can therefore be gained by limiting to a maximum the amount of air contact with the wine and this principle is the basis of several of the recommendations in this Guide. Oxidation proceeds more rapidly as temperature increases, so each operation should be carried out at the lowest practicable temperature but without stimulating tartrate precipitation where either the supplier or the purchaser wants to avoid it. In any case, it is worth noting that oxygen is more soluble in wine at low temperature than at higher temperature. The rate of oxidation may be increased by the catalytic action of certain metals, even when trace amounts are present. Because of this, great care should be taken in the selection of materials which come into contact with the wine during transport.

3.1.2 Contamination

Undesirable contamination may be chemical, physical or microbiological in nature. It may arise from residues of a previous material handled in the equipment, from ingress of dirt, rain or seawater or through the deliberate or accidental addition of a different product. In ships, particular difficulty may be experienced ensuring cleanliness of valves and pipelines, especially where they are common for different tanks. Contamination is avoided by good design of the systems, adequate and strict cleaning routines and an effective inspection and sampling service, and the rejection of tanks which have carried unsuitable previous cargoes.

3.2 DEFINITIONS

3.2.1 Supplier

The company or companies from whose cellars the wine is to be collected for shipment.

3.2.2 Purchaser

The Party that has placed a contract for the wine to be collected from the Supplier and transported.

3.2.3 Ship Owner/Agent/Freight Forwarder

The Party that has been contracted to transport the wine, whether this be Ship Owner, Agent, tankcontainer/roadtanker operator or a commissioner of transport

3.2.4 Acceptable cleanliness

For tanks, pipelines, and all ancillary equipment, including pumps with which the wine comes into contact, a state of Acceptable Cleanliness is defined, after cleaning and disinfection, as follows:

- All items shall be free from taint or perceptible odor.
- No traces of solvents or debris shall remain.
- No traces of previous cargoes shall remain.
- No traces of detergents or sanitising agents shall remain.
- Equipment must be disinfected and rinsed before use, according to the use of the equipment and the nature of the wine.

3.2.5 Conditions of use

Tanks, containers and all ancillary equipment must be in excellent condition, physically and mechanically, and fit for the purpose intended. It should be noted that alcoholic beverages may be classified under IMO and or ADR as flammable cargoes and that tanks carrying such substances should comply with appropriate construction criteria for transport.

3.2.6 Washing

Cleaning must be conducted by a pressure spray system using a rotating head, or by a system of equivalent efficacy. Water and cleaning agents should be used. The water used for all rinsing operations of surfaces in contact with wine must be clean and free from microbial or other contamination, and without residues of organic or inorganic disinfectants, whether oxidative or not (Cl₂, O₃, ...). It must also have a low content of calcium and iron.

4. TRANSPORTATION

4.1 CONSTRUCTION OF TANKS AND ANCILLARY EQUIPMENT

4.1.1 General

All materials used in the construction of tanks and of ancillary equipment, such as hoses, hose connections, pipelines, seals and gaskets, valves, strainers, pumps, temperature gauges or sampling apparatus, should be inert to wine, and should meet any appropriate legislation concerning materials in contact with food.

Copper and its alloys, such as brass, bronze or gun metal, should not be used in the tanks or ancillary equipment of a ship or road/rail tanker that are designed for the transport of wine. Temperature gauges containing mercury should not be used. Glass equipment and glass sample bottles should be avoided where breakage might lead to contamination.

4.1.2 Tanks

All tanks, pumps and fittings should be constructed of stainless steel, of polished AISI 304 or 316 (EN58J) quality or equivalent rating. Where existing vessels with tanks constructed of materials other than AISI 304 or 316 stainless steel are required to be used, the Purchaser must be informed and his approval to use the vessel obtained in writing in advance. In this event, the Purchaser should notify the Supplier or Agent that approval has been given for the vessel to be loaded subject to the condition of the vessel being acceptable immediately prior to loading.

In all cases, tanks should be fitted with a bottom outlet valve capable of being connected to the pumps to assist cleaning and sanitising procedures, to ensure complete drainage, and to allow bottom loading and discharge of the wine. This is an essential requirement for tankcontainers and roadtankers.

Ideally, ships' tanks should each be fitted with an independent pump which should be reversible to allow wine to be loaded and discharged via a bottom outlet valve. Pumps must be capable of

being cleaned, sanitised and inspected as described in Sections 6.2 and 5.1, respectively.

Internal fittings within the tank should be kept to a minimum and should be constructed of the approved grade of stainless steel. For roadtankers and tankcontainers, all internal fittings should be constructed of the agreed grade(s) of stainless steel (see above). Internal ladders must have fully sealed ends except in the case of the side supports of a ladder being specifically designed for use as a loading or discharge pipe. In this case the ladder rungs must be completely sealed from the loading/discharge section.

Tank doors or manways should be of sound construction and well-fitting. They should be easily accessible for steaming, washing with a pressure spray system using a rotating head or other cleaning and sanitising procedures. Sealing gaskets/washers should be detachable from the tank door or manway to allow manual cleaning and replacement at regular intervals.

It may be useful to equip each compartment of the container or tank with a cleaning-in-place system, correctly sized and positioned. However, this should be avoided if the container or tank is also used to transport viscous liquid foodstuffs. Tank closing or sealing devices should be constructed in such a way that will not allow the intake of air or liquid during a sea voyage. Where necessary, seals should be tamper evident or should comply with appropriate excise requirements.

Expansion pipes and pressure relief valves should be constructed of stainless steel and be of sound construction. They must be capable of being cleaned and sanitised and should include a non-return valve to prevent the return to the tank of the expanded liquids, with suitable provision to avoid a consequential vacuum in the tank. Particular attention must be given to the pressure in tanks during transport and discharge.

Fittings should be of a common size either 80 mm, 90 mm, 100 mm or 150 mm, preferably of the bayonet type with free jointing or male screw thread. Where non-standard fittings are in use, suitable cleaned and sanitised stainless steel adapters should be made available by the Ship Owner or Freight Forwarder.

It is strongly recommended that tanks should be insulated against temperature variations which might be reasonably anticipated in the course of transit. Where appropriate, further temperature control equipment should be fitted, to give in all cases the possibility to refrigerate the tank or the wine and to monitor temperature.

4.1.2.1 Flexible containers

The containers should be constructed from inert materials, approved for wine contact and impervious to oxygen and potential volatile contaminants (such as chloroanisoles, petroleum, fuel oil,....).

4.1.3 Hoses, pipelines and pumps

All flexible hoses used during loading and unloading must be of inert material suitable for contact with wine, be suitably reinforced and be of such a length to make cleaning easy. Couplings should be of stainless steel or other inert materials. When not in use, all flexible hoses for delivery of the wine shall be stored with the ends capped after draining and not in contact with the floor. There must be clear marking or identification systems for pipelines.

4.1.4 Precautions against unnecessary exposure to air

Pipelines and their connections should be designed to prevent the admission of air. It may be appropriate to sparge the wine with nitrogen, carbon dioxide or a mixture of nitrogen and carbon dioxide to remove oxygen during loading and unloading. Tank filling should be done wherever possible from the bottom of the tank. Where filling is done over the top of the tank, the pipe (cleaned on the inside and outside) should lead to near the

bottom to avoid cascading and thus aeration. It is preferable to purge the pipeline leading to the tank with inert gas before use. However, if air is used a suitable means must be provided to prevent it coming into contact with the wine in the tanks. It is essential that any air or inert gases used in these operations be of food quality.

Where necessary, equipment for the provision of inert gas blanketing of the wine during transport should be fitted in accordance with the appropriate construction and operating regulations or recommendations for tankcontainers.

Containers, tanks or their compartments should be fully filled so as to limit the risk of oxidation.

4.2 CARGOES CARRIED

It is preferable that tanks and containers used for bulk transport of wine should be dedicated to carrying only must, grape sugar, wine or potable spirit. Particular care should be taken with tank cleaning when the previous cargo contained aromatic spirit or other aromatic food commodity.

Other foodstuffs may be carried as previous cargo but only with express written agreement of the Purchaser. In the case of oils, fats, dairy products, animal feed or other substances that may technically be considered as foodstuffs (food-grade products for pharmaceutical use, for example) particular precautions must be applied in regard to cleaning. The precise cleaning and sanitising steps used should be adapted according to the nature of the immediate previous cargo (see section 6.2).

For ships' tanks, the Purchaser should be advised in advance in writing of the exact nature of the previous cargo carried. In some cases, Purchasers may require details of a number of the cargoes carried prior to the shipment of the Purchaser's wine where the use of common loading or discharge equipment may cause

contamination or loss of its quality. Other cargoes on the vessel at the time of loading and those planned to be handled prior to off-loading should also be identified.

For tankcontainers, the previous cargo should be noted on the cleaning certificate or certificate of intervention.

The different parties (3.2.1., 3.2.2., 3.2.3.) must be informed of any passivation that may have been performed on the tank.

It is not permissible for Freight Forwarders to use tankcontainers that have previously carried non foodstuff cargoes¹⁵

5. INSPECTION, CERTIFICATION AND SAMPLING

5.1 INSPECTION AND CERTIFICATION

5.1.1 Ships' tanks

It is imperative that an independent surveyor is employed to check all aspects of the tanks, containers and ancillary equipment. This surveyor should be trained so that he/she has a full understanding of the Guide, the Supplier's and Purchaser's written requirements and the specific requirements of the wines being transported. In addition, it is strongly recommended that a member of the Supplier's technical staff attends loadings to ensure that the surveyor is fully briefed and effective and check that the ship's crew is aware of the nature of the product being transported.

In accordance with the terms laid down in the charter party, it is the responsibility of the Ship's Master to provide (for the

¹⁵ For sea transport, seawater must in no case be used in tanks in a regular manner to ensure the stability of the vessel. Use of seawater for ballast is only permitted exceptionally because of difficult meteorological conditions. Seawater cannot be considered as a foodstuff.

shipment and discharge of wine) tanks or containers, pumps, pipelines, hoses and any other ancillary fittings which are in good repair, of satisfactory cleanliness (see section 6.2) and free from any taint or defect which could adversely affect the quality or characteristics of the Purchaser's wine.

The Purchaser, his Accredited Agent or any independent surveyor (recognized as competent in the area of international transport of foodstuffs) appointed by the Purchaser (and acceptable to both the Purchaser and Ship's Owner) should carry out an examination of all tanks, containers and other equipment to be used. A certificate of inspection (see example in Appendix 1) should be completed and signed by the Ship's Master/Chief Officer.

The certificate of inspection should contain the following information:

- The Plan of Loading
- The nature of products carried on the previous voyage (or more if requested by the Purchaser (see 4.2)).
- The nature of any additional cargoes being carried at the same time as the Purchaser's wines together with details of any discharges carried out prior to the Purchaser's destination.
- Precise details of cleaning procedures used to remove residues of previous cargoes and subsequent sanitising procedures.
- Suitability of tanks, pumps, hoses, etc., to receive the wine (i.e. freedom from damage or defect, cleaning completed satisfactorily, visual appearance acceptable, etc.).
- Guarantee of perfect segregation of the cargo.
- Additional information as required by individual Purchasers.

Any details regarding unacceptable standards in the tanks or equipment to be used should be recorded, together with the action taken by the Ship's Master/Chief Officer to rectify those standards.

The independent surveyor has the right to reject any individual tank or item of equipment which he/she considers to be in an unacceptable condition for loading the wine, giving his reasons in writing to the Ship's Master/Chief Officer, and to require the Ship's Master/Chief Officer to take the necessary steps to bring the tank or equipment up to the required standard.

Loading will not normally be permitted until the certificate of inspection has been completed and approved by the surveyor/accredited Agent. However, in the event of the majority of tanks and equipment being passed as acceptable, loading may commence into these tanks and equipment while action is being undertaken to bring the unacceptable tanks and equipment up to the required standards.

One copy of the completed certificate of inspection should be made available to each of the following:

- Ship's Master
- Surveyor
- Purchaser's Agent (if different from the Surveyor)
- Ship's Owners
- Purchaser

Copies for the Ship's Owners and the Purchaser should be dispatched by airmail or fax to be available in advance of the ship's arrival at its destination. The Ship's Owner is required to notify the Purchaser of the previous cargoes carried in the ship, preferably 5 days in advance of the ship being presented for loading.

5.1.2 Other tanks, including flexible containers

The transport operator shall not be responsible for the provision or condition of any hoses, pumps, pipelines or other ancillary equipment used for the loading and/or discharge of the goods unless previously agreed with the Supplier or Purchaser.

Certificates of cleanliness should be issued after cleaning for each tank (see Appendix 2 for an example). Presentation of these certificates may be made directly to the loading bay, or by arrangement between the Freight Forwarder and the Purchaser. Details may be notified by telex or fax and the original certificates retained on file.

Tankcontainers and roadtankers carrying alcoholic beverages classified under appropriate regulations as flammable liquids must be equipped and labeled to comply with the appropriate regulations. The consignor has a statutory duty to ensure that these regulations are complied with before dispatch of the transport unit.

5.2 SAMPLING OF THE WINE

5.2.1 Introduction

It is strongly recommended that adequate samples should be taken at each stage at which the wine is handled so that, in the event of a defect (including lack of authenticity) or contamination being found in the wine the cause and source of the defect or contamination can be established. It is the responsibility of the party taking the samples to ensure that the samples are taken under conditions of strict hygiene in such a manner that will neither infect nor contaminate the sample or the wine in the tank.

Samples should be taken in clean, sterile bottles kept solely for the purpose. Samples should be representative of the condition of the wine being sampled and should be clearly labelled, hermetically closed, possibly sealed and stored under suitable conditions. The use of receptacles having tamper-evident closures is recommended.

Sampling cans used in ships' tanks operations must be thoroughly cleaned and rinsed in fresh, potable water before use. Ideally, they should also be sanitised by immersion in a suitable

sanitising solution followed by rinsing in fresh, sterile-filtered or sterilised potable water.

Where necessary, the Purchaser will arrange for suitable sterile sample bottles to be provided by the Supplier or other nominated Agent at the points of loading and discharge.

The samples should be clearly labelled, hermetically closed and possibly sealed, in a manner acceptable to all parties.

All the samples taken must be retained for at least 90 days or any period specified in the contracts signed by the Purchaser, the Supplier and the shipping Agent. In cases of dispute over the quality or the condition of the wine, these samples may be analysed by accepted experts so as to establish when the fault occurred. Additional samples may be requested by the buyers involved.

5.2.2. Sampling prior to loading

5.2.2.1 Supplier's cellars

The Supplier should take at least 4 samples of between 0.5 and 1.0 litres from each vat from which the wine is to be drawn for shipment. Samples should be drawn under strictly hygienic conditions from the heart of the tank or compartment and should be representative of the condition of the wine immediately prior to shipment. Samples should be hermetically closed, possibly sealed, clearly labelled and signed by the Supplier or in his/her presence.

- One sample should be retained by the Supplier.
- One sample should be retained by the Freight Forwarder, Ship Owner or his Agent.
- Two samples should be available to the Purchaser.

5.2.2.2 Transportation to ship's side

In the event of the wine being transported to ship's side by means of a container, tanker, rail wagon, etc., samples may be required from each container, tanker, rail wagon etc., after loading. Details of the number of samples required and of the parties requiring these samples should be agreed in writing between the Supplier and the Purchaser or the Purchaser's accredited Agent.

5.2.3 Sampling at loading

A minimum of 3 samples of between 0.5 and 1.0 litres should be taken from each tank containing the wine immediately after loading has been completed. The samples should be taken hygienically and representatively, as specified in 5.2.2.1

Ideally, samples should be taken by the Supplier or loading point Staff in the presence of a representative of the Freight Forwarder. The samples should be clearly labelled, hermetically closed and possibly sealed in a manner mutually acceptable to all parties.

One sample should be signed for and retained by the Supplier, Freight Forwarder or Ship's Master. One sample should be retained by the Purchaser's accredited Agent. One sample should be retained for the Purchaser.

5.2.4 Sampling on arrival

Samples should be taken from each tank prior to the commencement of unloading at the point of discharge. The samples should be taken hygienically and representatively, as specified in 5.2.2.1.

The number of samples required may vary and should be agreed in advance between the Supplier, Freight Forwarder or Ship's Owner, and the Purchaser or the Purchaser's accredited Agent.

Samples should be taken by the Purchaser in the presence of a representative of the Freight Forwarder. Representatives of other interested parties may be present if the contract permits.