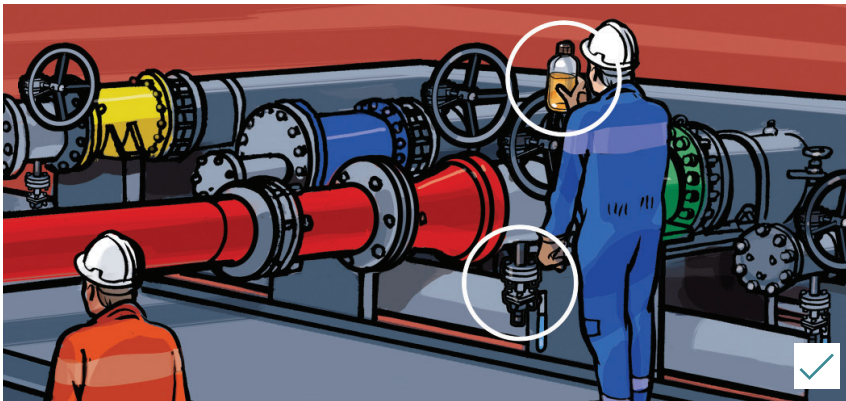


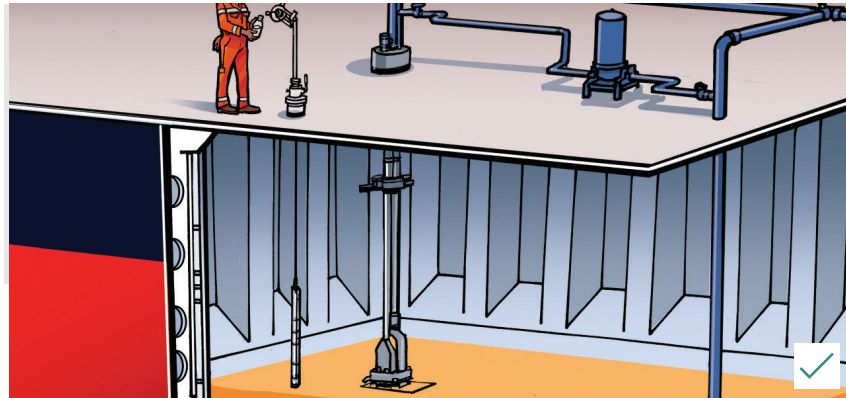
# Liquid Cargo Sampling



One sample from each manifold at the start of loading – sometimes referred to as ‘first flow’ or ‘first flush’.

Manifold samples should initially be taken using a clear **clean** glass container and then, after inspection, transferred into an appropriate sample bottle for type of cargo being loaded.

OOW should check cargo sample for signs of sediment, free water, density, colour and smell (if non-toxic).



1st foot samples are particularly important for sensitive or high value cargo and may be required in 1st tank only or in every tank.

These samples may be used to assess the quality of the loaded cargo as well as the cleanliness of the cargo tanks and pipelines.

Again OOW should check cargo sample for signs of sediment, free water, density, colour and smell (if non-toxic).



Samples should be stowed and secured to prevent damage from any movement of the vessel.

Samples should be stowed in a dark, well-ventilated room where daylight cannot enter and away from sources of heat, living quarters and foodstuff storerooms.

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# LIQUID CARGO SAMPLING

Use in conjunction with onboard procedures, ISGOTT Chapter 11.8 and North's Shipboard Petroleum Surveys guide.

## Disclaimer

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# Checklist

## Preparation:

- Tanks, lines and pumps cleaned in accordance with industry guidelines or in compliance with the specific requirements of the charterer's written instructions .....
- Sampling, gauging and associated equipment clean and suitable for the cargo – serial numbers recorded .....
- Tank cleanliness certificate requested from surveyor .....

## Manifold samples:

- One sample from each manifold at the start of loading – sometimes referred to as 'first flow' or 'first flush' .....
- One sample from each manifold five minutes after start of loading for all grades .....
- Samples should initially be taken using a clear clean glass container and then, after inspection, transferred into an appropriate sample bottle for type of cargo being loaded.
- OOW should check cargo sample for signs of sediment, free water, density, colour and smell (if non-toxic).
- If the OOW is in any doubt as to the quality or type of cargo being loaded then loading should be stopped until further analysis is completed.
- Sample bottle should be sealed and labelled with:
  - Vessels name .....
  - Date/time .....
  - Port/berth .....
  - Operational status – before/after/resumption of loading or discharge .....
  - Product name .....
  - Sample description – first flow/spot sample/1st foot/running/composite etc . .....
  - Location where drawn – tank number/manifold number/pump number .....
  - Identity of sampler – ideally a surveyor in attendance should countersign the label .....
  - Seal number .....

Whenever possible all samples drawn by ship's crew should be witnessed by attending surveyor.

It is recommended that vessels take and retain their own samples and do not rely solely on charterers samples.

## 1st foot sample:

Particularly important for sensitive or high value cargo and may be required in 1st tank only or in every tank.

OOW should check cargo sample for signs of sediment, free water, density, colour and smell (if non-toxic).

If the OOW is in any doubt as to the quality of the sample then loading should be stopped until further analysis is completed.

Some terminal or charterer's insist on stopping loading at this point to confirm the cargo is on spec and tanks/lines are clean.

## During operation:

At a change of shore tanks, shore lines or after any significant stoppage a further manifold sample should be drawn, checked and labelled accordingly .....

## Completion of operation:

Samples should be drawn in compliance with industry practice as set out in publications such as those issued by ASTM, API, IP, ISO and BS.

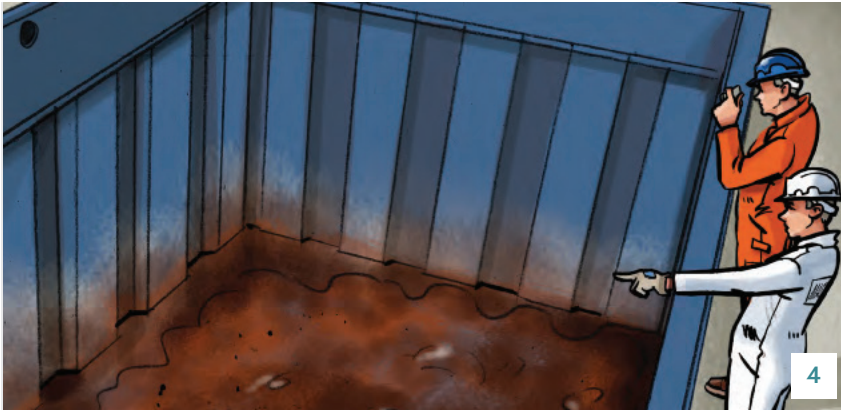
In general, a 'running' sample taken by use of a bottle and sample cage is the preferred method of obtaining a representative sample in a homogeneous bulk cargo.

Where the cargo may not be homogenous, careful zone sampling is required to produce a representative composite sample.

## Sample stowage:

- Samples should be stowed in a dark, well-ventilated place where daylight cannot enter and away from sources of heat, living quarters and foodstuff storerooms .....
- Samples should be stowed and secured to prevent damage from any movement of the vessel .....
- It is suggested that samples be retained onboard for a period of at least one year after the discharge of cargo or such time the charterer requires .....
- If there is any dispute involving the cargo then the samples should be retained until instructed otherwise .....
- A sample log should be maintained, recording all samples taken along with notes on disposal .....

# Liquefaction



The master should observe the start of loading and look and listen for signs of splattering (muddy splashing) of the cargo on tank tops and bulkheads. This is an indication that the cargo may be in a fluid condition.

The holds should be checked regularly for signs of splattering throughout the loading operation.



If the master is concerned at any stage during 1, 2, 3, or 4 then he should refuse to load the cargo or stop loading. Remember this is a safety issue and SOLAS V regulation 34 - 1 allows the master to make a decision based on his professional judgement in such situations.



Consider appointing a surveyor to assist the master.

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