

## Procedures for sampling mineral oil cargoes at the ship's manifold

### Introduction

We herewith provide you with a proposal for the procedure of sampling of mineral oil cargoes at the manifold station of product tankers. The objective of the proposed procedures is to provide ship owners/managers with advice to obtain representative samples of the cargo at the stage that it arrives in board viz. where the custody of the cargo/liability is transferred from the shore to the ship.

### Objective of sampling

In case cargo claims on quality of the product carried on tankers, analysis of manifold samples may play a very important role in the investigation into the cause. Nowadays, it is still common practice that vessels are only provided with samples of the shore tanks before loading and samples from the ship's tanks after loading. These samples only provide information with regard to the condition of the cargo in the shore tank and in the ship's tanks. It does not provide the essential information regarding the condition of the cargo in which it arrives on board the ship. Needless to say that many damages to mineral oil cargoes in the past had been caused by contamination of the product in the shore lines. However, the burden of proof that the cause of damage was extraneous to the vessel still rests with the shore installation as the true cause of the damage, effectively contributing to repudiation of the ship owner's liability.

### Recommended procedure of sampling

It is assumed that most product tankers are fitted with drain cocks or sampling plugs in the crossover lines at the manifold station. If these are not fitted, it is a relatively simple modification, which can be fitted by shore based work shops around the world.

For sampling cargoes arriving at the ship's manifolds, two crucial stages should be distinguished. The first and very important stage in this respect is the condition of the cargo when loading commences. Any remnants of previous cargoes and/or any other contaminants (water) in the shore line, liable to affect the cargo adversely will best appear in a manifold sample drawn immediately upon commencement of loading. The second stage is to ascertain whether contaminants may have found their way into the cargo in the shore line in the course of loading. This may be accomplished by drawing samples at the manifold in portions of one litre at regular intervals.

Therefore, we recommend drawing one 5 litre sample immediately upon commencement of loading then to draw 10 litres in portions of one litre at regular intervals in the course of loading (from commencement until completion of loading). Before sampling, one must ensure that the drain cock or ullage plug is properly flushed, because they are liable to retain remnants of previous cargoes. It goes without saying that the drain cocks or sampling plugs must be absolutely clean.

The background of drawing relatively large volumes of sample material is that analysis of mineral oil products incorporates methods which may consume large volumes of sample material (distillation, density, flash point etc.).

### Sampling material

As mineral oil cargoes may be sensitive to exposure to light, it is recommended to use non-transparent containers, preferably tins of 5 litres. These can be purchased from companies providing laboratory and sampling materials to inspection companies active in the mineral oil trade.