

**To:** Steamship Insurance Management Services Ltd  
**Att.:** Loss prevention department

**SUBJECT:** SUBSTANTIAL PARCELS OF CONTAMINATED BY ORGANIC CHLORIDES RUSSIAN CRUDE AVAILABILITY OF MARKET

## GENERAL INFORMATION

We have had a number of enquiries from Members IG Clubs regarding possibility of storage and carriage of crude oil cargo supplied by Public Joint Stock Company «Transneft» (further “Transneft”) pumped through the “Druzhba” pipeline, which is delivering the this cargo to the Western Europe via Belorussia and Poland.

Members are offered to load and store (till further order of cargo interests) shipping parcels of this cargo, rejected by refineries in Belorussia, Poland and some other European Countries.

The following information and recommendations must be issued clarifying this matter.

### ORIGIN OF THE PROBLEM

Rejection of the cargo transshipment and carriage by above mentioned countries is based on the fact of higher content of **Organic Chlorides**.

These compounds (organic chlorides containing hydrochloric acid and free chlorine) are introduced into the oil with reagents used in oil production processes.

Till 2018, the Russian Law regulated the content of this compound in the application of oil production, namely, since July 2002, a new GOST R 51858 - 2002 was made in force, regulating the quality indicators of commercial oil, which set the standard for the content of organic chlorides in oil.

However, further such regulations were canceled, and some small oil producers and suppliers began to use this compound without control.

In this regard, there were parcels of cargo containing a substantially larger proportion of this compound being brought to the market.

Currently, there are parcels of cargo on the market in which the content of this compound exceeds standards by 100 times.

## **AFFECTION OF EQUIPMENT USED FOR STORAGE AND HANDLING OF THE CRUDE WITH CHARACTERISTICS MENTIONED ABOVE**

Organic Chlorides having high corrosivity are known to cause severe corrosion of crude tower overhead systems at refineries, which contributes to the clogging of heat exchange equipment and, under reforming conditions, form compounds that poison the expensive catalyst systems used in the refinery.

Despite the fact that the greatest risk and likelihood of damage to the expensive equipment is still existing at the refinery, due to these properties of this compound, there is also a real risk of corrosion or deterioration (even breakdown) of the equipment of the tanker, especially the ones, consisting of materials made from various alloys and non-ferrous metals.

In addition, there are risks of reducing the service life of ship hull materials and tanks.

In particular, the organic chlorides, containing in crude oil, during the chemical reaction with aluminum compounds, increase the acid condition of the crude oil on board vessel and producing aggressive condition of cargo in respect of corrosion.

Therefore, using of the machinery in mentioned aggressive conditions will inevitably lead to the corrosion damage/destruction, causing the breakdown of the mentioned machinery earlier.

In particular, steels are subject to local damage/destruction when the corrosion affects into the metal structure, what causes sudden decrease of the mechanical properties of the material. Local corrosion, in particular, takes place also in chloride containing conditions.

The working life of the equipment, used during such cargo handling, may become significantly reduced and then require expensive repair in the future.

Moreover, the diagnostics of the causation for the breakdowns of the mentioned equipment may not reveal any connection to the storage of such cargo.

This, in turn, may also make recovery processes in respect of repairs more complicated against a liable party.

## **CONCLUSION AND RECOMMENDATIONS**

Basing on the above mentioned, we do not recommend to perform loading, storage and carriage of the crude oil with higher contents of the organic chlorides in connection to the high risk of the reduce of vessel's machinery and equipment working life.

In case if still the decision to carry such goods is made, it is highly recommended to consider the possibilities to recover potential damages from the liable party.

Yours faithfully,  
Denis Shashkin

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