

## CASE STUDY

# OMMICA™: Methanol penalty reduction using accurate onsite analysis

### BACKGROUND

The commercial impact of methanol in crude oil for refinery is well known by North Sea Operators. Whether it results in a waiver fee from FPS or a reduced value for cargo crude at point of sale, the costs can be significant. Methanol is often used during shutdown and start up, to prevent hydrate formation, however as it's not continually used, the effects of its presence in the crude oil can often be underestimated, despite the financial penalties of this, which can run into millions of dollars.



For Cargo crude, the “legacy” of a shipment contaminated with methanol can mean refusal by some refineries to take crude from that installation, or a reduced price for that portion. For entrants to FPS, methanol in crude means significant waiver fees, delays and deferment, all of which carry high costs.

Waiver fees for portions of methanol contaminated crude can be agreed between the pipeline owner and the operator, based on an agreed level of partitioning of methanol to the crude oil. These can be historically agreed figures which may or may not favour the operator and can vary widely.

### CHALLENGE

An international operator with an installation in the North Sea felt they were paying excessively in waiver fees to export crude oil into FPS, following use of methanol when wells were re-started through maintenance and other issues.

The previously agreed partitioning with FPS was considered high and commercially costly, therefore the client wanted to establish the actual current partitioning of methanol to the crude oil, prior to its export from the installation. In order for this to be achieved, a fast, onsite test method which could accurately assess levels of methanol was required.



## SOLUTION

The previous known method of testing methanol in oil was by gas chromatography (GC), which is not normally found on offshore installations. This is an accurate and recognised method, however samples have to be shipped back onshore for laboratory testing, and results can take weeks to obtain.

OMMICA™ is a straightforward colourimetric test which can be carried out offshore, giving results within 1 hour to an accuracy of +/-2ppm. This test was chosen by the operator as the only analysis method which could fulfil the requirements of the offshore installation.

OMMICA™ tests were carried out on both oil and water samples regularly during start-up, to establish the relevant partitioning to each phase (partitioning to the gas phase was also calculated). This showed that partitioning to the oil phase was significantly lower than expected, possibly due to changing conditions over time.

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## SUMMARY

These results were used to demonstrate the current, actual amount of methanol in crude oil to the pipeline owner, which was lower than the historically agreed value. The OMMICA™ results were therefore used to agree a new partitioning for methanol in crude from that installation.

This has saved the operator over \$1,000,000 per year in waiver fees for one installation alone. Showing the benefit of accurate testing for operators who feel they have a historically high partitioning factor agreed with the pipeline owner.