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Köln-Godorf  
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### **Ultra-low sulphur product interface detection**

Dear Mr. Mohajer,

in Germany the sulphur content in Mogas and Diesel was reduced with the Auto Oil Program to a level of 50 ppm starting November 2001 and then at the beginning of 2003 to 10 ppm. Up to now the spec of light heating oil is still at a level of max. 2000 ppm sulphur.

Before we started in 2001 with the transport of these new products in our pipeline system we performed a couple of tests to find out how the sulphur influenced the interface between two batches having such large different content of sulphur. We found out that the sulphur content has the same progression in an interface than the density.

The problem was that heating oil and diesel in a lot of cases (~ 35 %) have the same density. As due to this the interface no longer could be detected only by density we tried to use in addition the Optical Interface Detectors from KAM CONTROLS as online sulphur measurement was not available. This with very good success. All interfaces between products with same density could be detected with the information delivered by the OID.

As a result we could say that due to the experience we made in transporting high and low sulphur products in our pipeline system the combination of density and OID fulfils all requirements to detect the interface.

Kind regards

Andreas Haskamp

Bert Schöne

Rhein-Main-Rohrleitungstransportgesellschaft mbH