ISO/TC 28 Petroleum products and lubricants Advisory Group

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To: Members of the ISO/TC 28 AG

Dear Members,

Advice on the revision of ISO 3016:1994 Petroleum Products – Determination of pour point

It was agreed in 2005 that ISO 3016 would be revised following a systematic review. The comments submitted during the review are attached as Annex A. The project leader, Stu Porter (USA), developed a revision text and distributed it to the experts nominated during the review. However, he has not received any feedback from them.

The project leader has asked advice on how to progress this item, especially with regard to technical equivalency with the corresponding ASTM standard, D97. ASTM D97 does not allow automated or automatic equipment to be used and allows for the manual method only. ISO 3016:1994 does have allowances for some automated and automated/automatic methods to be included, as the following clause indicates:

"**6.11** If automatic testing instruments are used, the user shall ensure that all of the manufacturer's instructions for calibration, adjustment and operation of the instrument are followed. As the precision of automatic pour-point testers has not been determined, in any case of dispute, the pour point shall be determined by the manual method described herein and shall be considered as the reference test."

Advice to ISO/TC 28 on the issue of inclusion of automated/automated instruments in test methods is given in document 28 N 2001 Rev. I have extracted the relevant sections of this document and included it as Annex B.

Members are requested to review this information for discussion at the forthcoming ISO/TC 28 AG meeting (22 June 2007) so that advice can be given to the project leader on how to proceed with the revision of ISO 3016.

Yours sincerely

Paula Watkins

Paula Watkins
Secretary to ISO/TC 28/AG

Annex A

Comments received on the 2005 systematic review of ISO 3016:1994

France
French equivalent standard: NF EN 23015 (equivalent to ISO 3015) and NF T 60-105 (for residual fuel oil)

Reasons for revision:
– to include the note concerning applicability of FAMEs;
– revision of precision statement which are different for petroleum products containing heavy fractions such as residual fuel oils. French experts use national standard NF T 60-105 technically similar to ISO 3016 but which does not include residual fuel oils in its precision statement. New precision statement (higher) are given for information in an Annex of the French standard (RRT has been carried out in France between 1991 and 1994). These differences should be taken into account in the ISO standard. Frenc RRT (carried out each year since 2000) may be used for updating precision statement for residual fuels oils.

Germany
Expert to be nominated when necessary.

Corresponding national publication: DIN ISO 3016:1982-10.

General additional remarks:
1. While Germany basically agrees to the change of scope as documented in Resolution 26/2004, we propose to clarify several more issues which have become visible during recent discussions within CEN.
2. It is very likely that the sources for fatty acid esters will be extended to other sources on the alcohol part as well as on the fatty acid part. For most of these products there is no currently available precision information. So that the intended changes of scope can only apply to a small subset of possible fatty acid esters.
3. We therefore question the usefulness to add more and more non-final precision information into the scope - whenever a new set of chemical classes of fatty acid esters appears on the market.

Italy
Dr. Paolo Tittarelli

Revision to include applicability to specific fatty acid methyl esters (FAME).

Romania
Mihaela Tocan

ISO 3016 has not been adopted yet as a national standard, but it is used 'per se' with no change.

Singapore
Dr Tsai Siew Fah, DNV

Slovakia
In Slovakia is used STN 65 6078

Spain
Adopted as UNE 51506; this standard is related with ASTM D97:1966 and ISO 3016:1974.

Sweden
[Expert] To be nominated.

SS-ISO 3016:1995

Method with automatic pour point tester should be included in this standard or create a separate method for this application.

Turkey
Cemal Yusuf Yucedal, TSI

Corresponding national publication: TS 1233 ISO 3016

Comments received on the 2005 systematic review of ISO 3016:1994 (continued)

UK
Peter Bowles

USA
ASTM D97:2004 is the US national standard.

The following sentence shall be adopted as a Note to the scope of future revisions of test methods (see the list given in ISO/TC 28 Resolution 26/2004) to incorporate FAME, for those methods that have shown no change in precision.

"NOTE FAME conforming to EN 14213 or to EN 14214, heating oil containing FAME according to EN 14213 and distillate fuels containing up to 5 % (V/V) of FAME according to EN 14214, were shown to meet the precision of this document."

Trinidad & Tobago
Mr. Prem Nandlal, Executive Director, TTBS

Annex B

Extracts from document 28 N 2001 Rev. on automated/automatic equipment

B.10 Automated and automatic methods

Much debate has taken place over recent years in many groups on this topic, and definitive guidelines have not yet been agreed. It is generally accepted that a procedure which replaces manual operations in a test method (e.g. stirring, titrating, etc.) by automated procedures, does not change the essential elements of that procedure, and that such variants should be allowed in the text, together with any changes to precision that they may introduce. More difficult however, is the measurement of the same property of a material by a means that extend these changes to more significant operations, or ultimately to a different measurement technique. Obviously, where the technique is completely different (e.g. different instruments for elemental analysis, different apparatus for vapour pressure, etc.), it is clear that a separate test method is required, but in many cases, the changes are intermediate between the two extremes, and guidance is needed whether a given variant is acceptable within an existing manual test method. This is commonly described as the ‘automated/automatic interface’.

See annex D for a generic description of the two terms and/or guidelines for inclusion/exclusion of a technique within an existing manual test method.

Annex D

The distinction between automated and automatic procedures

Automated methods

Methods which, in part or whole, have mechanized the test without changing the principle or technique of the basic manual method. The essential elements of the apparatus in respect to dimensions, design and operational characteristics are not changed. No correlation is used to correct the measured result. The precision is at least equal to that of the existing manual method.

Automatic methods

Methods which simulate the basic manual method via a different chemical or physical principle. A correlation to correct the measured result may be used. The precision is at least equal to that of the existing manual method.