54th CIML Meeting - Working Document



### 54 CIML Addendum 10.1.2.4

2019-07-18

### Agenda item 10.1.2.4:

### Project proposal for a new Recommendation

Rotary viscometers - Determination of dynamic viscosity -Verification method





## Addendum

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2019-07-18

AAA					Proposal for a new project					
<b>QIML</b>					Within:	TC	17	SC	C	5
					Date:	2018/	2018/09/25			
Proposer(s):										
Iran										
Proposed convener(s):										
Mr. Arash Osouli										
Type of proposed publication:			X	New	Rev			vised		
X	Recommendation	Documen	ıt			Vocabular	ocabulary		Guide	
Title of proposed publication:										
Rotary viscometers- Determination of dynamic viscosity- Verification method										
Terms of reference of the project, including detailed time frame (approximate dates by which e.g. 1WD, 1CD, FD and project completion are expected – see also explanation in 6.2):										
<ul> <li>This new recommendation is applied for the use and also the verification of rotary viscometers. These devices are used to measure dynamic viscosity of fluids. Principles of verification is based on the setting reading value of viscometer by a reference material with a specific viscosity (CRM).</li> <li>There are two recommendations in OIML TC17 which are related to this document. One classifies different equipment for measuring the viscosity of fluids (OIML D17). Another specifies characteristics of capillary viscometers (OIML R69).</li> <li>This document specifies the metrological and technical requirements to test and verify the rotary viscometers that commonly used in oil and drilling industries and complementary glass capillary viscometers.</li> </ul>										
Why should the OIML develop this publication?										
Two commonly devises for measuring the viscosity of fluids, namely Glass viscometers (capillary viscometers) and rotary viscometers are used in the industries and laboratories. The former, measures viscosity of fluids based on its resistance to downward movement due to the gravity. Rotary viscometers measures viscosity stand on the shear stress created by the fluids when moving on rotary surfaces. Some sensitive equipment and facility cannot be used in the operational area, so the only way to make sure that the viscosity of fluids are having an accurate and also durable measuring device.										



Addendum

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Todays in the industry especially in oil and drilling, rotary viscometers are generally used because of their easy and simple operation, handling and working requirements.

It is essential to have a comprehensive and integrated instruction for using and verifying viscosity measuring devices. OIML in TC17/SC5 by R69 has provided a recommendation for the use and the verification of capillary glass viscometers, but there is not any document or Recommendation for rotary viscometers.

Since these days in industry there would be a special requirement to measure and verify of equipment, this proposal suggests to provide a simple but comprehensive Recommendation for testing and verifying of rotary viscometer.

Countries known to regulate or to be intending to regulate this subject, if applicable:

Canada- Russia- Nigeria- America- China

Relevant associated OIML publications:

OIML D17, OIML R69

List of appropriate liaisons and their work related to this proposed project (include supporting documentation as necessary and reference it here):