

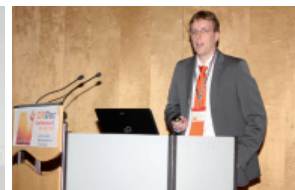


OilDoc Conference & Exhibition

Jan. 22-24, 2013
Bavaria - Germany

Lubricants
Maintenance
Tribology

Welcome to Rosenheim
just 50 km from Munich, Bavaria



Call for Papers Deadline 31st March 2012

Speakers interested in making a presentation in 2013 OilDoc Conference shall submit themes and abstracts before **31st March 2012**. The duration of a speech is 20 minutes plus 10 minutes for discussion.

Please follow the instructions as specified in this form. Abstracts will be subject to peer review and, if approved, authors will be asked for submitting a complete paper.

Complete and approved papers will be published in proceedings.
One copy of the proceedings will be provided for each delegate at the conference.

Speakers pay a reduced participation fee – your participation to the OilDoc Conference and Exhibition cost you EUR 150.- + VAT only.

Instructions

Please hand in an electronic version of your abstract (word-file if possible, per e-mail or CD).
Abstract must be one page only! Papers shall be made in English.

Please see the example and use the file OilDoc_Abstract.doc which you can download at <http://www.oildoc.com/en/download.html>.

Typeface and Linespacing

Version: Word 6.0 or higher
Paper size: A4 (210 x 297 mm)
Type: Calibri (or similar), 10pt
Margins: left/right 15 mm, top 25 mm, bottom 20 mm

Title

Title of the Abstract (20pt)
Speaker and (Co-)authors
e-mail, Company/University, City, Country

Text

The text should be in 2 columns: 85 mm, block form, 10 mm between columns

Headings

Main headings: 12pt Calibri/Bold, Caps/lower case, Arabic numbers
Second Level Headings: 10pt Calibri/Bold, Caps/lower case, Arabic numbers
Please do not underline headings.

Proofreading

The manuscript will be sent to press as submitted, only the layout will be adjusted.

Send abstract via email to conference@oildoc.com or
on CD via mail to: OilDoc GmbH, Mr. Rüdiger Krethe, Kerschelweg 28, 83098 Brannenburg, Germany

Program Committee

The 2013 program for the OilDoc Conference is developed by a blue-ribbon planning committee directed by Mr. Peter Weismann (OELCHECK GmbH) and Mr. Rüdiger Krethe (OilDoc GmbH).

The complete list of members will be edited on www.oildoc.com.



OilDoc



25 mm

Title of the Paper –Just an example text

Author

Company/University, City, Country

E-Mail Author

First Co-Author

Company/University, City, Country

Second Co-Autor

Company/University, City, Country

**Abstract – max. 1 page
(DIN A4, 210x297 mm)**

85 mm

1. The air release test

Air and the lubricant are two compounds in a technical system that reacts unavoidable with each other. It depends on a set of parameters like base oil type, additives or viscosity on the oil site and e.g. temperature, pressure and the kind of contact between lubricant and air on the machinery site how the interaction takes place. Normally two conditions of air in oil can be found. Also if the oil is clear and no gaseous bubbles are visible can it contain between 8 and 11% air that is completely solved. This effect is normally not critical for an application. It becomes a problem if gaseous bubbles are visible. At this time the saturation limit is reached and the air forms fine distributed gaseous bubbles in a way of a dispersion. A couple of negative effects like the well known gaseous cavitation are the results and some application won't even work properly. But the air does not stay in the oil. A specific rest period e.g. in a sump or tank is necessary for the outgas process. The air release test according ISO EN 9120 is established as standard test method to inform about the time is needed by the oil.

1.1. Standard air release test

Air release property acc. ISO EN 9120 is the period in minutes after which in oil dispersed air is again released up to a residue of 0,2 Vol.%. For the measurement is 200 ml of the oil needed. The sample is filled in the Impinger bottle, a special gas washing flask that was originally conceived to filter pollution out of gas into a fluid. The oil is heated up to a temperature of 50°C and the initial density value is measured. Afterwards the blow in process starts. For 7 minutes preheated air flows with a defined pressure through the Impinger. During that time the oil becomes more and hazier because of the growing number

20 mm

85 mm

of fine distributed air bubbles. After stopping the air flow it is one minute time to rebuild the instrument for the density measurement.

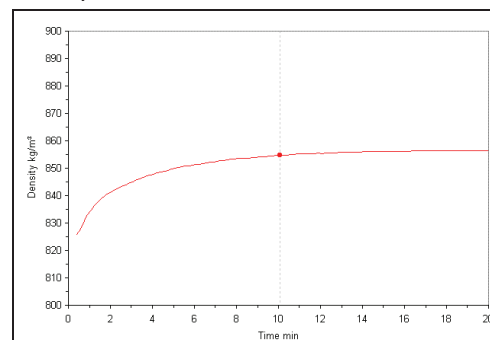


Fig. 1 Typical Air Release Diagram from a OELCHECK Lab-report

1.2. Modified air release test

Some applications like hydrodynamic turbo transmissions have special requirements regarding the air release properties. Beside the lubrication of the moving parts like bearings is the oil also responsible for the power transfer that works according the turbine principle. As result the oil has an intense contact with air. In the system are big pressure differences and the oil circulation times are high due to the relatively small oil volumes. Although there is a strong connection between air release properties and the usability of the oil in these types of application showed the results of the standard air release test no clear correlation between the results and the practical experiences from the field or test set ups.