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## Newsletter – April 2018

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**T** **RIBOLOGY** was quantified in West Germany in 1976 in a report which revealed that the economic losses caused by friction & wear cost about DM 10 Billion per annum. (Just equate that to a 2018 present value!) <http://www.tribonet.org/tribology-history/>

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### ETT – Essential Tribology Terminology

Simple definitions for three of tribology's essential terms

- ✓ **Dielectric Strength** - A measure of the electrical insulating, properties of a gas, fluid or solid according to a standard test method.
- ✓ **Dispersant**- An oil additive that keeps particles suspended in a colloidal state and thus prevents formation of sludge, varnish and of other engine deposits.
- ✓ **DPF** - Diesel Particulate Filter, used to trap the soot particles from diesel engines.

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### SAIT TRAINING

#### Smooth the path to knowledge

##### 2018 SAIT TRAINING CALENDAR DATES:

- ✓ **LE 114:** 7 - 11 May 2018, Johannesburg
- ✓ **LE 115:** 21 - 25 May 2018, Durban
- ✓ **LE 116:** 23 - 27 July 2018, Johannesburg
- ✓ **LE 117:** 27 - 31 August 2018, Cape Town

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### 2018 SAIT WEBINARS

**Tuesday 10 April 2018 at 16:00**

#### “Mining 101, or, Learning about Mining”

by **Dave Gamble**  
2017/18 President SAIT



Dave has spent the last 42 years working in the fields of Petroleum products, heavy industry and Mining: 20 Years with Oil Companies, and 22 years with a major global Mining Group.

He will speak about the basics of Mining for non-miners, covering geology, exploration, extraction, processing and the equipment used therein.

If you would like to attend, please register by clicking the link:  
[https://zoom.us/webinar/register/WN\\_Nu0NmXsrSBKL3iGdplzF3Q](https://zoom.us/webinar/register/WN_Nu0NmXsrSBKL3iGdplzF3Q)

After registering, you will receive an email with the login details and instructions on how to join.

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### INTERNATIONAL EVENTS

- ✓ **September 4-7, 2018 - 45<sup>th</sup> Leeds-Lyon Symposium on Tribology: Smart Tribology Systems** at Leeds Trinity University, Leeds, UK  
*Please take the time to explore the symposium website [Leeds-Lyon 2018](#)*
  - ✓ **Sept,17-20, 2018 – Malaysia: ASIATRIB 2018:** the mega event in the series of International Tribology Conferences under the auspices of the Asian Tribology Council (ATC), the apex body of national tribology society of Asia Pacific countries. See the prospectus at:  
[http://asiatrib2018.mytribos.org/PDF/ASIATRIB2018\\_prospectus.pdf](http://asiatrib2018.mytribos.org/PDF/ASIATRIB2018_prospectus.pdf)
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### DID YOU KNOW?

#### **Hydrodynamic lubrication theory is used to reduce friction and/or wear of rubbing solids with the aid of liquid lubricant.**

For a vast majority of the surfaces encountered in nature and used in industry, the source of friction is the imperfections of the surfaces. *Even mirror shining surfaces are composed of hills and valleys – surface roughness.* The goal of hydrodynamic lubrication is to add a proper lubricant, so that it penetrates into the contact zone between rubbing solids and creates a thin liquid film. This film separates the surfaces from direct contact and in general (but not always) reduces friction and consequently wear, since friction within the lubricant is less than between the directly contacting solids.

Elastohydrodynamic Lubrication – or EHL – is a type of hydrodynamic lubrication (HL) in which significant elastic deformation of the surfaces takes place and it considerably alters the shape and thickness of the separating lubricant film.

Visit: <http://www.tribonet.org/wiki/hydrodynamic-lubrication/> and <http://www.tribonet.org/wiki/elastohydrodynamic-lubrication-ehl/>

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### TRIBOLOGY & THE ENVIRONMENT

One litre of oil pollutes one million litres of water – the current estimate is that we are recovering 80% of a potential recoverable pool of 120 million litres of oil. **This means 24 million litres of oil is going to waste in our environment.**

A major root cause of shortened oil service life is contamination through exposure to heat, entrained air, water, metal debris, pressure, and mechanical action. The extra service life and cost savings of premium-quality synthetic lubricants is lost when contaminants are allowed in.

It's not only used oil recovery that counts, it's also getting maximum use of the correct lubricant for the right application and employing the toughest discipline against contamination.

[www.rosefoundation.org.za](http://www.rosefoundation.org.za)

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### PARTING SHOT

#### Wake up South Africa!

The entire industrial and automotive complex of Southern Africa is woefully short of regulation through minimum quality standards for the lubricant industry. The way forward is being pointed out by the Kenya Bureau of Standards (KEBS) and mandated to set the minimum standard of lubricants that are permitted to be sold in Kenya.

According to a headline feature in Lubezine magazine – ‘Without bodies such as KEBS, the industry in Africa would be suffering immensely from unscrupulous traders who might want to take advantage of consumer ignorance regarding lubricants quality.’

In addition, Lubezine reports that the Energy and Water Utilities Regulatory Authority (EWURA) of Tanzania has officially thrown its weight behind regulating the local lubricants business. According to EWURA, all importers, producers, distributors and sellers of lubricants must have registered all types of lubricants with the authority by March 31, this year. After that deadline, the regulator will not allow any dealer to import, produce or distribute lubricants that would not have been registered. See the full article at [www.lubezine.com](http://www.lubezine.com)