EFNMS Newsletter #2
(June 2018)

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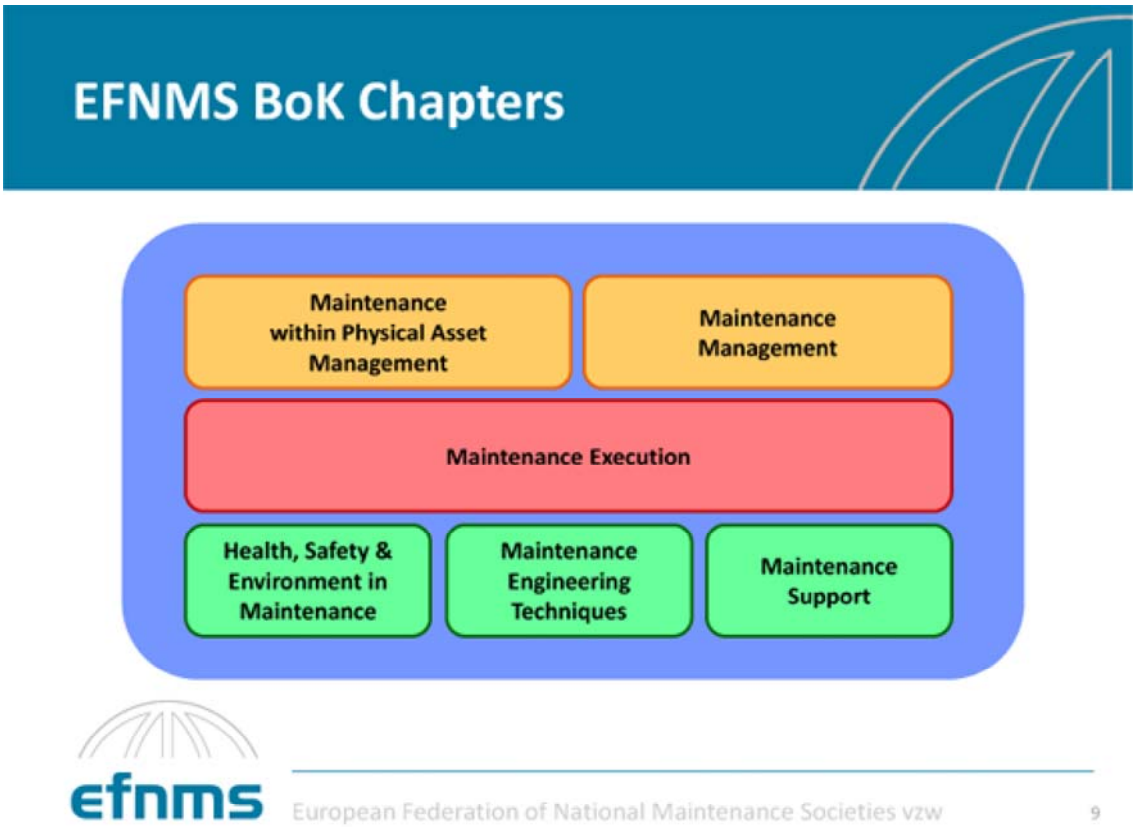
Activities

EFNMS' Body of Knowledge

Maintenance is a process that requires many and varied skills to provide companies with competitiveness, sustainability and risks control. It is therefore important to determine the necessary competences of technicians, engineers, managers who contribute to these essential activities.

This work has been undertaken by EFNMS in the recent months and it resulted in a description of the maintenance Body of Knowledge. The objective is first to describe the maintenance landscape, its scope and activities and to identify the required knowledge at four levels of qualification: Maintenance Technicians, Maintenance Engineers and Supervisor, Maintenance Manager, Technical Director/ Physical Asset Manager.



Two European standards of CEN/TC319 have been especially used: EN17007 describing the maintenance process and EN15628 about qualification of maintenance personnel.

The result, approved by all the EFNMS members, presents more than 70 maintenance subjects (methods, knowledge, techniques) classified, on the one hand, according to the processes in which they participate and, on the other hand, in chapters grouping them according to common disciplines or functions. Links are established with the skills listed in EN15628 and also with international, European and national maintenance standards.

This work is an important first step, which will be progressively enriched, to create and to disseminate a European maintenance culture.

EFNMS, being invited by WVIS, meets at Düsseldorf

General Assembly and Committees discuss during two days on trends and joint projects in the European Maintenance Network

The main focus of the meeting, as always, was on the exchange of knowledge between the National Member Societies. Despite the unusually warm weather, all participants found enough time to deepen their contacts and discuss joint project ideas. At the same time, the opportunity was given to work on central maintenance topics within all committees and the general assembly.

The next meeting will take place on the occasion of Euromaintenance 4.0 Congress in Antwerp. **Wim Vancauwenberghe** took the opportunity to

present the details of the conference. The members of the National Maintenance Societies, members of EFNMS, can make Early-Bird registrations until the 30th of June. For this purpose, each National Maintenance Society will provide discount codes to its members.

EFNMS General Assembly at Düsseldorf, hosted by WVIS on 26th of May 2018; Picture by David A. Merbecks, WVIS

Presentation of Euromaintenance 4.0 concept at the EFNMS General Assembly on 26th of May 2018; Picture by David A. Merbecks, WVIS

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Events

Early birds registrations for Euromaintenance 4.0 until June 30th

EURO MAINTENANCE 4.0
September 24–27, 2018 | Antwerp, Belgium

The program is now available at www.euromaintenance.org

Euromaintenance 4.0 offers a unique opportunity to learn from the experiences and expertise of industry practitioners and experts on each subject:

- more than 20 workshops on day 1 and 4
- 106 presentations in 7 parallel tracks on day 2 and 3
- more than 50 cases presented by asset owners
- field visits on day 4

Conference event featuring the celebrated author Ben Pring of the book 'What To Do When Machines Do Everything: How to Get Ahead in a World of AI, Algorithms, Bots, and Big Data' and the presentation of the finalists of the Euromaintenance Award.

Early birds rates apply until June 30th 2018!

Use the discount code "**EM40EFNMSC**" and claim your free welcome gift.

HINT: Are you a member of one of the 24 European national maintenance societies represented at the EFNMS? Ask you National Maintenance Society for a discount code and you will receive a 10% discount on your registration. This discount is valid on any selection and is applied at the end of the registration process (click here to find your National Maintenance Society).

REGISTER NOW!

News

Use of molecular biomarkers to assess exposure to harmful agents at work

TDr. Efthymios Thanasias
Occupational Physician

Maintenance workers often have contact with vapour or gases, particles (dust, smoke), fibres (asbestos, glass fibre), heavy metals and mists. This triggers a mechanism that may result in the development of occupational diseases.

The main goal for the protection of employee health & safety is Early Detection by health monitoring, which in medicine is achieved by using biomarkers i.e. molecular tools that can be used to identify changes or effects that occur in the body as a result of exposure to any given toxicant. One of the biomarkers used are micronuclei i.e. nuclear material distinct from the main nucleus and within the cytoplasm, which may serve as an indication of tissue damage in workers exposed to carcinogens.

Based on the above a new experimental research method was developed in Greece which can predict trends for lung cancer development among workers exposed to carcinogenic substances. This technique is called micronucleus biomarker comet assay.

The technique is based on the fact that when carcinogenic cells are subject to a separation technique called “electrophoresis” and then are painted with fluorescent material called “fluorescent staining”, then the damaged cells can be separated and, when observed under the microscope, look like a comet; the longer the tail, the more damaged the cell is (Figure 2). This method is therefore called “Comet Assay Overview” as shown in Figure 1.

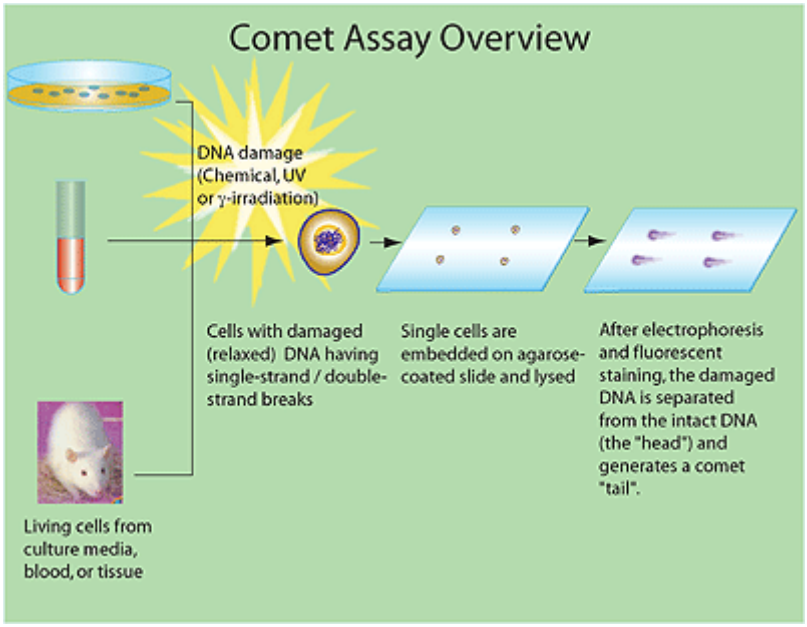

Figure 1: The Comet Assay Overview technique.

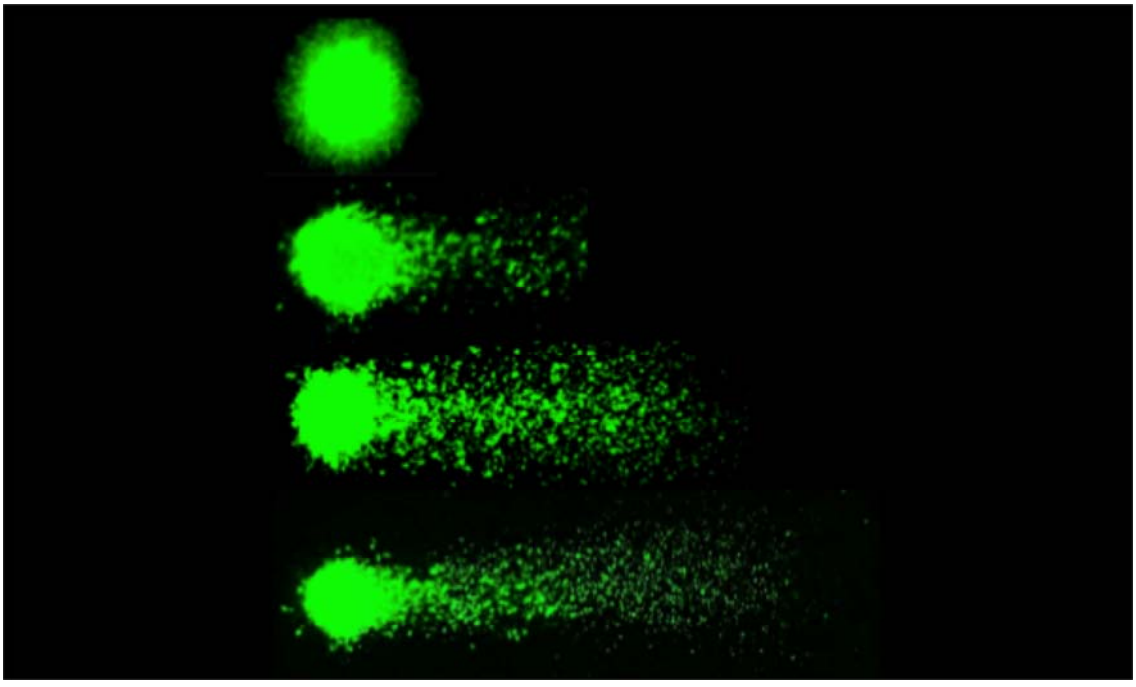

Figure 2: Various cells under Comet Assay Overview after the electrophoresis.

This method is being tested for maintenance workers in a metal industry in Greece aiming to investigate possible alterations in the genetic material of maintenance workers in a mining and processing of nickel.

Since the study is under way, results are pending but the objective is to determine whether the exposure limits (TWA, OEL, STEL and CL) must be revised and also assist the Occupational Physician prescribe medical examinations to early-detect carcinogenicity trends among high-risk employees.

The EFNMS's Health, Safety & Environmental Committee (EHSEC) has addressed an invitation to all National Maintenance Society Members to contribute by providing specimens for laboratory testing in order to contribute to this effort.

Link to the full article (PDF) >>

WVIS market study proves: Digitization needs to be priority in the Industry

- **Significant growth in the future segment Industry 4.0**
- **Digitization requires powerful network infrastructure**
- **Contractual Work Law and Energy Transition additionally hamper success in Germany**
- **More than 150 customers and service providers deliver a broad database for the marketstudy**

"The digital expansion in Germany must be significantly accelerated, the German industry should not fall behind." **Reinhard Maaß**, Managing Director of the WVIS Business Association for Industrial Services explains with a view to the results of the current "WVIS Branchenmonitor 2018", which will be presented in a few days. The study provides key figures on the development and direction of industrial services.

"The industrial service has been proven to be an accelerator of industrial conversion," emphasizes Dr. Maaß. In particular, the area of smart services is growing due to the intensive use of Industry 4.0 in the companies.

"Especially the main service providers of the German economy, the small and medium-sized enterprises, are dependent on the digital competence of the industrial service providers, because they cannot build up the corresponding expertise by themselves in the short time", said Dr. Maaß.

However, the rapid digitization of the German economy also requires correspondingly efficient network infrastructures. "However, a high-performance digital high-speed network is still missing and despite all the assurances of the politicians," complains Maaß.

156 companies contributed to the results of the "WVIS Branchenmonitor 2018", with this market study being the only survey to observe both providers and customers. Both gave information on numerous questions around the still growing market segment of the industrial service in Germany:

- 4.7 percent was the average growth of industrial service providers in 2017
- 5.1 percent is the expected growth of the providers for the current year

- 3.3 percent was the growth of the top 10 in 2017
- 3.0 percent growth await the top 10 for 2018
- Growth driver is the foreign business for many industrial service providers
- Growth is driven by small and medium-sized suppliers
- Big providers grow slower or have withdrawn from crisis areas such as the energy industry
- The 60% of customers see a growing need for HR services.
- For maintenance, 50% see a growing need.
- Technical cleaning (35% of companies), maintenance (33% of companies) are services that are outsourced by most companies
- The professional competence of the employees is decided by 53% of the customers on the award of the contract

About WVIS

The WVIS (German Economic Association for Industrial Services) is a sector-overlapping interest grouping for enterprises on the industrial services sector.

The objectives of WVIS are to represent the economic interest of the fast-growing industrial services sector and, in close cooperation with our member firms, to achieve quality and sustainability by uniform standards as well as to create a common representative appearance.

In Europe, the industrial services branch represents a market volume of approximately 100 billion Euro, and about 20 billion Euro in Germany.
The WVIS was founded in 2008 and is domiciled in Düsseldorf.

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IFS study: Servitization and Aftermarket Contracts Pay Off for Manufacturers

Companies offering annual aftermarket service contracts 24% more likely to report profitability than those doing reactive field service work, as study conducted by IFS shows.

IFS, the global enterprise applications company, has released a research study of 200 executives to determine how industrial companies are progressing towards servitization — the expansion of manufacturing and product-focused companies into value-added service after the sale.

Servitization is of critical interest to industrial companies right now because growth of new product sales may be slowing, which means expanding into services is an appealing way to increase top line revenues. New technologies, including the internet of things (IoT), is enabling new service business models such as streamlined field service triggered by condition monitoring on products and equipment.

Analysts have been focusing on the desirability of servitization. McKinsey has found that the average margin for aftermarket services was 25 percent — substantialy more than the 10 percent realized on new equipment sales. According to a recent analysis by Frost & Sullivan, the North American market for calibration and repair services alone is set to reach almost $4 billion by 2022.

This study from IFS captures a snapshot of where industrial companies are currently on their servitization journey — whether they are selling products only, selling aftermarket parts, offering reactive field service, selling annual service contracts or offering asset-as-a-service or product-as-a-service — charging not for the product but for usage or productivity.

The study reveals that:

- Servitization maturity is tied to profitability of the service organization. Manufacturers involved in planned maintenance or service contracts were most likely to report service as a profit center with 62 percent reporting profitable service operations.
- 38 percent of respondents sold only products, with no aftermarket or other service revenues.
- 19 percent sold products and some aftermarket service parts.
- 15 percent sold products and aftermarket field service through break-

fix repair.
- 16 percent sold planned maintenance contracts with service level agreements (SLAs).
- Only 4 percent of respondents reported full servitization — selling products on a subscription rather than a discrete item through power-by-the-hour, fee-for-usage or revenue sharing agreements. Companies operating in this fully-servitized business model include:

  - 5 percent of metal fabrication businesses
  - 5 percent of metal fabrication businesses
  - 5 percent of companies in the oil and gas industry

The study also explores how well enterprise software used by respondents prepares them for the digital transformation servitization requires, including whether they have integrated IoT data into their business systems to facilitate service.

– The fully servitized model, where a manufacturer may deliver a piece of equipment as a service, charging based on usage or through revenue sharing with their customer, requires a high degree of technological sophistication, IFS Senior Evangelist, North America, **Tom DeVroy** said.

– But even companies selling annual maintenance contracts or break-fix repair can benefit from integrating IoT data streams with their field service management software to improve responsiveness, automate the dispatch of technicians based on conditions of the product or just to gain an understanding of how their customer is using their products so they can sell to them more effectively.

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Best regards,
EFNMS Newsletter Team

With Maintenance Greetings

Cosmas Vamvalis ***David Merbecks***
EFNMS – European Federation of National Maintenance Societies

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Heikki Jokinen
Finnish Maintenance Society, Promaint

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