

34th Annual European Seminar

‘THE IMPACT OF AGEING PROCESS PLANTS ON SAFETY, NEW TECHNIQUES TO IMPROVE SAFETY’

 **November 5th, 2019**

 **Landgoed Ulvenhart / Ulvenhout (Breda)**

Excellence in safety is the key to address the increasing complexity of industrial production processes and the increase of rules and regulations both in Europe and internationally.

Ageing infrastructure in process manufacturing industries and changes in operating regimes can adversely affect equipment integrity and reliability.

Experts in the field of plant operation will give an overview of new methodologies and techniques to improve process safety in the chemical industry and related sectors.

The 34th European AIChE seminar is an effective platform for interacting and sharing insights with industry leaders and professionals.

Location

Landgoed Ulvenhart
Heistraat 16
4858 RL Ulvenhout (Breda)
The Netherlands

Registration and information:

AIChE NL/B Secretariat
Mrs. Kitty Bentvelsen
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Fees

Participant: 130 euro
Sponsor: 110 euro

- * *Early registration discount: 10% (on or before October 7th)*
- * *Essenscia members: registration fee will be paid by Essenscia*
- * *Cancellation after October 28th cannot be accepted; delegate substitutions may be made at any time at no costs.*

 Program

13 : 30	Registration and coffee
14 : 00	Opening
14 : 15	Presentations and Q&A
15 : 45	Break
16 : 15	Presentations and Q&A
17 : 45	Closing
18 : 00	Drinks and dinner

 Speakers

Ageing Operators: Is the best yet to come?

Prof. Dr. Jop Groeneweg - Human Factors Specialist Leiden University

In his presentation Prof. Dr. Groeneweg will discuss various aspects of the influence of ageing on cognitive performance. In general it is believed that ageing has only negative effects, in his presentation he will present a more nuanced picture.

Prof. Dr. Groeneweg is a human factor specialist at Leiden University with more than 30 years' experience in a range of industries. He started his career investigating causes and backgrounds of marine accidents. In the mid eighties his field of interest moved to the petrochemical industry where he was involved in a project aimed at giving the Royal Dutch Shell plc safety performance new momentum. A research team including Manchester and Aberdeen Universities together with Shell developed a range of tools that are now mainstream in the industry (e.g. Tripod, the Hearts & Minds tools, the Life-Saving Rules).

More recently he was involved in a project together with the Dutch Research Institute TNO aimed at developing a process approach to Learning from Incidents. Many organizations could prevent so-called recurrent accidents if they would effectively implement the lessons from incidents. This is not a matter of buying a better investigation method but requires management of the process starting with reporting the incident to measuring the effect of the interventions.

His latest research involves transferring knowledge for the petrochemical domain into health care and vice versa. Patient safety is an area where much can be gained using the tools developed in the oil and gas world, while the experience of hospitals to deal with complex organizational settings could benefit the rest of the industry. As an advisor he helps organizations to identify the strong and weak points in the way they manage safety and helps them to structure their efforts in a more efficient and effective way to improve safety.

Lessons Learned From Incidents - Bypassing of Interlocks

Geert Vercruyse - Project Coordinator BASF

On August 21st, 2017 a power failure resulted in the trip of different sections of a major petrochemical complex in the Netherlands. During the restart, a fire started at one of the furnaces. The investigation report showed that the root cause of this incident was the bypass of a low flow interlock which prevented the overheating of a furnace during start up.

This root cause may have been a trigger to review the management of bypassing safety critical items in a production plant. The results of this review will be shown and used as a basis for discussion.

Ir. Geert Vercruyse graduated in 1992 at the University of Ghent. He started his career at BASF Antwerp as a production manager for the EB/Styrene plant where he became project manager in 1998 and plant manager in 2001. As of 2004 he became plant manager at the Steamcracker, which is also located on the Antwerp site. In October 2012 he took the responsibility of the Butadiene Project as Project Manager. At the moment he is responsible as program manager for several projects at the BASF Antwerp site.

Since October 2010 Geert combines his professional activities with the role of guest professor in Process Safety Engineering at KU Leuven where he teaches "Process Safety of Unit Operations" and supports the master course "Hazardous Materials and Safety in the Process Industries", in cooperation with Essenscia.

Normalization of Deviation

Tijs Koerts - Operation Director of the European Process Safety Centre

Many large industrial accidents with hazardous chemicals have in the root cause a contribution from human involvement. Sometimes people deviate for very good reasons from a developed procedure, while not fully understanding the hazard and while not being corrected by peers or leaders. A famous example is the Texas City refinery incident (see the CSB film Anatomy of a Disaster – available on YouTube). This phenomena has obtained its own name: "Normalization of Deviation". Some examples will be discussed as well as manners how to recognise these and improve behaviour.

Tijs Koerts studied chemistry at the Utrecht University and obtained a PhD at the Eindhoven University of Technology. He got his process safety experience at DuPont, GE plastic and Lyondell Basell Industries, where he worked with all kinds of hazardous processes in both technical, operational and business roles. He is a passionate coach, trainer and speaker on the subject. Further he is leading the European Process Safety Centre (EPSC) that provides a platform for the industry to learn together on Process Safety.

Ageing and Corrosion

Arjan Reinders - Metallurgy and welding engineer at McDermott

Arjen Reinders is a metallurgy engineer for nearly 20 years at McDermott (former Lummus), The Hague. As a metallurgy engineer, he has worked on Licensor Packages, BDEP, FEED and EPC projects, wherein he is responsible for the appropriate material selection. He has also been involved in Risk Based Inspection (RBI) studies for new and existing plants. He has worked on Plant Life Expectancy Studies for ethylene and delayed coking units. As welding engineer (since 2016) he is also responsible to validate welding documentation (Welding Procedure Specification / Procedure Qualification Record) for critical equipment.

Many petrochemical plants are past their original design lifetime but are still being operated for many years to come. Whilst these plants are inspected and maintained in various ways, this may impose risks. Depending upon the applicable process conditions involved it may result in specific damage mechanisms. The plant design is based on the damage mechanisms and design life but several damage mechanisms are time dependent and therefore in the light of lifetime extension, it is important to assess the current situation of these plants and to make estimates of residual lifetime. For more than 25 years McDermott has developed and successfully applied a specific methodology called "Plant Life Expectancy Study", which is assessing the current situation of a plant asset and evaluating the possibility to extend lifetime. This presentation will outline the plant life expectancy study and the underlying principles as provided by McDermott as a support for investment decisions or future plant operation.

Yes, I would like to attend the 34th Annual European Seminar
**'The impact of ageing process plants on safety, new techniques to
improve safety'** on Tuesday November 5th, 2019.

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