



Workshop:
Optimizing food production: Hygienic design for safety and efficiency
 Organized by EHEDG (European Hygienic Engineering & Design Group)

13:00	EHEDG, the global authority on hygienic design providing savings and gains in food processing	Adwy van den Berg, EHEDG Director (Netherlands)
13:20	Incident review	Matilda Freund, EHEDG Treasurer (Switzerland)
13:50	Food Safety and Hygienic Design	Gerhard Schleining, EHEDG Trainer (Austria)
14:20	Food Safety Starts with Hygienic design	Hein Timmermann, EHEDG president (Belgium)
14:50	Questions and Answers	Miomir Niksic, EHEDG Trainer (Serbia)
15:00	Coffee break	
15:30	Basics Hygienic Design principles	Hein Timmermann, EHEDG president (Belgium)
16:30	Questions and Answers	Miomir Niksic, EHEDG Trainer (Serbia)
16:50	Closing remarks	Hein Timmermann, EHEDG president (Belgium)
17:00	End	

EHEDG, the global authority on hygienic design providing savings and gains in food processing

Adwy van den Berg, EHEDG Director, Netherlands

The origin and the stakeholders of EHEDG, upgrading process lines with hygienic design—self draining pipes, crevice free welds, closed loop CIP manifolds—does more than satisfy auditors. It trims water, steam and chemical use, recovers product that once went down the drain, stretches equipment life and keeps operators out of harm's way, all while shaving minutes off every change over. Because those savings hit multiple cost buckets every day, most plants see the capital back quickly and keep enjoying cleaner, greener, more reliable production.



Adwy van den Berg has served as the Director of EHEDG since the foundation relocated from Frankfurt to Amsterdam in 2021. With a creative mind and extensive experience in marketing, Adwy brings a passion for business and a commitment to people in all his activities. Adwy has held various international marketing and sales leadership positions, developing commercial strategies, creating innovative products, and managing key account teams. His energetic and motivational leadership has inspired teams to achieve ambitious goals. Under Adwy's leadership, EHEDG has seen solid

growth in memberships and initiatives. The organisation now offers over 60 guidelines on hygienic design, covering topics from general principles to equipment for dry and liquid food. EHEDG is known for its high-quality courses and rigorous testing and certification methods, ensuring companies meet stringent food safety standards. In collaboration with EFFoST, EHEDG introduced the EYE Mentorship Programme, offering young professionals the opportunity to learn from experienced industry leaders. This initiative exemplifies Adwy's dedication to fostering the next generation of talent in the food industry.

Review of Hygienic Design related industry incidents

Matilda Freund, EHEDG Treasurer, Switzerland

Food Safety is the first priority for companies involved in the production of food and companies openly share information on food safety as it is considered non-competitive. The negative consequences of a recall by one company will impact the entire category and, in the worst case, when the recall is associated with severe illness, there is an erosion of public trust in the overall food supply. In the past few years there have been a number of high-profile recalls which demonstrated this effect.

The food industry is truly global with raw materials and finished products being shipped around the world. Global events such as economics, politics, climate and war put pressure on the supply chain and have the potential to create an increased risk. As a result, despite the focus that is placed on safe food production, from time to time, there can be issues leading to contamination events. It is important to understand the root causes of these incidents and learn from them in order to prevent reoccurrence. This talk will discuss the root cause of events when it is related to the hygienic design of the equipment or factory infrastructure.



Dr. Matilda Freund is currently the President of Freund Consulting Company which specializes in food safety consulting. She also serves as the Treasurer and is a Foundation Board Member of EHEDG. She has been active in EHEDG for over 20 years and has served as President as well as on the Advisory Board before assuming the current role of Treasurer. In addition, Dr. Freund is leading an EHEDG working group writing a guideline focused on improving the safety and cleanability of chocolate manufacturing equipment. Dr. Freund is also a Board Member and the Ambassador Director of GHI (Global Harmonization Initiative). Dr. Freund has over 30 years of experience in the food industry and recently retired from Mondelez International where she

served as Global Vice President of Food Safety. Prior to that role, she was Vice President, Global Consumer Quality as well as European Quality Lead. Over her career, she held various positions in Microbiology, Sanitation, Research and Development, and Production Management. Dr. Freund holds Master's and a PhD degrees in Food Science and Human Nutrition and a Bachelor of Science in Microbiology and Cell Science from the University of Florida. She currently resides in Zurich, Switzerland.

Food Safety & Hygienic Design

Gerhard Schleining, EHEDG authorized trainer, Austria

Besides people and environment, also equipment is a potential hazard for food safety. HD can be seen as preventive measure. A design which enhances cleanability does not only save time and costs but prevents also the growths of microorganisms, the formation of biofilms and the contamination with unwanted items like lubricants, screws, etc. In many cases operational safety requirements conflict with hygienic requirements. The interpretation of regulations and standards must always be done in relation to the local situation, the specific product and process requirements, the available equipment, the qualification of the staff and the environment. A lot of knowledge and experiences and sometimes simple solutions are available in form of guidelines.



Dr. Gerhard Schleining graduated in Food and Biotechnology and is retired after more than 35 years experience in research and teaching in food physics and food quality and food safety management at the [BOKU](#) University Vienna, where he was responsible for education and coordinated several years an international Master programme “[Safety in the food chain](#)”. Dr. Schleining has many years experiences in EU-funded projects related to innovative teaching materials, methods and tools and he coordinated 2 Erasmus+ projects, [FoodD-STa](#) a Food Studies and Training Alliance between the food industry and universities in Europe and [SEA-ABT](#), a capacity building project to establish an Academy of Beverage Technology in South East Asia. He has organized and delivered highly regarded workshops on food safety and hygienic design across the globe, including in Austria, China, France, Kazakhstan, Thailand, Turkey and Vietnam. In addition to his academic role, Dr. Schleining was 15 years Secretary General of the [ISEKI-Food Association](#). Dr. Schleining's is still engaged in several international non-profit organisations like [ICC](#) (Internat. Assoc. for Cereal Science and Technology), where he served as president in 2022 and 2023 in the area of cereals and in [GHI](#) (Global Harmonisation Initiative) in the area of food safety and food security. As member of [EHEDG](#), he co-authored guidelines on dry materials handling. He serves as the Chair of the regional section EHEDG Austria and contributes to the EHEDG Training & Education Working Group.

Food Safety Starts with Hygienic design

Hein Timmerman, EHEDG president, Belgium

EHEDG, the European Hygienic Engineering and Design group is a leading source of hygienic design and engineering expertise, with a global reach and enhances food safety and quality across the whole industry. The goal of EHEDG is to raise awareness of hygienic design and engineering, develop guidance and solutions, provide a platform to promote our expertise and facilitate networking across the world. In a recent EFSA publication of 19 January 2024, it is clearly concluded that common risk factors for persistence in the food and feed processing environment (FFPE) are inadequate zoning and hygiene barriers; lack of hygienic design of equipment and machines; and inadequate cleaning and disinfection. EHEDG has an inventory of over 50 documents addressing 10 focus areas, to better serve the food and hygienic design market in a time of rapid industrial and technological changes. The Global Food Safety Initiative (GFSI) had dedicated 2 specific technical scopes on hygienic design(HD): the JI : for Suppliers of Food Building and Processing Equipment to incorporate HD in business processes and the JII : for Food Producers to incorporate HD into existing GFSI scope. EHEDG has published a white paper on these scopes to provide substantial practical insights, as well as a new guideline N°58 on Hygienic Design Risk Management that will be published in the coming month, and offers dedicated training programmes to support a full integration of HD within a food safety culture.



Hein A. Timmerman, MSc. is Global Sector Specialist for Diversey, a Solenis company. He has 39 years of experience in food and beverage engineering, sales management, business development and technical management. He also has expertise in processed food technology, Open Plant Cleaning (OPC) and Clean-In-Place (CIP) technology. Before joining Diversey, Hein Timmerman worked for Alfa Laval in Food & Beverage. He is the President of the European Hygienic

Engineering & Design Group (EHEDG), authorized hygienic design trainer, chairman of the Belgian regional section and holds the chair of the global working group on CIP. Timmerman holds a master's degree in food technology from the University of Ghent, Belgium, and a Master of Business Administration from EHSAL-European University College, Brussels, Belgium. He is lecturing in various organizations and contributing to several technical books.



Prof Dr Miomir Niksic is Full professor at UDG -University of Donja Gorica, Faculty for Food Technology, Food Safety and Ecology, Montenegro and full professor of Industrial Microbiology and Applied Mycology at the University of Belgrade -Faculty of Agriculture, Department of Industrial Microbiology, Institute of Food Technology and Biotechnology, Serbia. He was a visiting professor at the University of Auckland (New Zealand), Iowa State University(USA), and China. Teaching graduate and postgraduate students, in microbial control of food and food safety, applied mycology and solving technological troubleshooting traceback problems in food and

pharmaceutical companies. Researcher and developer of new products for the food industry and dietary supplements for the pharmaceutical industry. Over 40 years of experience in fungal science with a main focus on the structure and function of biologically active components. Also, Prof Niksic is a consultant for the food safety industry and a trainer for Hygienic Engineering and Design. He is also member of editorial board of IMM journal, Ex-President of Serbian Mycological Society, President of EHEDG-Serbia and Ambassador of GHI (Global Harmonization Initiative) for Serbia. He Published over 210 scientific papers and 5 books and chapters in textbooks and was leader and coordinator of 16 national scientific projects and 7 international projects.