



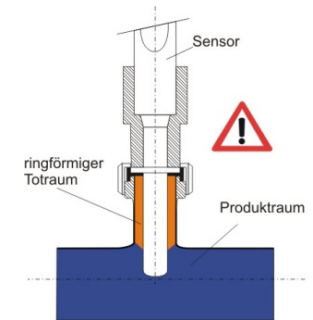
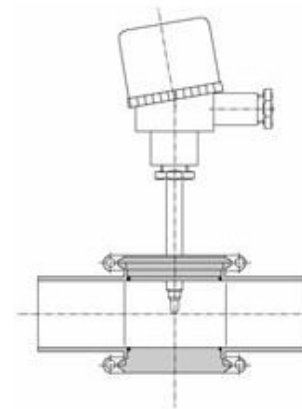
Introduction of EHEDG

Problem Statement

Although equipment manufacturers and food companies comply with standards and regulations, numerous food-borne diseases happen every year as a result of not hygienically designed food processing equipment, process lines or plants.

Important reasons for such failures are the following major gaps:

- Lack of practical guidelines
- Lack of education



What is EHEDG?

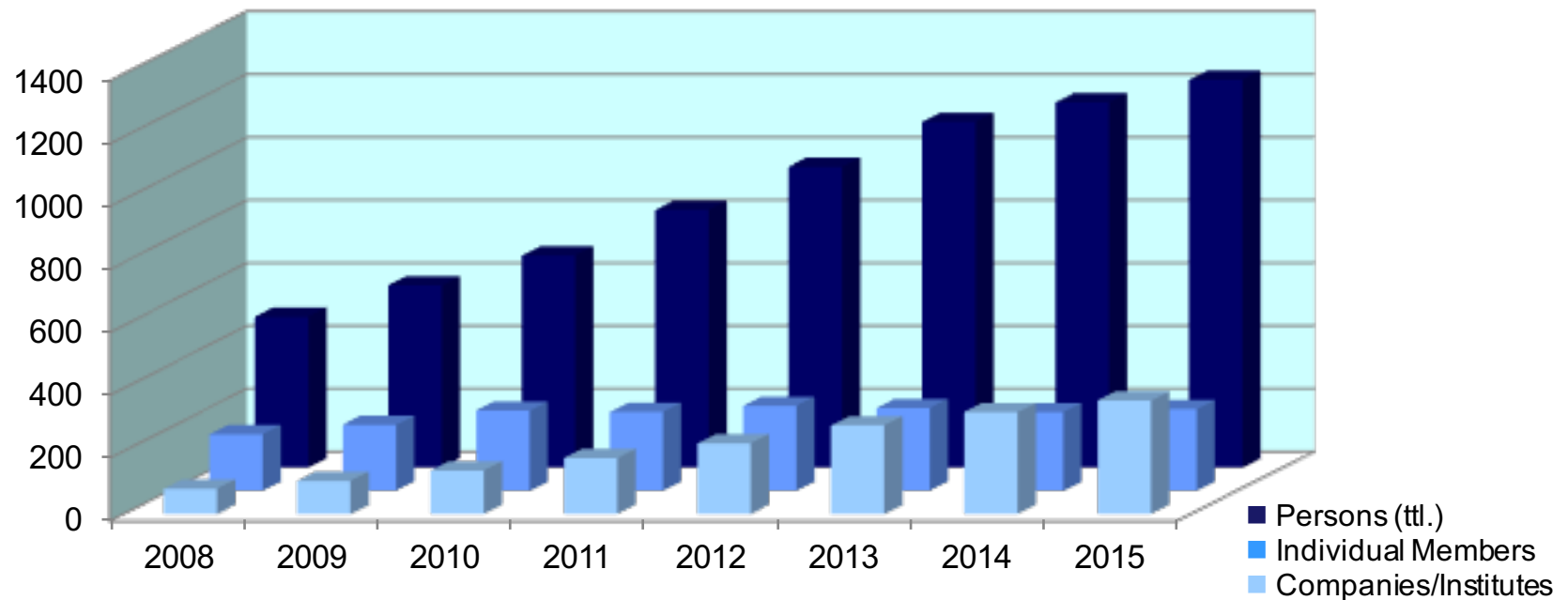
EHEDG was founded 1989 as a non-profit consortium of:

- Equipment manufacturers
- Food industries
- Suppliers to the food industries
- Research institutes and universities
- Public health authorities

Since that time, the European Hygienic Engineering & Design Group is guiding the industry in hygienic design solutions by offering practical guidelines, test procedures, training and education.

Our Mission: "EHEDG enables safe food production by providing guidance as an authority on hygienic engineering and design".

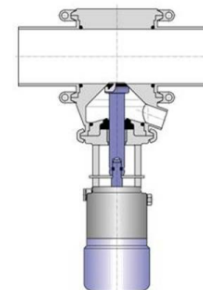
Membership Development



September 2015:
 about 1,230 main contact persons world-wide
 260 individual members
 361 member companies and institutes
 with many thousand EHEDG resources behind

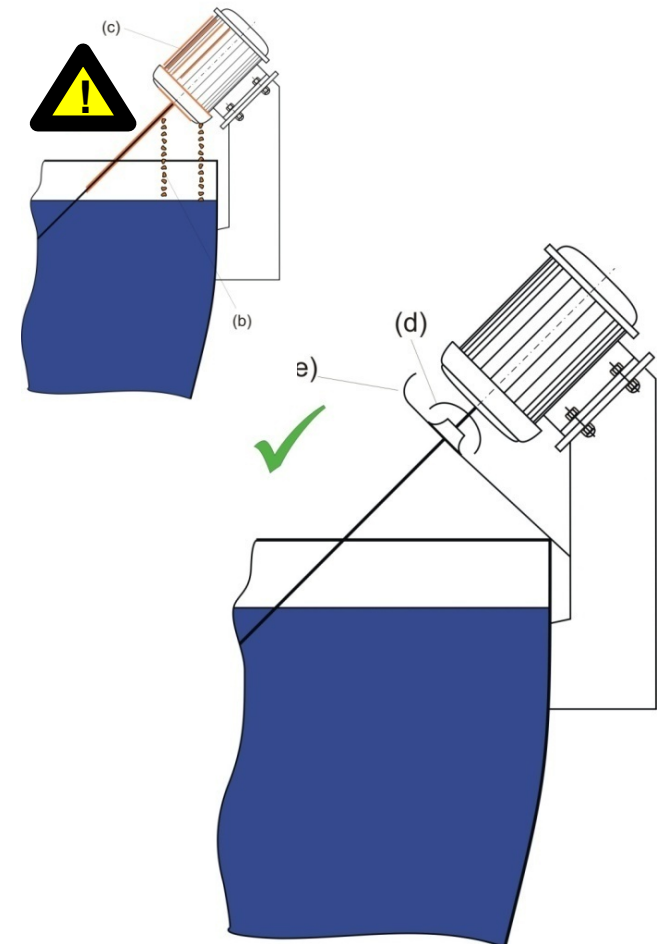
Tasks and Objectives (1)

- Fill the existing gaps by practical guidelines and education
- Offer expertise, networking and further development in the fields of hygienic engineering & design and safe food production
- Prepare scientific and technical guidelines on all aspects of state-of-the-art hygienic design requirements in accordance to EU legislation
- Develop test methods in order to identify and reduce hazards of equipment used in food production



Tasks and Objectives (2)

Offer training courses, seminars and workshops
Understand the difference between
Mechanical Engineering and Hygienic Engineering

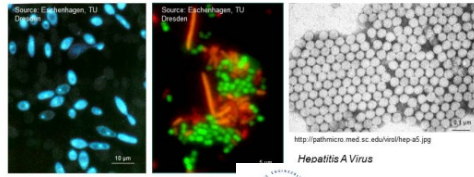


Training and Education

- EHEDG provides international, high-level training & education. Our training material is developed by recognized experts in the field and translated into many languages
- The “**International Advanced Course on Hygienic Design**” is standardized and offered in many countries. Successful attendees are published on the EHEDG webpage (if agreed).
- EHEDG courses 2015: **Germany, Italy, Japan, Mexico, NL, USA, Spain, Taiwan, Turkey, France, Denmark**

(Micro)biological contamination
Microorganisms

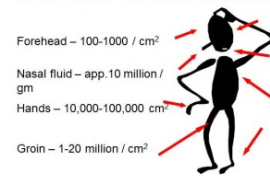
- yeasts and moulds, algae; bacteria; viruses (can not survive on surfaces)



Saccharomyces cerevisiae red: *E. coli*, green: *E. coli*, orange: *Salmonella*

Hepatitis A Virus

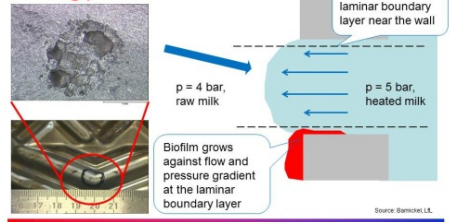
Contamination routes
Human error - Contamination source No.1



Contamination Source	Approximate Count
Scalp	approx. 1 million / cm²
Forehead	100-1000 / cm²
Nasal fluid	app. 10 million / gm
Hands	10,000-100,000 cm²
Armpit	1-10 million / cm²
Feet	1 million / cm²
Faeces	greater than 100 million / gm

Guide to GMP, Revision Annex 1, 2003)

Water-filled corrosion pit in a stainless steel heating plate



No flow at the laminar boundary layer near the wall

$p = 4$ bar, raw milk

$p = 5$ bar, heated milk

Biofilm grows against flow and pressure gradient at the laminar boundary layer

Source: Barmickel, L.A.

Regional Sections

EHEDG is growing world wide and has members in 55 countries today

Existing Regional Sections (29):

Armenia, Argentina, Belgium, Brazil, China, Croatia, Czech Republic, Denmark, Germany, France, India, Italy, Japan, Lithuania, Macedonia, Mexico, Netherlands, Nordic (FI, S, NO), Poland, Russia, Serbia, Spain, Switzerland, Taiwan, Thailand, Turkey, Ukraine, U.K., Uruguay



A global network!

EHEDG Publications

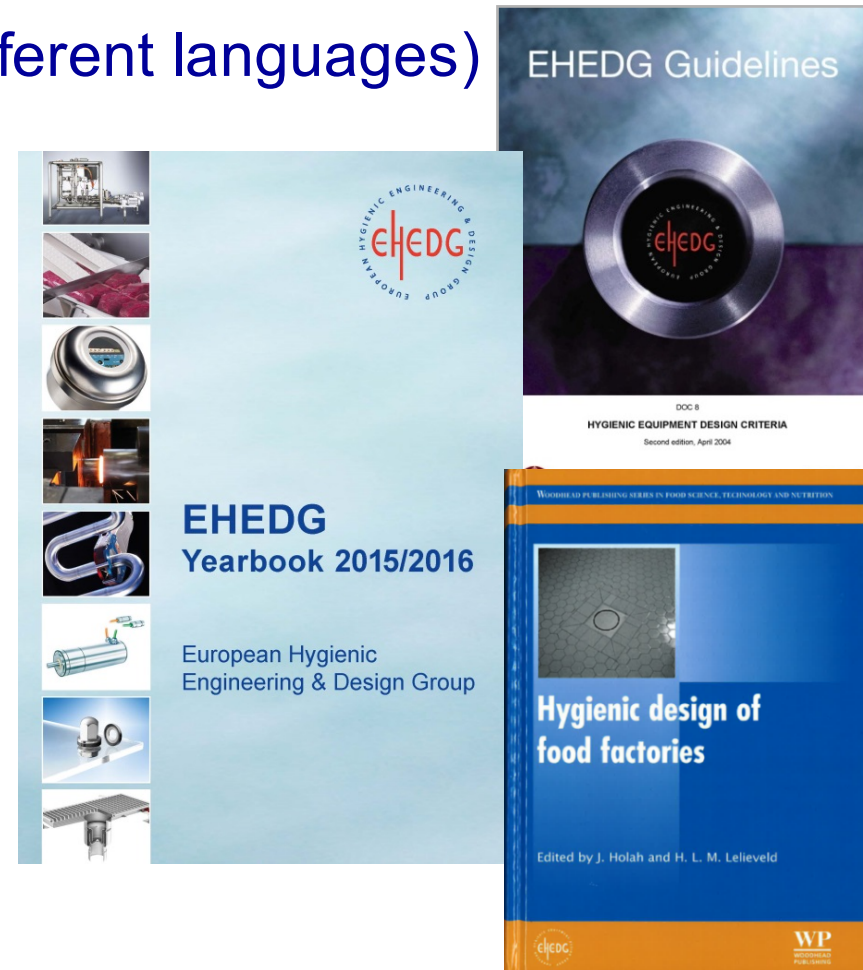
44 guidelines (many available in different languages)

Yearbook – new issue 2015/2016

Handbooks:

- *Hygienic Design of Food Factories**
- *Hygiene in Food Processing **
- *Handbook of Hygiene Control in the Food Industry **

Articles in technical press and
Selected journals: *New Food*,
Food Engineering, *Journal on*
Hygienic Engineering & Design
and others





EHEDG Website

The website www.ehedg.org is the major EHEDG information and communication platform available in many languages

1989-2014
EHEDG
25 Years

WELCOME TO EHEDG
THE EUROPEAN HYGIENIC ENGINEERING & DESIGN GROUP

HOME

Home Training & Education Guidelines Certification

Home
More about EHEDG
Regional Sections

Welcome to EHEDG

The European Hygienic Engineering & Design Group (EHEDG) is a consortium of equipment manufacturers, food industries, research institutes as well as public health authorities and was founded in 1989 to promote hygiene during the processing and packing of food products. The principal goal of EHEDG is the promotion of safe food by improving hygienic engineering aspects of food manufacture. EHEDG actively supports European legislation, which requires that handling, preparation and packaging of food is done hygienically using hygienic machinery and in hygienic premises (EC 2006/42/EC for Machinery, EN 1672-2 and EN ISO 14159 Hygiene requirement).

The EHEDG mission is defined as:
"EHEDG enables safe food production by providing guidance as an authority on hygienic engineering and design for food manufactured in or imported into Europe". The mission statement of the EHEDG Statutes which were extensively revised in the past years and relaunched in January 2014.

For more information please download

- the [EHEDG Statutes](#)
- the [organisational chart](#)
- the [EHEDG brochure](#)
- the [EHEDG benefits](#).

Please have a look at the EHEDG Introduction movie (turn on the sound). Duration: 4:15 min.

Select your country

- Organisation
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- Macedonia
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- USA

Select your language

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EHEDG Working Group Valves

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