The State of Hygienic Engineering and the Challenges of EHEDG

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- Challenges of EHEDG
- Mechanical Engineering / Hygienic Engineering
- Mechanical design versus Hygienic Design
- Hygienic design criteria for open and closed equipment

Still millions of food born diseases killing thousands of people every year as a result of not hygienically designed food processing equipment, process lines or plants.

Side effects: Loss of *product* (spoilage, quality defect), cleaning costs↑, production time ↓.

Although manufacturers and food companies comply with legal requirements and implemented GMP and HACCP,

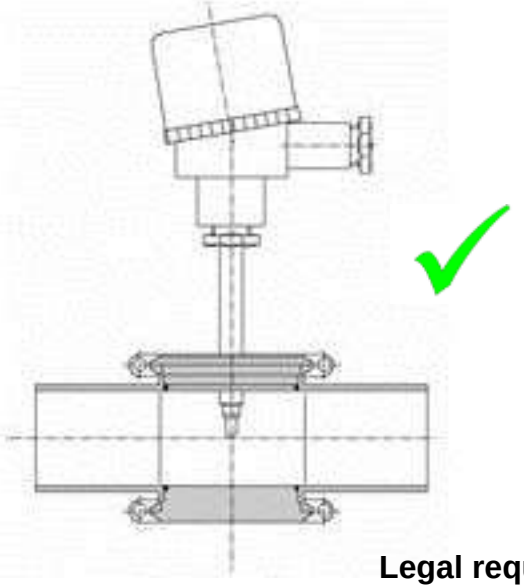
there are two major gaps.

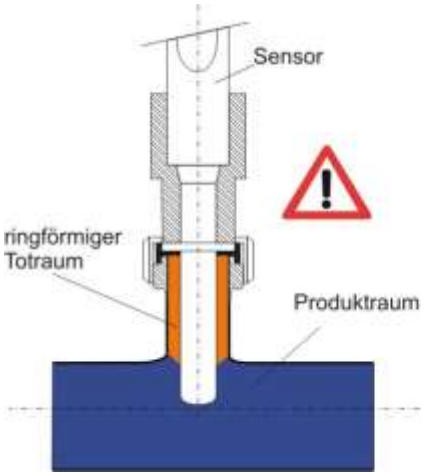
Lack of practical guidelines

educational gap

Designers and engineers talking in pictures but have to do their job in accordance to legal requirements.

EHEDG delivers guidance to the industry by developing illustrated guidelines, practical test procedures and animated training material to make legal requirements easy understandable.





Legal requirements: Easy cleanable

EHEDG Challenges

- **To fill existing gaps EHEDG develops practical guidelines, education material and test procedures and makes it public world wide in local languages**
- Working voluntary in a demanding market
- Discussion and further development of Hygienic Design issues
- Preparation of scientific and technical guidelines on all aspects of state-of-the-art hygienic design requirements and in accordance to legislations
- Development of test methods to identify and eliminate HACCPs of equipment used in food production
- Offer lecture, training courses, seminars and workshops on Hygienic Design
- Strengthen the participation in standardisation bodies like CEN, ISO, DIN, JIS, 3-A and NSF etc.
- Strengthen the cooperation with the legislation bodies
- Strengthen the cooperation with universities
- Improve PR activities to disseminate Hygienic Design know-how

Regional Sections World Wide

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

Existing Regional Sections:

Armenia, Belgium, Croatia, CzechRepublic, Denmark, Germany, France, India, Italy, Japan,Lithuania, Macedonia, Mexico, Netherlands, Nordic(FI, S, NO), Poland, Russia, Serbia, Spain, Switzerland, Taiwan, Thailand, Turkey, Ukraine

Coming soon / in the course of formation:

Bulgaria, Brazil, China, Latvia, Romania, U.K., USA

A global network!

for further information see www.ehedg.org

Regional Sections

Regional Committees:

Each Regional Section has a Regional Committee (RC) consisting of a Chairman, a Secretary, a Treasurer and at least two Members at Large. The RC must have representatives from the Food Industry, Equipment Manufacturers, Research & Development Organisations and – if possible - Health Authorities.

The RC reports to the Executive Committee of EHEDG. Membership of the RC must be proposed to and approved by the Executive Committee of EHEDG. The RC will meet at least once a year.

Maintenance of the EHEDG Website:

All language versions of the EHEDG website **www.ehedg.org** are intended to be identical to the original English version at all times. Regional related information shall be added by the regional Administrators.

EHEDG Regional Sections – World-Wide Network

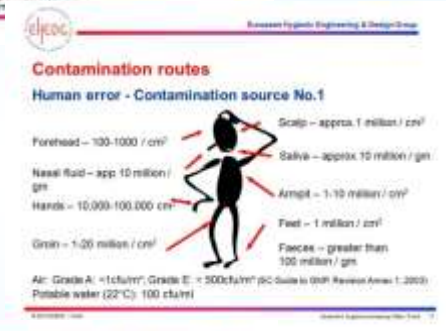
EHEDG Offices in 26 Countries

Make use of the EHEDG to strengthen your relations with the important market players who are part of our network and also involve your subsidiaries abroad. Please recommend us and let us know of your contacts at site – our Regional Section Chairmen will gladly approach them!

We get you connected to our experts in many countries. Hereby, your staff members can learn from EHEDG at first site world-wide and on a high-level.

EHEDG Education and Training

- The International Advanced Course on Hygienic Design based on the EHEDG training material is standardized and can be offered worldwide
- EHEDG courses in 2014:
  Belgium, Germany, Italy, Japan, Mexico, Netherlands, USA, Spain, Taiwan, Turkey.
- Names of certified EHEDG course attendees are published on the EHEDG-Website.
- Hygienic Design as lecture course based on the EHEDG training material are offered by varies Universities.
- Future trends to establish a bachelor/master degree in Hygienic Design based on the EHEDG training material



EHEDG Publications

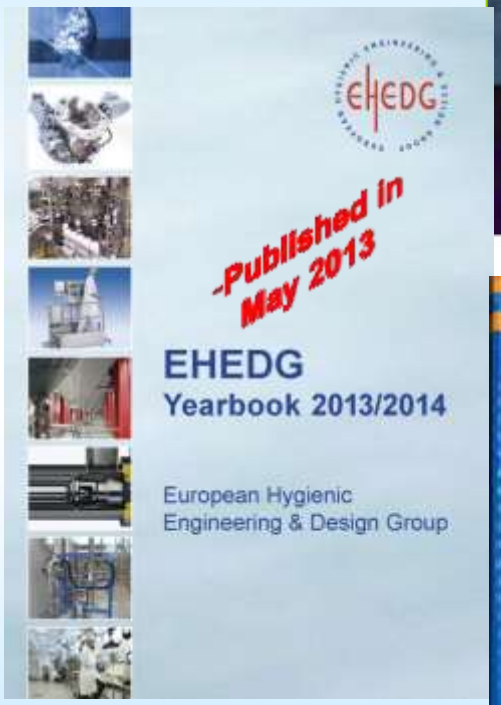
42 guidelines (many available in different languages)

Extended guideline summaries available in
Trends in Food Science and Technology

Yearbook – new issue 2013/2014 recently published

Woodhead Handbooks:

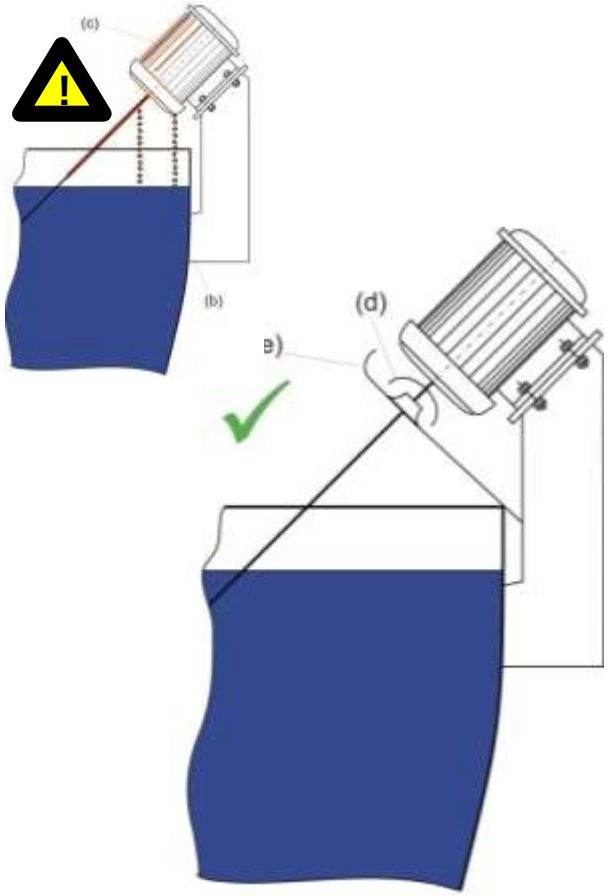
- *Hygienic Design of Food Factories**
- *Hygiene in Food Processing (second edition available as of January 2014) **
- *Handbook of Hygiene Control in the Food Industry **
  Articles in technical press and journals:
  New Food, *Food Engineering,*
  Journal on Hygienic Engineering & Design and others



EHEDG members receive a 35 % discount on above Woodhead publications

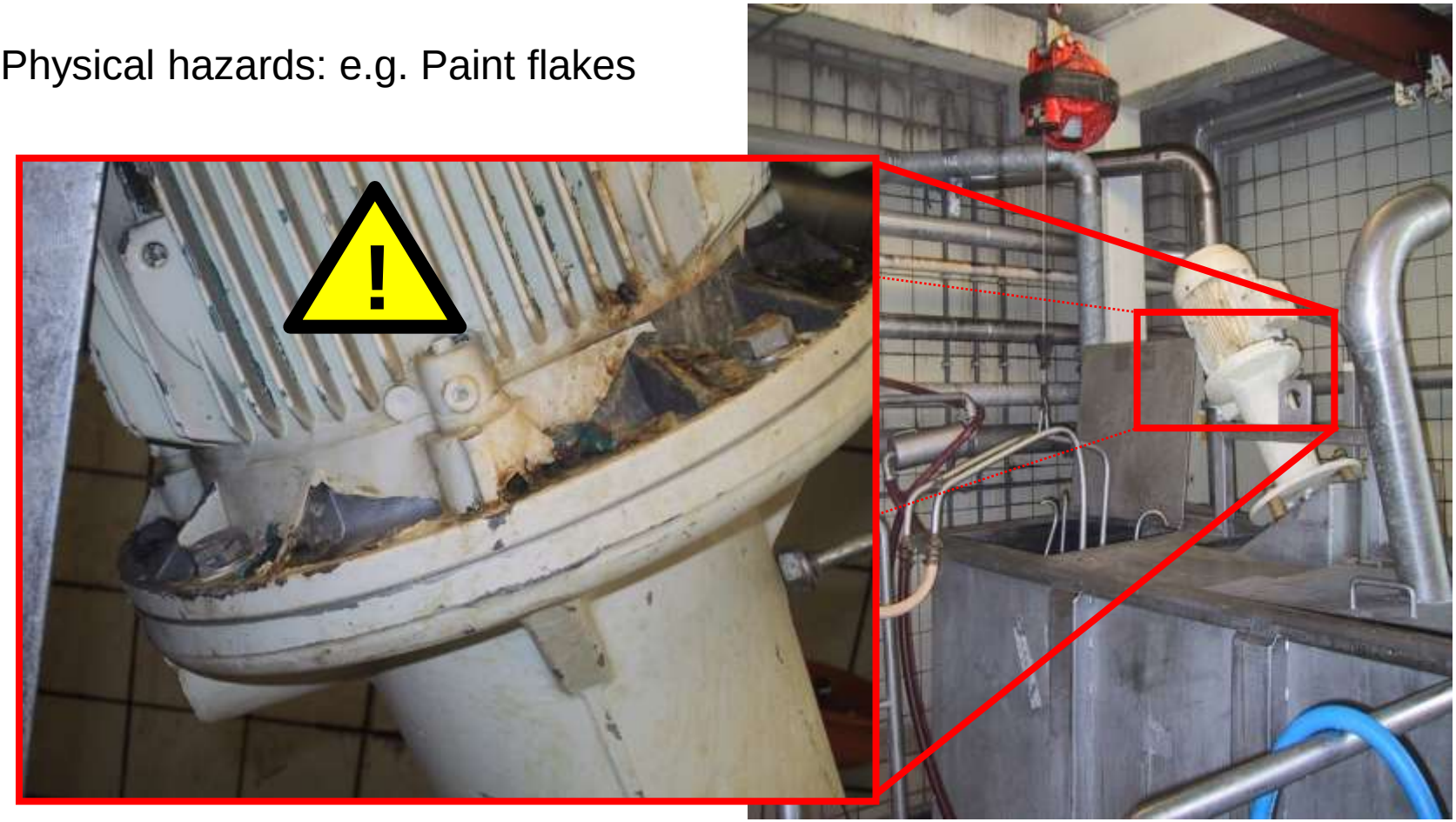
Mechanical Engineering / Hygienic Engineering

Arrangement of ancillary equipment

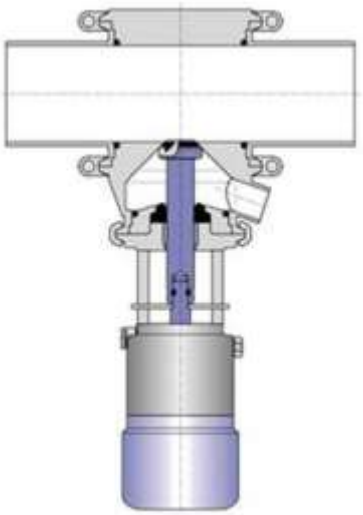


Arrangement of ancillary equipment

Physical hazards: e.g. Paint flakes



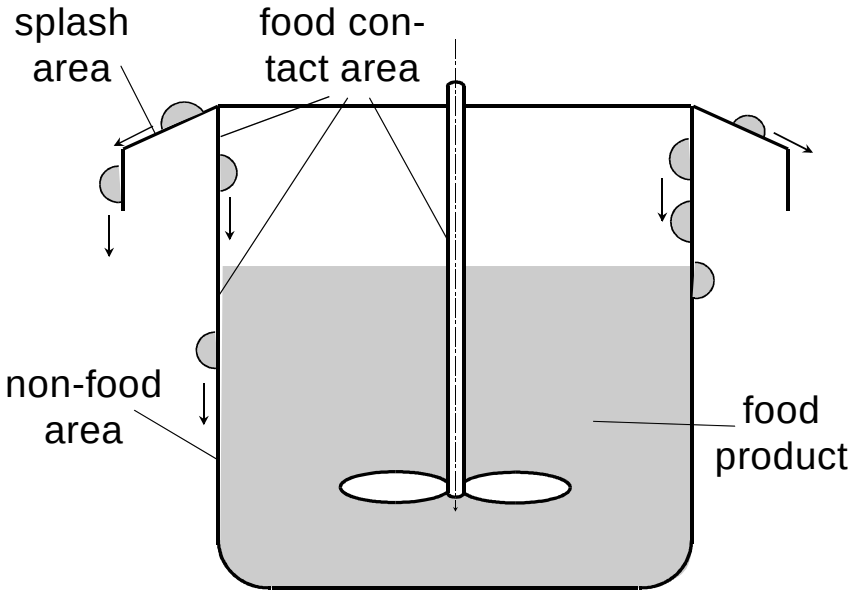
Mechanical Design / Hygienic Design



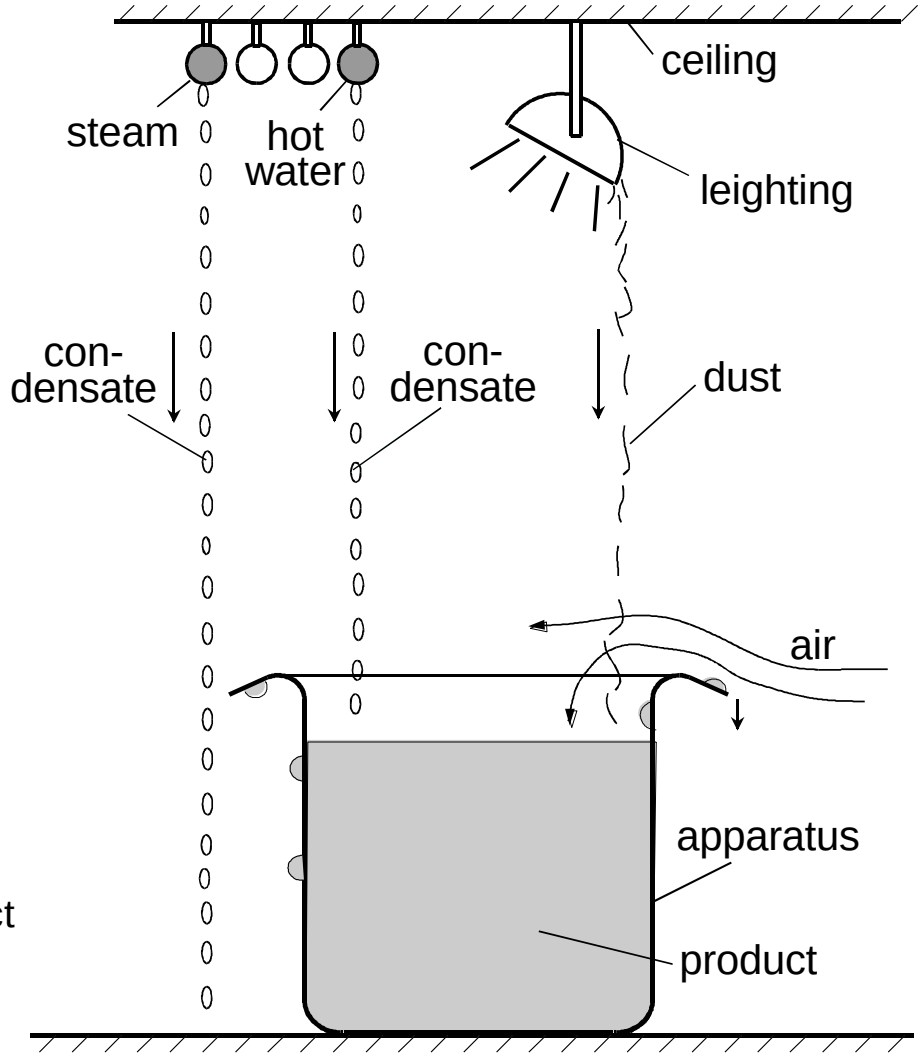
Product contact surfaces

The machinery surface which are exposed to the product (**direct**) and from which the product or other materials can drain, drip, diffuce or be drawn into (self returned) the product or product container (**indirect**).

According EN 1672-2, ISO 14159



According EHEDG

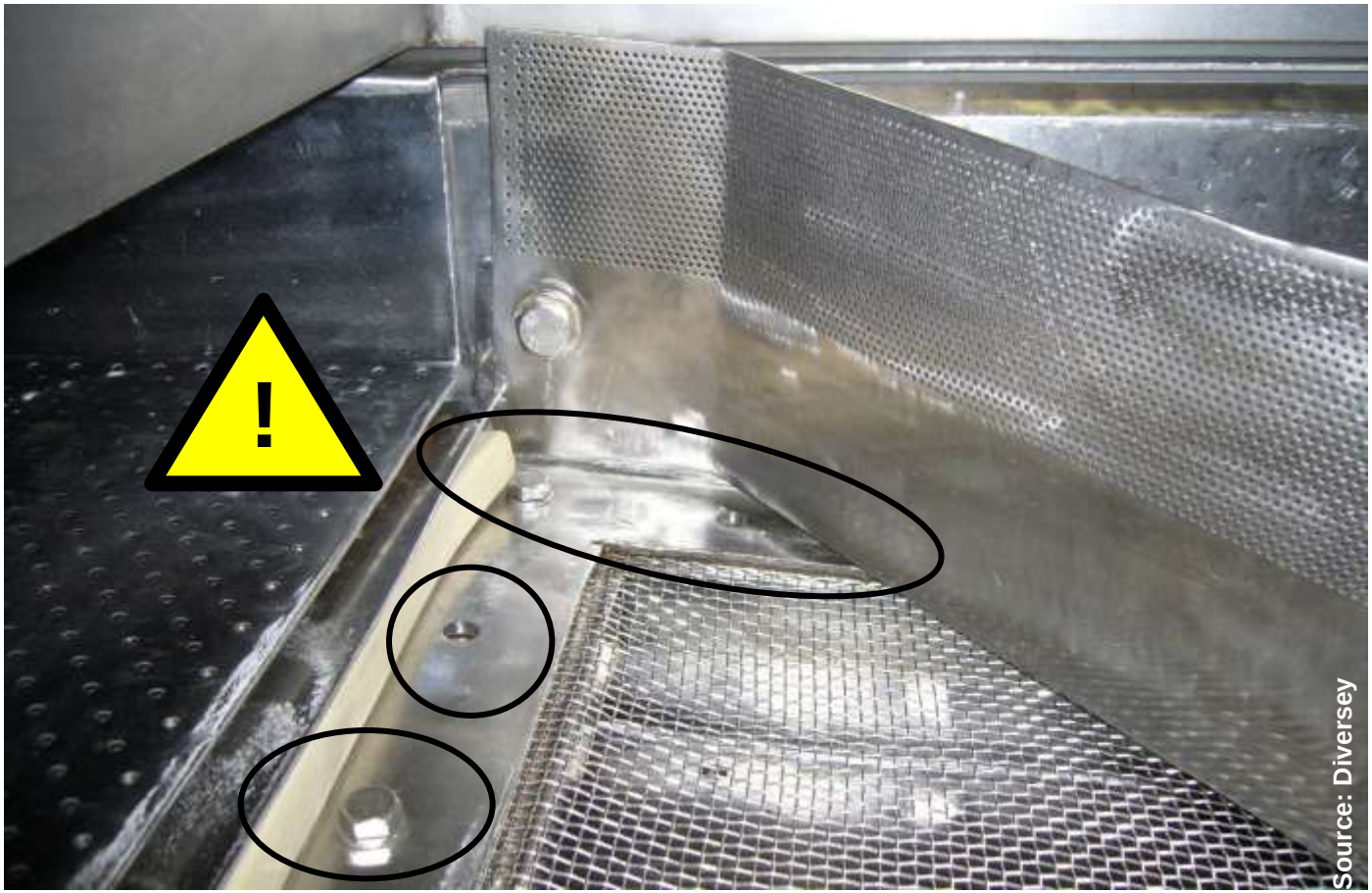


Indirect product contact area

If possible: Keep it dry, high pressure cleaner?

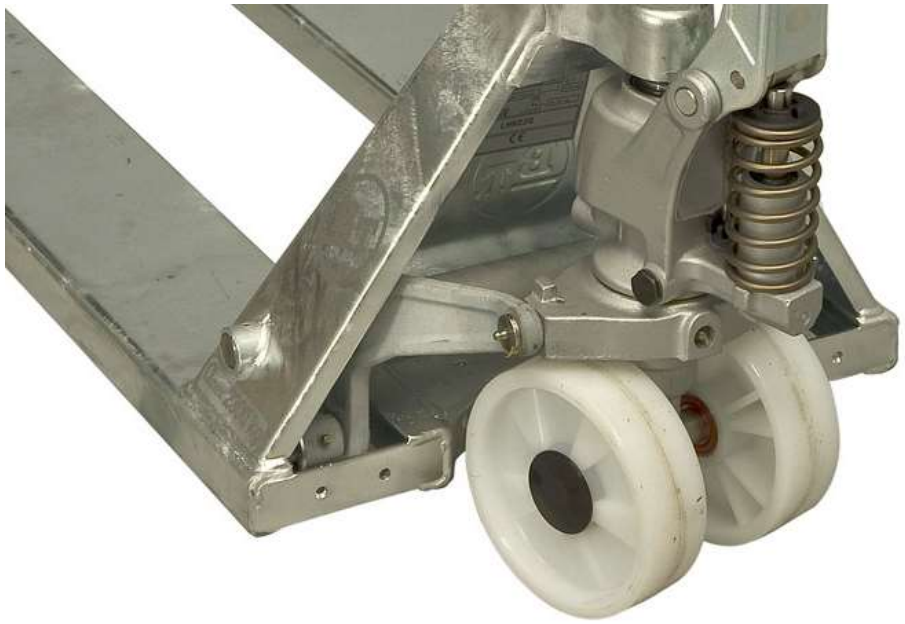
Stagnant water

Example: Joints



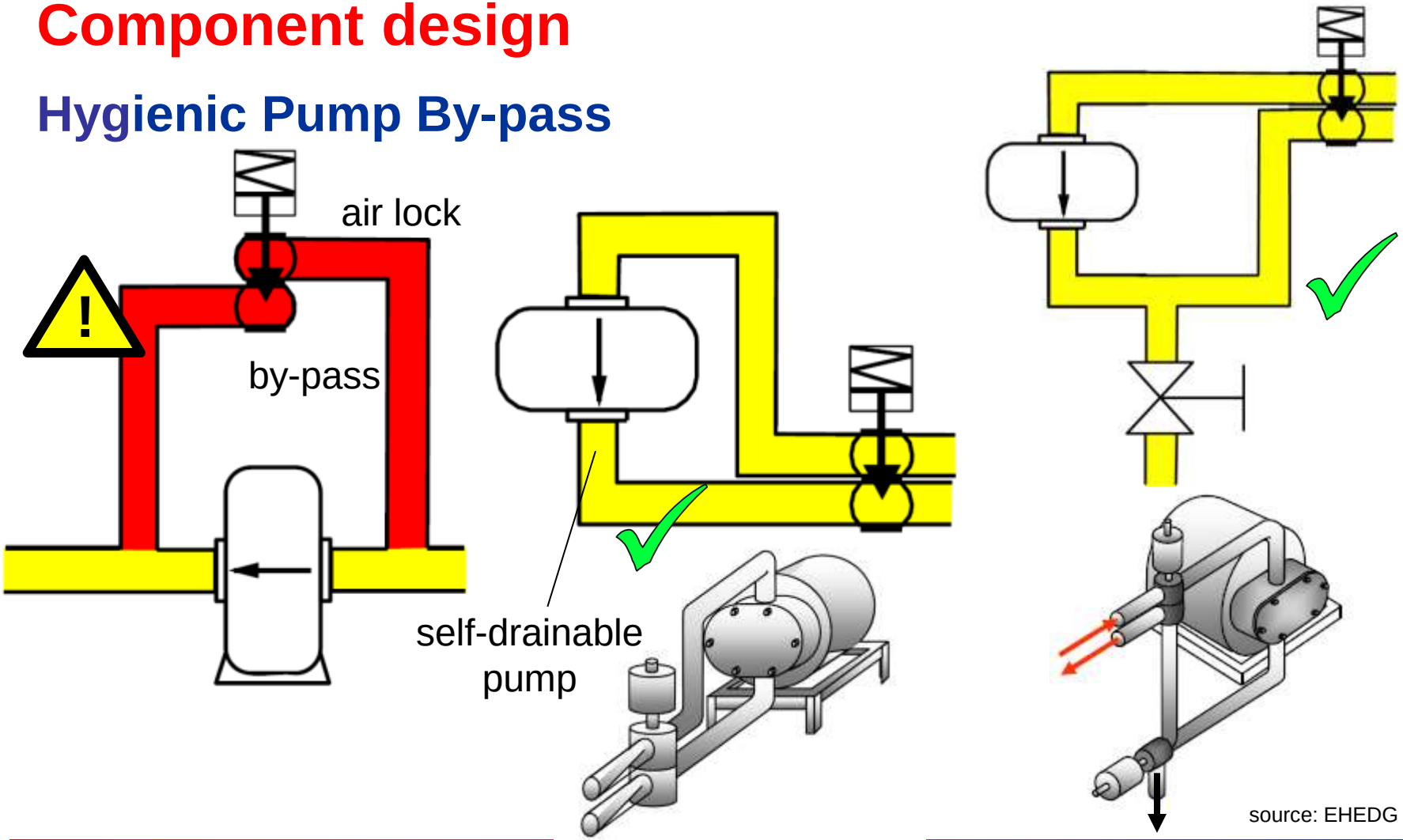
Drainability of condensates

Example: Joints and Surfaces on Forklifts



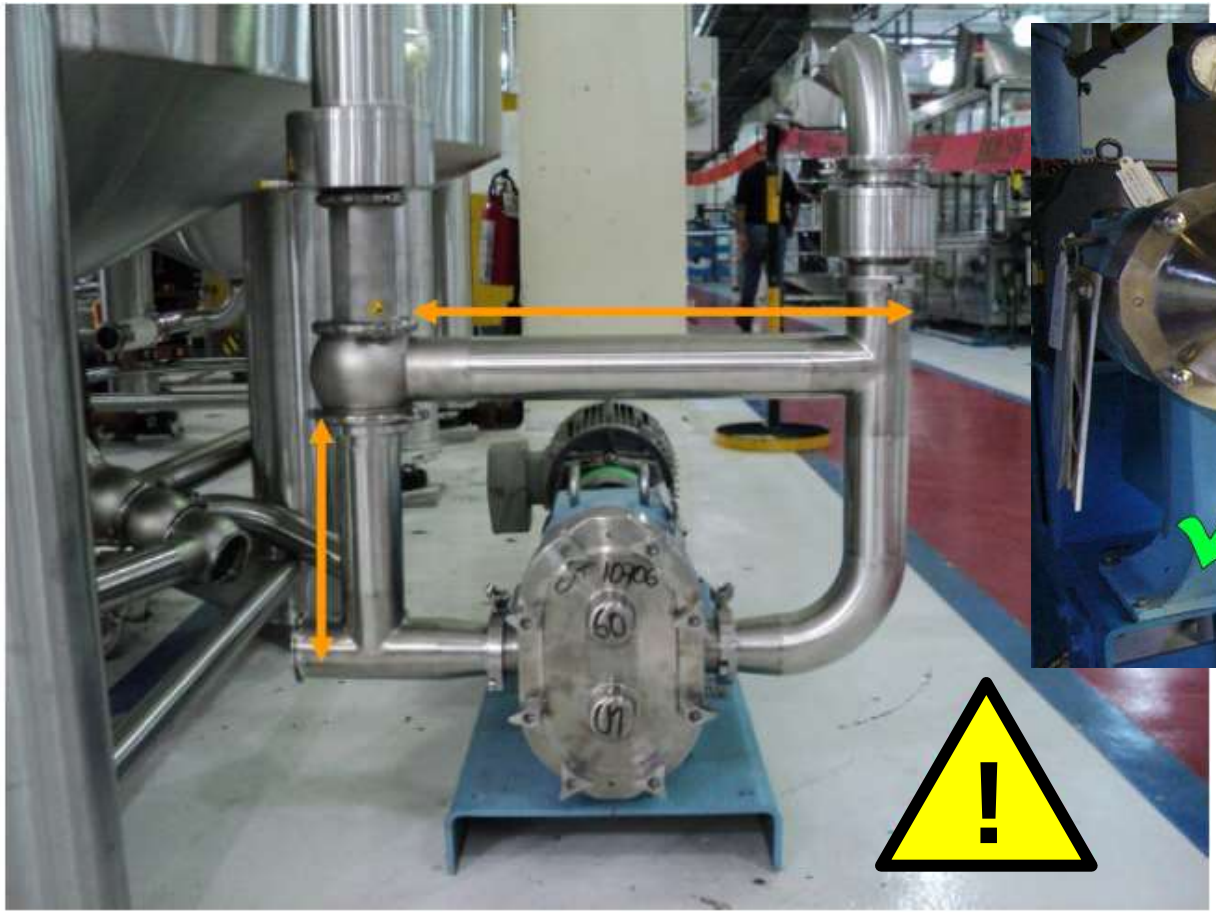
Component design

Hygienic Pump By-pass



source: EHEDG

Hygienic Pump By-pass



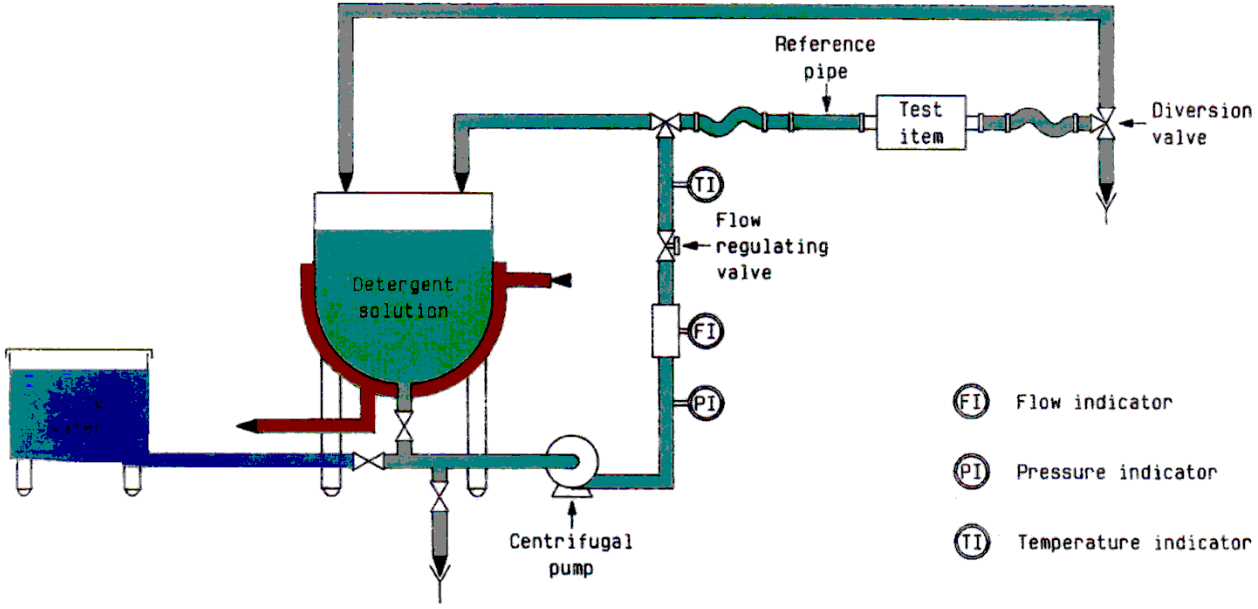
sources: Unilever

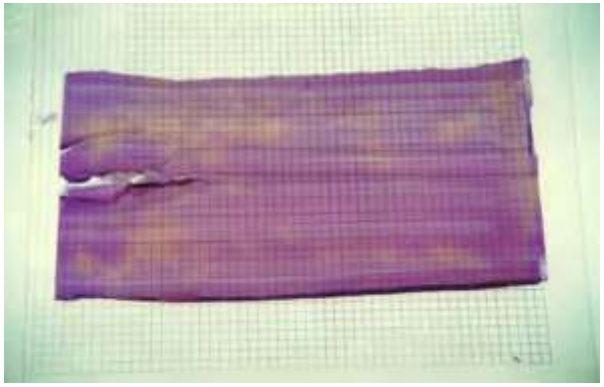
Stakes of hygienic design in the food industries

- EHEDG education material
- EHEDG training courses, seminars and workshops

EHEDG Test Procedures

- EHEDG Cleanability test for closed equipment
- EHEDG Certification scheme
- Further EHEDG Test methods



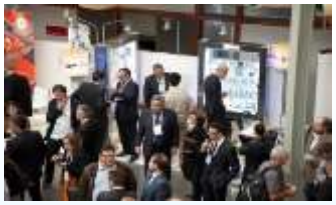


EHEDG Events & Congresses

EHEDG World Congress on Hygienic Engineering & Design, 30 - 31 October 2014 in Parma / Italy in conjunction with Cibus Tec – Food Pack

Save the date!

Topics & Programme



As in its previous editions, the congress will be a 'summit' in hygienic design and will highlight the following topics:

- Hygienic design of equipment for the food, pharmaceutical and cosmetics industries
- Hygienic design of food factories and utilities
- New trends in cleaning & disinfection, surface treatments, validation, sustainability and others
- Materials in contact with the product

- 2 days international congress
- Excellent sponsoring opportunities and exhibition area for companies
- Call for articles and poster's area
- One-to-One business meetings
- Official congress dinner
- Guided exhibition tour
- Hygienic Study Awards Ceremony

www.ehedg-congress.org

Please visit the congress webpage for all programme details, sponsorship opportunities and registration

Thank you for your attention.