Easy to use Guideline for the Bakery Industry Doc 55

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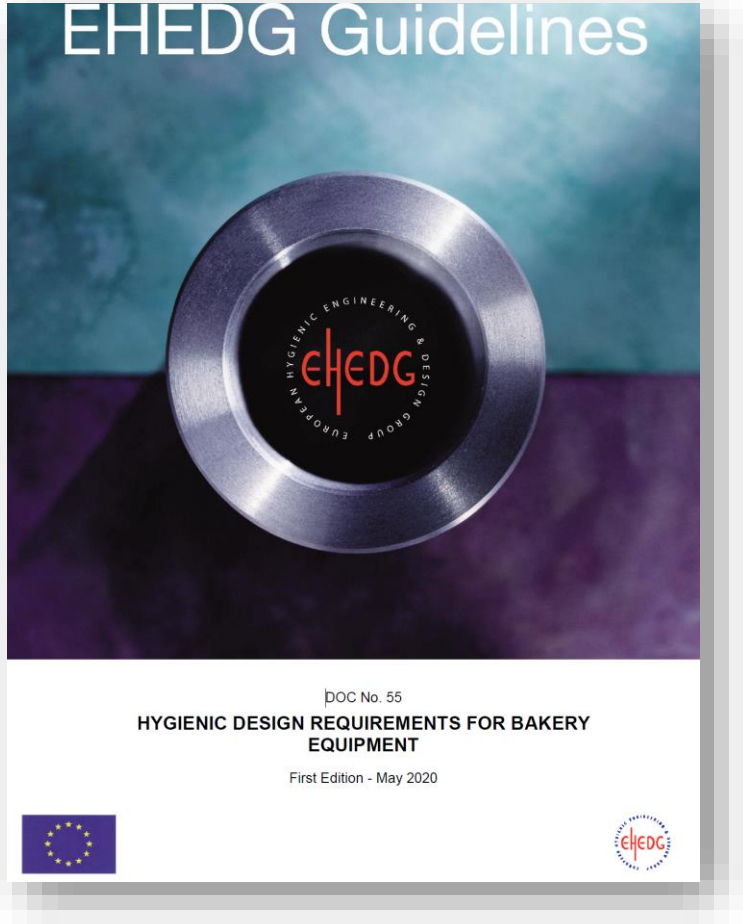
Start 10 years ago

Trigger: Bavarian bakery hygiene scandal

- first meeting during iba 2012
- German was chosen as the working language
- The large participation from the user side was great
- Initially strong need for discussion about the principles of hygienic design (EHEDG)

Long way to finalize the Guideline

- Lots of discussion between machinery supplier and user to find a common sense about hygienic design
- More than 15 meetings
- Final publication May 2020
- Now available in English, German, Japanese



Aim of the Guideline

- General hygienic design requirements also apply to the baking industry
- The strict separation between dry and wet areas is important
- Machines for dry cleaning cannot be wet cleaned
- Specific machines for different processing steps → definition of the hygienic design requirements
- Practical instructions on how to use hygienic design
- EHEDG Doc. 8 is not enough for all the machines in the bakery

Structure of Guideline

- Diversity of machines is taken into account
- From raw material handling to baked goods, all process steps are listed
- we excluded:
  - Freezing facilities
  - packaging machines
  - special machines for confectionery
- based on the production of baked goods three subgroups were formed:

A) Raw material handling and raw material refining

B) Dough preparation and dough manufacturing

C) Oven and Cooling

Content

6. General information about Bakery Equipment and Processes
7. Product contact materials and surfaces
8. Non-product contact materials and their surfaces
9. Product contact equipment and components
10. Hygiene Risks at the Bakery Production Equipment

Chapter 10: Table of equipment

10.2 Dough preparation and dough manufacturing

No.	Unit operation process	Equipment (process type)	Hygiene Risks	Requirements (design & cleaning)	Recommended Cleaning method (soil)	Figure/Example (reference)
1.1.1.	Dough production (discontinuous)	mobile tank, container, vessel (open)	- Drainage of the cleaning liquid not ensured - Outlet with closing at pull out vessel (gaps)	- Drainage of the cleaning liquid shall be ensured, e.g. by the complete overturning of the vessels or by a bottom outlet - Avoidance of outlets with internally arranged threads	**Wet** (dough residues, flour dust, cleaning liquid)	 Fig. 10-18: closing of outlet, non-hygienic design
1.1.2.	Dough production (discontinuous)	Fixed vessel with bottom discharge (open)	- Blocked bottom discharge of the dough	- The ejection port shall be freed from product automatically - Device for the collection of residues sufficiently large to minimize soiling of the surrounding area	**Wet** (dough residues, flour dust)	
1.2	Dough production (discontinuous)	Lifting fork, vessel drive, dosing station with vessel scales (open)	- Lifting fork - Mechanical components (vessel drives) - Non-accessible mechanical components - Soiling by lubricants, abrasion, or dropped dough into non-accessible areas - Corrosion in the substructure	- Lifting fork to pick the vessels are preferable to another locking - Drives with smooth friction wheels are preferable to sprocket tooth systems - Removable covering to enable complete cleaning of the drive unit - lubricant-free drive - Corrosion-resistant drive unit with shaft (special coating) and fork actuation, easy to clean	**Wet with dismantling** (dough residues, lubricants, abrasion)	 Fig. 10-19: lifting fork

Horizontal surfaces, not easy to clean

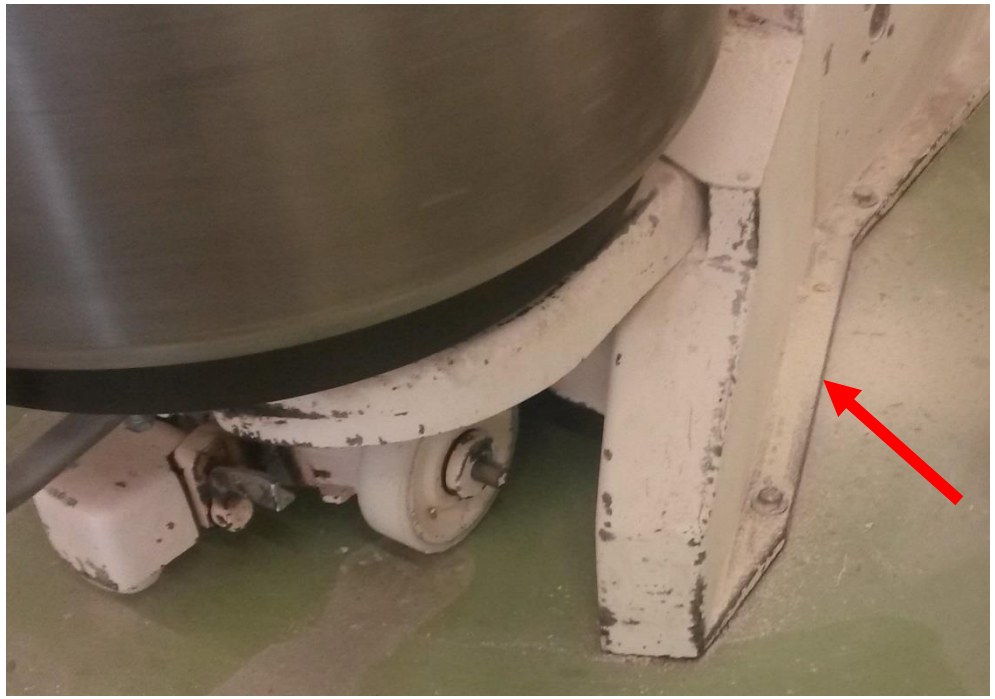
Areas where residues accumulate

Not easy to clean equipment – open threads

Accessibility, choice of materials

Not accessible for cleaning

Risk of foreign bodies – flakes of paint



Cleaning & Maintenance

No accessibility, high above in the air near the ceiling.

Future plans: New Guideline Projects

GL 55 Part 2

Content: Conditioning, Slicing, Packaging

Cleaning-Out-of- Place (COP) requirements in the bakery industry

Guideline together with the WG Cleaning

Experts are welcome!