CLEANING OF SURFACES
The removal of dust, grease, rust, and other contaminants from surfaces is an important step in the value creation chain for manufacturing products. Poor knowledge or insufficient care with the cleaning steps often results in high costs and problems in the production. Loss of product functionality and product recalls may ensue.

The Fraunhofer FEP has many years of experience with the cleaning of surfaces. Our experts are able to advise you about all steps of the process chain, namely about prevention of contamination in the preliminary stages, about the different cleaning technologies that are available, about environmentally compatible process management, and about monitoring the results of cleaning processes. Working together with the other Fraunhofer institutes in the Fraunhofer Cleaning Technology Alliance, we evaluate the specific requirements of different industries and are able to offer you independent, effective solutions for cleaning processes and systems.

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**Complete solutions from a single organization**

Our offer

- on-site evaluation of problems
- options for solutions
- optimization of cleaning processes
- selection of suitable cleaning processes
- cleaning tests
- condition and process analysis
- seminars covering fundamentals and also specially customized seminars and workshops on industrial cleaning technology
- evaluation of the causes of failure
- measures for improving process safety
- large spectrum of cleaning technologies
- cleaning of sample specimens, individual parts, and small series possible
- cleaning technologies
- quality assurance systems
- plant components
- plant conception, tendering
- evaluation of tenderers
- assistance with commissioning

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Main areas of work

Industrial cleaning of components and semi-finished products
- component cleaning for value creation
- in-line cleaning processes
- effective cleaning processes
- environmentally friendly processes

Surface treatment before coating
- integration into coating processes
- meeting high requirements for surface quality
- understanding of adhesion mechanisms
- know-how in the area of PVD coatings allows the development of customized cleaning methods
- experience with metals, ceramics, glass, plastics
- activation or passivation of the surfaces of materials

Cleaning for hygiene-relevant areas
- hygienic production of foods and products in the areas of medical technology, life sciences, and biotechnology
- cleaning, disinfection, and sterilization of products and packaging
- biomedical test laboratory for evaluating cleaning quality
- seed treatment with low-energy electrons

Cleaning to preserve cultural and historical objects
- analysis of historic materials and contamination on such materials
- gentle methods for cleaning sensitive materials
- temporary protection of surfaces
- treatment of damaged paper documents

Technologies
- wet-chemical fine cleaning for metal strips and components
- wet-chemical ultra-fine cleaning for precision components made of glass and plastic
- high-rate plasma cleaning for metal strips, polymer films, and components in vacuum
- local cleaning of surfaces with an electron beam in vacuum
- sterilization and disinfection with accelerated electrons
- other methods are also available within the Fraunhofer Cleaning Technology Alliance

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