



## Our research topics at Fraunhofer IGP

The Coating, Weathering and Corrosion Protection department of Fraunhofer IGP is concerned with the development of automated coating applications, including underwater applications, the field and laboratory aging of coating materials, and the quantitative evaluation of corrosion processes in the maritime and offshore sectors.

In the accredited test laboratory of Fraunhofer IGP, materials, compounds and coating systems are tested and qualified under standardized conditions. In addition, new test methods are developed and used for special applications. In the field of corrosion protection and artificial aging, the IGP focuses on the development and qualification of new types of corrosion protection systems with improved properties and the determination of aging effects.



Photo: Fraunhofer

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## Coating, Weathering and Corrosion Protection

Overview of our services





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# Coating, Weathering and Corrosion Protection

## Our services at a glance

### Coating

- Selection and optimization of coating systems and processes for steel construction and offshore applications
- Development and testing of automated application technologies for large structures
- Development of smart coatings with function and sensor integration
- Development of ROV-supported coating technologies for the underwater environment



We have the right proof for your corrosion protection.«

### Weathering

- Accelerated laboratory aging in accredited test laboratory
  - Salt spray test - DIN EN ISO 9227
  - Condensed water test - DIN EN ISO 6270-2
  - Offshore test - DIN EN ISO 12944-9
  - UV test/Xenon test - DIN EN ISO 16474-2/-3
- Natural weathering
  - Atmospheric weathering in Rostock and Hiddensee
  - Weathering in brackish water (Warnow) and Baltic Sea (off Nienhagen)
- Development of test methods for combined mechanical and media stresses for special applications
- Combined test procedures for large components as well as for joining and assembly processes in a climate chamber (-50°C...+60°C)

### Corrosion Protection

- Evaluation of the corrosion protection effect of coating systems and of complex structures and mechanical joints
- Determination of corrosivity categories in the field and derivation of necessary corrosion protection measures
- Use of electrochemical measurement methods to quantify novel coating systems in the underwater environment and transfer from laboratory tests to real environmental conditions with large sample geometries



Electrochemistry for large structures - We make corrosion measurable.«