

# Transport Industry

Automotive Industry

Aerospace Industry

Shipbuilding Industry

*Research and Development,  
Life prediction and material selection,  
Failure analysis, etc.*

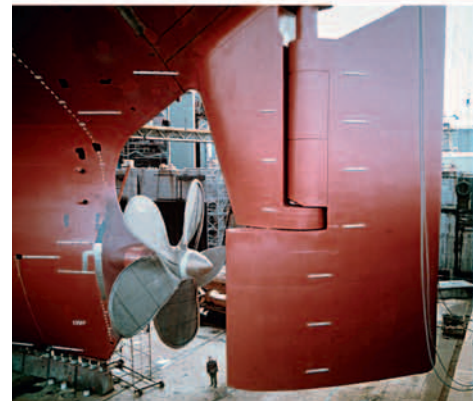
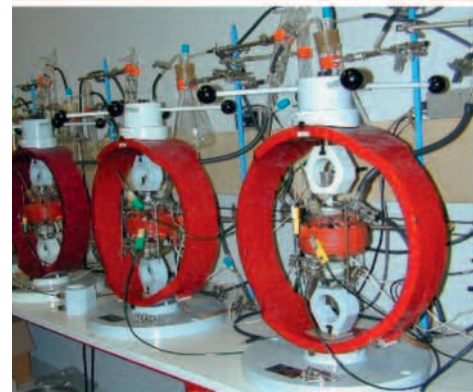
**T**he French Corrosion Institute, a subsidiary of **SWEREA KIMAB** (Sweden) is one of the leading organizations in Europe in the field of atmospheric corrosion. It includes two sites located in Brest and Saint-Etienne, with a task force of 40 engineers and technicians. Together with SWEREA KIMAB, more than 80 employees work in the area of corrosion protection.

**P**artner and coordinator of numerous R&D projects in collaboration with the Industry, our objectives are :

- To develop accelerated corrosion tests
- To better understand the mechanisms of corrosion of materials used in the transport industry
- To study the application of new products with environmentally friendly systems
- To evaluate the combined effect of corrosion and fatigue on joined materials used in automotive and aerospace industry

## We can offer

- **Participation to cost-shared projects**
- **Consultancy and Advices**
  - Selection of materials
  - Failure analysis
- **Laboratory tests**
  - Tests according to automotive standards: Renault D17/2028, Volvo STD423-0014, VDA621-415, VDA 233-102 (new VDA), etc.
  - Tests for painted systems in the marine sector : ISO20340, NACE TM0304/TM0404
  - Salt spray tests
  - Weathering tests
  - Fatigue-corrosion tests
  - And other tests according to demand from customer
- **Field tests** on operating vehicles/ships or stationary sites



# Facilities

## Field testing

- On-vehicle exposures in Sweden/Switzerland
- Atmospheric marine field stations  
Exposure sites with various corrosivity categories (C2 to C5M for steel) : Europe and Dubai (UAE)
- SCAB testing (ISO 11474)
- Determination of corrosivity of indoor and outdoor atmospheres

## Laboratory testing

- Automated chambers for cyclic corrosion tests with salt pollution wet and dry phases
- Climatic chambers for humidity and temperature regulation
- Salt spray chambers
- QUV chambers
- Condensation chambers
- Corrosive gas chambers
- Fatigue-corrosion equipments

## Methods of analysis

- Electrochemical techniques
- Scanning Kelvin probe (SKP)
- Infra-red spectroscopy and micro-spectroscopy
- Optical microscopy and image analysis
- Scanning electron microscopy (SEM)
- Hydrogen analyzer
- Paint adhesion testing
- Carbon slurry test
- Color and gloss measurements, etc



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