

## Word from our CEO

2015 was an eventful year for Acotec with a lot of progress and sales growth in both new and existing markets. Thanks to the efforts of our worldwide team, Humidur® further strengthened its position in the offshore oil and wind markets. Amongst others clients like Vattenfall, Talisman Energy, Shell, Maersk, Conoco Philips, Chevron and Statoil strongly increased the use of Humidur® on their assets.

In the shipping industry, Acotec acquired certificates of CCS (Chinese Classification Society) and ABS (American Bureau of Shipping). For Humidur® AF, the anti-fouling coating in the product range, due to its durability and long lasting performance, new contracts have been signed with Navy operators and shipping companies worldwide, which will generate significant business in 2016.

In the marine sector, Acotec remains the market leader in the on-site rehabilitation of sheet and round piles. Clients worldwide start to understand the threat of bio corrosion to their assets and accept the only durable solution by means of the Humidur®-DZI system. New projects will start next year in the UK, the USA, Belgium, Egypt, Chile, Peru and the Netherlands.

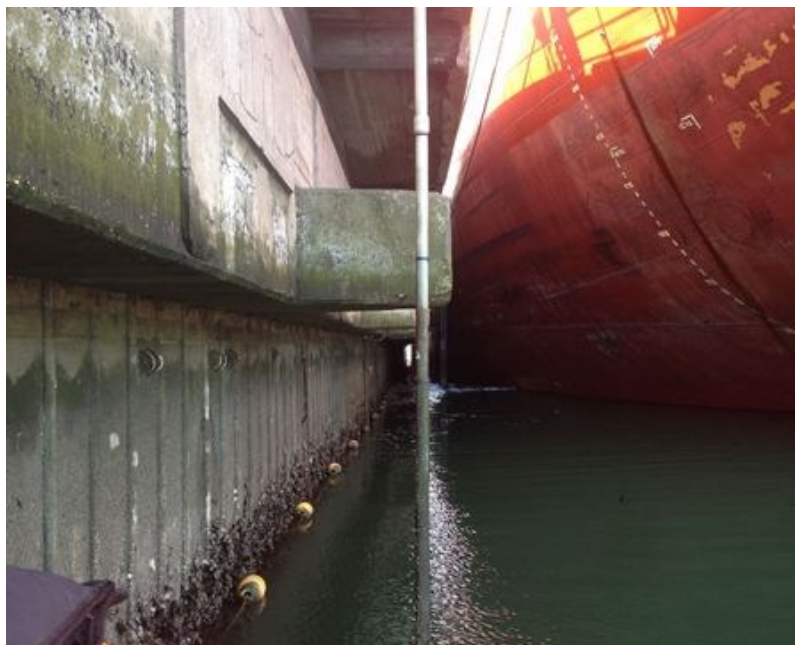
Therefore Acotec expanded its staff by 15%, with more recruitment in prospect.

In 2016 we will continue to move forward, further expanding our business. We will focus on growth of our existing market segments and introduce our products and services in new geographical areas and markets. Furthermore, we will continue to invest in our R&D program for coating development and innovation, with utmost respect for our clients and the environment.

I would like to take the opportunity to thank our Clients, the Flemish government, our Team and all the people involved, for their continued support and I wish you and your families a Merry Christmas and a Happy New Year.

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*Sheet pile coated with Humidur® is still in excellent condition after 27 years (Tata Steel, IJmuiden, The Netherlands, coated in 1988)*

### Coating repairs on Thanet Offshore Windfarm

United Kingdom

The Thanet Offshore Wind Farm, operated by Vattenfall, is one of the largest offshore wind farms in the world. It is situated 12 km offshore and covers an area of 35 km<sup>2</sup>. The Humidur® anti-corrosion coatings are specified as repair system. The coating is applied by rope-access by Total Jobs Contracts Ltd. on the 100 wind turbines.

The project started in the beginning of 2015 and will last for 4 years, with the option of being extended for an extra two years.

### Humidur® applied on helideck Brent Alpha

United Kingdom

On the helideck of the Brent Alpha oil rig owned by Shell, Humidur® was applied as anti-corrosion and non-skid coating. The original coal tar epoxy tiles suffered from undercutting corrosion. These spots were removed during surface preparation. After all the corrosion spots had been removed and the surface had been cleaned, the epoxy tiles were overcoated with Humidur®'s anti-corrosion coating.

As all the tiles did not have to be removed prior to coating application, a lot of time and money was saved during surface preparation.



*Coating repairs with Humidur® on Thanet Wind Farm*



*Humidur is used as anti-corrosion coating on the helideck Brent Alpha, Shell*



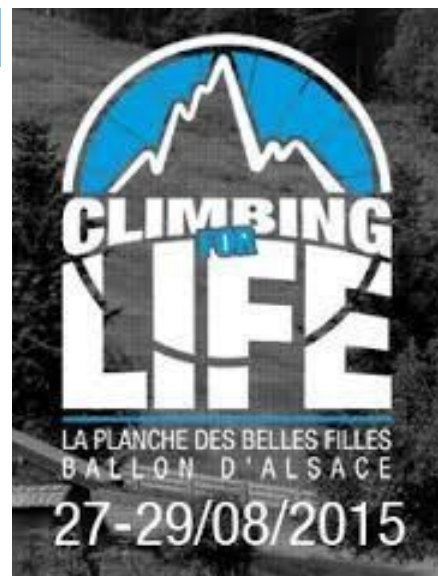
## Climbing for Life

France

Acotec, sponsor of the event, participated in the Climbing for Life weekend. This cycling event is organized to raise awareness about asthma and cystic fibrosis.

This year, the event was organized in the French Vosges and as apotheosis the summit of the famous 'La Planché des Belles Filles' was climbed.

Congratulations to all of our colleagues who participated to this event.



## Humidur® approved by CCS

China

Humidur® has been awarded the certificate of works approval by the China Classification Society for application in marine and shipping industry.

The Humidur® products have been approved for use as:

- Deck paint
- Topside paint
- Anti-fouling paint
- Oil tanks paint
- Anti-corrosive marine paint
- Boottopping paint
- Engine room bottom coating
- Shipbuilding coating for drinking water tanks
- Hold paint

## Humidur® protects concrete tanks in Peru

Peru

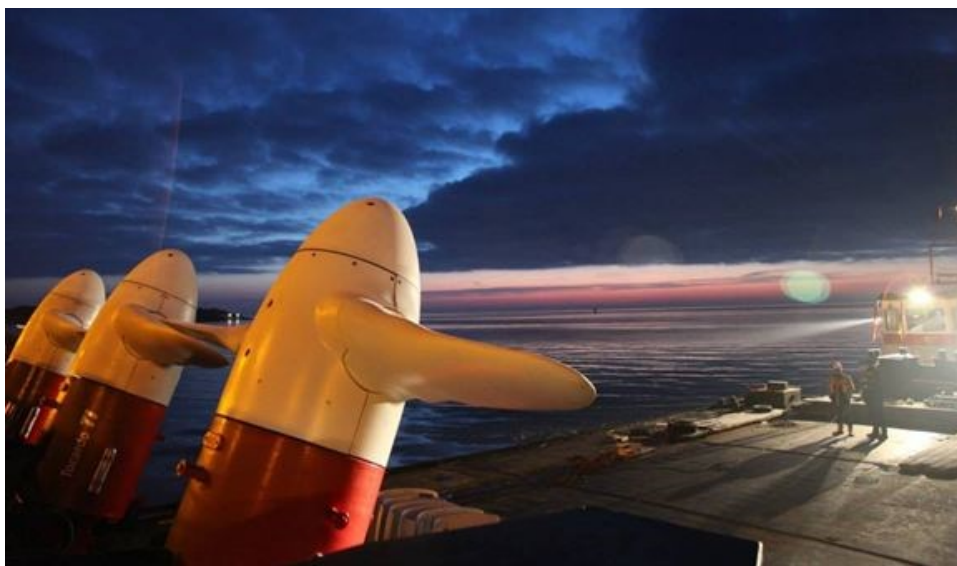
For Backus SABMiller, now part of the world's largest brewery in the world AB Inbev, concrete tanks were protected with Humidur®. The coating works were performed in cooperation with a local company. Acotec provided on-site assistance and did the quality control.

Surface preparation consisted of the removal and replacement of unsound concrete, followed by the decontamination of the surface. Then the correct surface profile was created. Surface irregularities such as bug holes were repaired. After the surface preparation had been approved by Acotec, the Humidur® coating was applied by airless spray.



*Application of Humidur® in a concrete tank for Backus SABMiller, Peru*





*Tocardo turbines coated with Humidur® (Afsluitdijk, Den Oever, the Netherlands)*

## Humidur® protects Tocardo turbines

### The Netherlands

Tocardo, manufacturer of tidal and free-flow water turbines, applies Humidur® as anti-corrosion coating on the housing and inner parts of its turbines.

Recently, Tocardo installed three of these turbines in the Afsluitdijk, Den Oever, the Netherlands.

Another five tidal turbines were installed in the Eastern Scheldt storm surge barrier. This installation is both the largest tidal energy project in the Netherlands as well as the world's largest commercial tidal installation of five turbines in an array.

## Belwind approves Humidur® for offshore structures

### Belgium

Humidur® was used as repair system on offshore wind turbines of the Belwind wind farm. The application was done in 2014 on St 3 prepared surfaces in the splash zone.

Inspection was carried out by Belwind in 2015, after almost 1 year. Humidur® showed no degradation and no tendency to flake off. It is still in excellent condition. Belwind concluded that Humidur® shows superior protection properties in this critical application for offshore wind farms.

The conclusion of the report by Belwind was as follows:

Humidur® is suited as repair system for the anti-corrosive protection of offshore structures.

## Acotec publishes book about biocorrosion

### Belgium

*'Biocorrosion' describes the concept of microbial induced corrosion (MIC) and corrosion control associated with MIC.*

*The book was written in cooperation with the University of Ghent.*

*Authors: Johan Mertens, Lynda Beladja, Wim Schalley*

### Synopsis

Water is a medium where organisms thrive and attach to virtually all materials leading to biofilm formation and fouling. Biofilms on iron, the most widely employed metal on earth, cause severe material loss - corrosion values as high as 1 mm per year - by biocorrosion, such as accelerated low water corrosion, and microbial induced corrosion by sulfate reducing bacteria. Biocorrosion encompasses even interesting ecological and evolutionary aspects, becoming a topic in the field of 'electro-microbiology'.

In order to develop strategies that minimize the costs of corrosion in shipping, offshore, harbor, petrochemical structures, pipelines, etc., it is essential to have a deep understanding of these phenomena from a scientific point of view.

Biocorrosion is an essay, reviewing the relevant scientific papers, brought together, in order to be as convincing as possible. The authors are excessively cited, and the references are listed at the end of the document, as a source for personal documentation.

## Humidur® AF protects heavy-lift jack-up vessel of Deme

Germany

Innovation is the most powerful heavy-lift jack-up vessel in the world owned by HGO InfraSea Solutions, a joint-venture of HOCHTIEF Solutions and Geo-Sea (a company owned by DEME). Its box coolers, located in the central sea-water channel of the ship, suffer from heavy fouling. As a result the efficiency of the box coolers is lowered. Humidur®'s anti-fouling coating, Humidur AF, was applied on these box coolers. Thanks to Humidur®, the coolers can work without loss of efficiency.

Inspections were carried out after 3 months, 6 months and 1 year. These inspections showed that the box coolers were still in excellent state, free from fouling.



*Box cooler coated with Humidur AF*

## Rehabilitation of sheet pile wall in Duluth, USA

USA

1,200 feet (360 m) of severely corroded steel sheet pile wall was rehabilitated for Hallett Dock Company using Aco-tec's Humidur coating and DZI cofferdam. The project took place in Duluth, Minnesota and was carried out in cooperation with Roen Salvage co.

Over 12,000 square feet of corroded sheet pile wall was covered with pre-coated steel plates. The voids between the protection plates and the existing piling were filled with stud-reinforced cement grout and sealed with marine epoxy grout. Additionally, 1,200 feet of new timber fenders were installed.

The project saved the client money as this method increased the life time of the dock wall at a fraction of the cost of installing a new dock wall.

The project was completed in 5 weeks, well ahead of schedule.

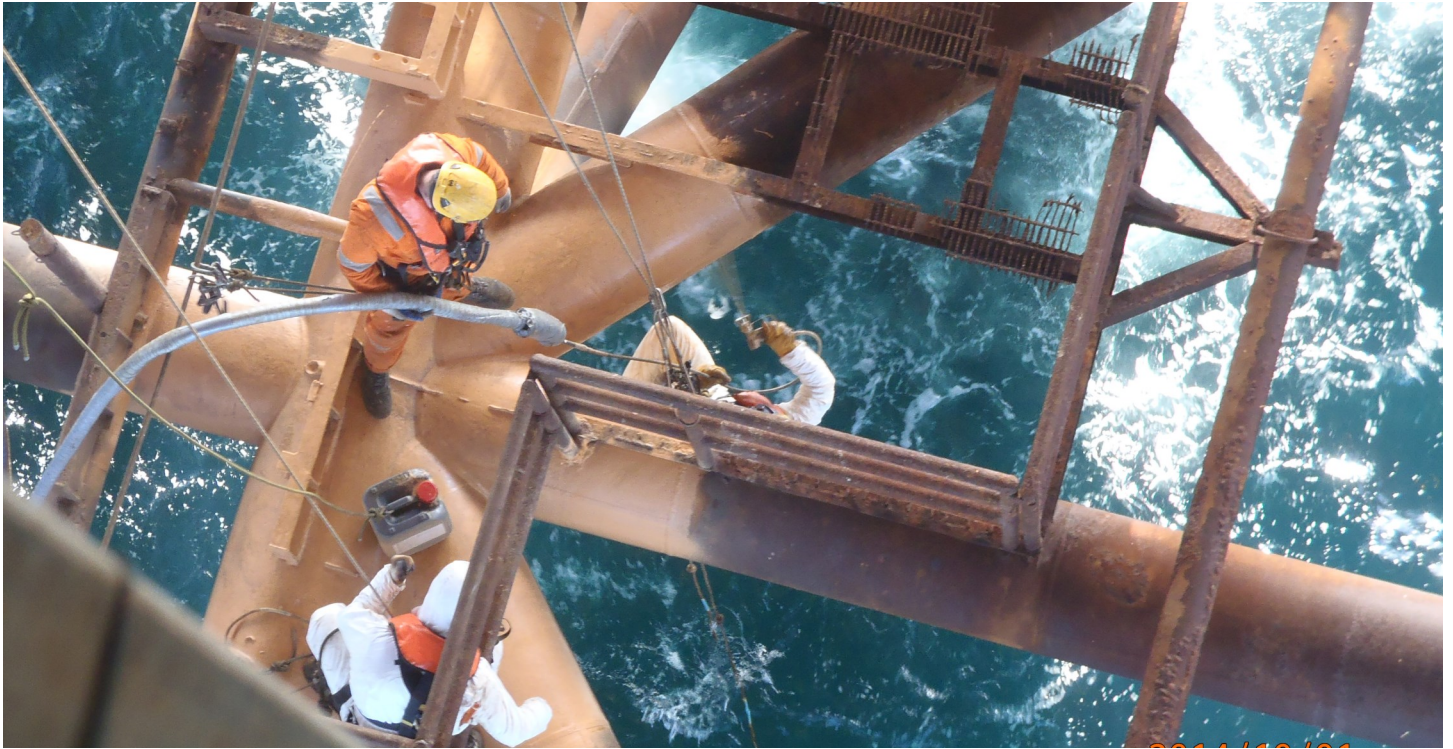


*Severely corroded steel sheet pile*



*Rehabilitation sheet pile in Duluth, USA*





*Application of Humidur® on node by rope-access on TLM Claymore*

## Coating repairs on TLM Claymore

UK

Humidur® is used as coating repair system on the Claymore oil rig, owned by Talisman Energy. In cooperation with trained Acotec personnel, the coating is applied on a variety of applications such as structural nodes, risers and pipe-work.

Humidur® is applied in one layer, straight on steel, without the use of a primer. Humidur® is surface tolerant and can be applied on both minimal (St 2 and St 3) and optimal surface prep (Sa 2½).

## Shell Ireland applies Humidur® anti-corrosion coating and topcoat

Ireland

To save substantial costs Shell Ireland uses the Humidur® anti-corrosion coatings and top coat in its fabric maintenance program. Humidur® has been used in the Corrib project, more specifically in the Bellanaboy Bridge Gas Terminal.

Humidur® has been used on a wide variety of applications such as fire hydrants, methanol coalescers, stainless steel pipework, ...



*Methanol coalescer coated with Humidur® anti-corrosion coat and topcoat*