



# PORTS & HARBORS

Official Journal of the International Association of Ports and Harbors

**Modern Africa**  
Examining port technology

**Automation ambitions**  
Unraveling issues around automation

**Renewed reputation**  
Targeting the renewables sector

# Clean break

Fuel supply and emission enforcement  
ahead of 2020 global sulphur cap



## 12

The journey to lower sulphur fuel is fraught with logistical challenges

Photo: Getty Images

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## Asia expansion

The race is on to meet demand

## Brexit confusion

Ports brace for disruption

## Greening Barcelona

Natural gas leads the way

# Data flow

How vessels talk to ports is changing



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Ships calling at ports have always generated large paper trains. But new regulations could see that set to change

Photo: Getty Images

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## Slow but steady

Europe's ports chalk up modest growth

## Scrubbers

Ports prepare to deal with wastewater

## Port equipment

Automation will bring fresh problems

# Maritime Silk Road

Ports eye opportunities from Chinese  
economic integration

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# 12

China is investing heavily in infrastructure, with profound implications for its – and the world’s – ports

Photo: Anthony Wallace/AFP/ Getty Images: S110330

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## Growth spurt

North American volumes have jumped

## Designing the future

Simulators have transformed port design

## Georgian giant

A vast new Black Sea port is taking shape

# Go with the flow

Helped by new technology, ports are learning to love renewables



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Sustainability is an issue that is not going away. Ports need to adapt to a low-carbon and low-pollution world, and many are already doing it

Photo: Getty Images

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## Compliance conflicts

Ports must enforce 2020 emission rules

## Offshore ambitions

Taichung aims to be renewables hub

## Lashing legislation

Calls for tighter box lashing rules

# Secure connection

Digitalisation is creating a new era of transparency and collaboration for ports



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For the digitalisation of ports to be implemented successfully, ports will need to collaborate more and share information and ideas.

Photo: Shutterstock/Nightman1965:5121317

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## Slow steam ahead

Bulker operator says it's a win-win all round

## Public and private

Holistic approach for smart port cities

## India's efficiency

Technology drives port productivity

# Individual pathway

Forging ahead for future port success



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Pioneering smart ports serve as an example of what's possible, but not all smart solutions are relevant to all ports

Photo: Gett Images/TimeStopper

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