

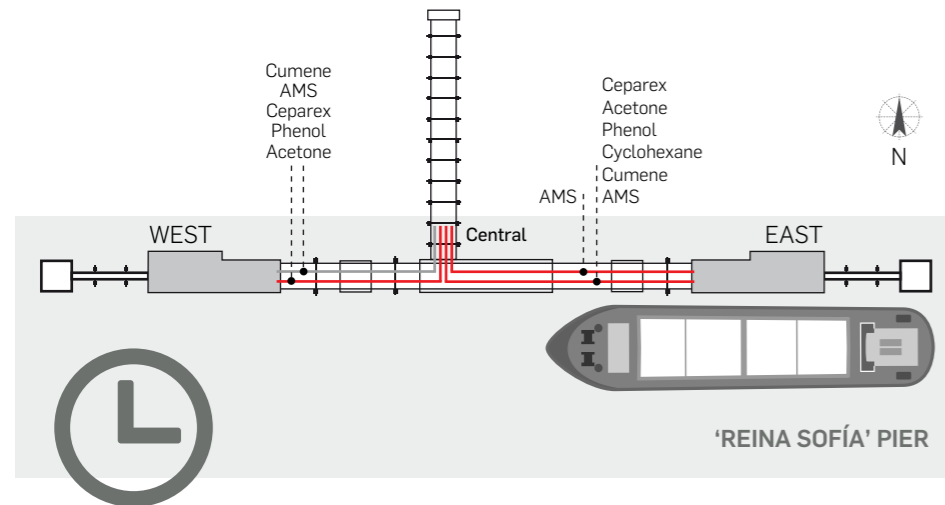


# 'REINA SOFÍA' PROJECT

THE NEW TANKER LOADING AND UNLOADING SYSTEM REDUCES THE OPERATING TIME BY 56%

## 01. STARTING POINT

THE 'REINA SOFÍA' PIER IN HUELVA SHOWS SIGNS OF SATURATION



## 02. PREVIOUS

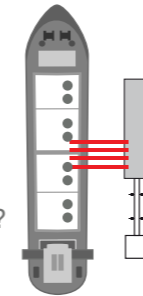
LOADING ARMS SYSTEM

### LOADING ARMS

- Only one can be connected at a time
- The tanker must be moved to fit each arm

### WHY DO THEY CAUSE DELAYS?

- There are only two berths for tankers
- Not all products are available at each berth
- Limits on loading of combined products



## 03. CURRENT

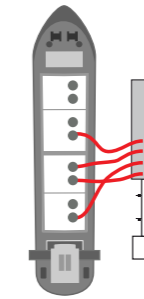
HOSE SYSTEM

### HOSE REELS

- System untried in ports until now
- Proven robustness in all types of conditions

### WHY IS VIABILITY GUARANTEED?

- Allows for simultaneous loading with complete flexibility
- Less complex system than loading arms
- Incorporates innovative safety measures



## 04. PROJECTED RESULTS

AFTER ROLL OUT

1 MAXIMUM SAFETY: MINIMIZES RISK OF ACCIDENTAL SPILLAGE



2 OPERATION TIMES ARE REDUCED BY BETWEEN 50% AND 60%



3 PORT FACILITIES OCCUPATION RATE IS REDUCED BY 20%



4 FUEL SAVINGS FOR TANKERS



5 FUEL SAVINGS MEAN A REDUCTION IN CO<sub>2</sub> EMISSIONS



## 2014 THE DELAYS IN OPERATIONS ON THE PIER REACHED THEIR LIMIT

The increase in volume caused delays of up to 3,000 hours between 2010-2011

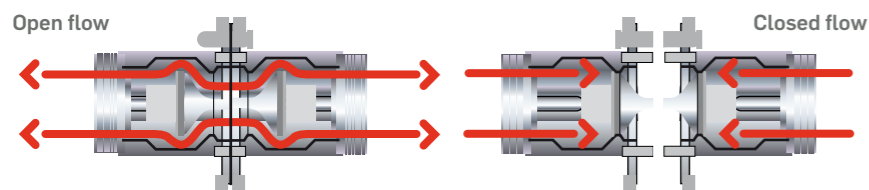
The port suffers delays when it operates at over 50% capacity

The impact of delays increases exponentially with occupation rates

## THE NEW SYSTEM, IN DETAIL

### WEAK LINK, THE KEY TO SAFETY

- The new hose's safety fitting system reduces any risks to a minimum



### HOSE WINDING REELS



- A system of 5, thirty metre long hoses
- Electro-hydraulic drive
- Activated by remote control

## Performance in 2015 - EAST BERTHING



125% faster

Load flow



56%

Time saved



42%

Increase of volumes loaded



13%

Increase in ships loaded



625 T/Year

Fuel that ships have stopped using



2.000 T/Year

Reduction in CO<sub>2</sub> emissions

### INVESTMENT

4,0 MILLION EUROS

CEPSA has patented the technology used in collaboration with TechFlow Marine



Project nominated for the Edison Awards 2016

