

# PLANT REVISION AND REPLACEMENT OF 750 HYDRA® EXPANSION JOINTS

## Application

Shipping locks on the Dutch North Sea coast. 1,200 expansion joints are used here as hydraulic elements for the pressing mechanism of the massive floodgates. After 30 years, the plant is now being renewed.

## Technical data

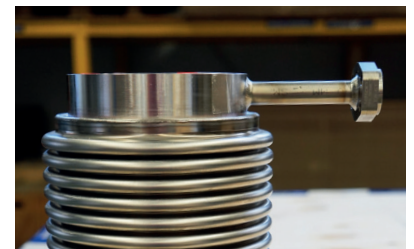
- DN: 150 / PN: 40
- Designed alternation of load: 60.000
- Material: 1.4571 (V4A) or 2.4856 (Inconel 625)
- Movement absorption: 30 mm axial, additionally 2° angular through the elasticity of the steel structures
- A pressing force of approx. 10 tons internal pressure results per expansion joint at 40 bar

## Special features

- Extremely high functional and service life
- High quality requirements (tightness).  
No hydraulic oil must leak from the bellows
- Maximum corrosion resistance, since the bellows are constantly in brackish water, fresh water or salt water
- In addition to the use of highly corrosion resistant basic materials, the expansion joints were also provided with a ceramic coating in a special flame spray process



First delivery of the 750 flexible Hydra® hydraulic expansion joints



Welded hydraulic connection



The expansion joints are fastened on a special retaining plate by means of three threaded blind holes



The replacement after 30 years – Quality by Witzenmann is ready for shipping