

Guaranteed safety – even after a twister

BRUGG FLEXWELL-HL safety piping
as a supply line for fuelling yachts



James Taylor,
Walter's West End Supply

"When I saw the BRUGG FLEXWELL-HL safety pipes, I knew that this piping would satisfy the County authorities. After a thorough examination the County gave their approval for the piping. That was the signal for the customer to realize the project and he gave us a very tight deadline for installing it. Thanks to BRUGG's efforts and their expert know-how in building fuelling plants for yachting marinas we were able to finish the project on time and to our customer's complete satisfaction."

Marinas (yacht fuelling plants) directly on the sea pose special challenges for fuelling supply lines. BRUGG has explored new avenues for the transition from dry land to the dock with its FLEXWELL-HL safety piping, specially designed for floating docks. Up to now flexible tubing was mostly used to compensate the movements caused by tidal differences and the consequent changes in length of the pipes running via the gangway. That means that connectors which can lead to leaks are fitted above the water. BRUGG developed a system in which the flexibility of the FLEXWELL-HL safety piping takes over the function of compensating such elongation. No connectors over the water are needed here, and in most cases an uninterrupted line can be installed from the storage tank to the fuel dispenser. This not only saves installation time, but connectors, sumps and other fittings are not needed.

The owners of the Wyncote Yacht Club in Huntington (Long Island, New York, USA) were ordered by the authorities to renew their fuelling station. Via a firm of consultant engineers they contacted a wholesaler

Running the piping into the floating dock



Connecting it to the fuel dispensers

specializing in petroleum plants. He got in touch with us due to our experience in installing pipelines for marinas. In this plant there are two nominal bore DN 50 lines, one for gasoline and one for diesel fuel, which run for about 150 m from a sump on land via the gangway to the floating dock and to the fuel dispensers. The tidal fluctuation in this case is about 3.5 m, but this can be more due to storm surge. The difference in length which results from this, and has to be compensated by the piping, is c. 50 to 60 cm.

Before any work could be started, the piping and the installation design had to be presented to the authorities for their approval. They not only checked the type approvals of the FLEXWELL-HL safety piping, but also subjected it to an intensive internal appraisal process by their own

The pipe routing in the dock from the gangway to the fuel dispensers.



(on the right): FLEXWELL-HL laid underneath the gangway.



Solutions for the future

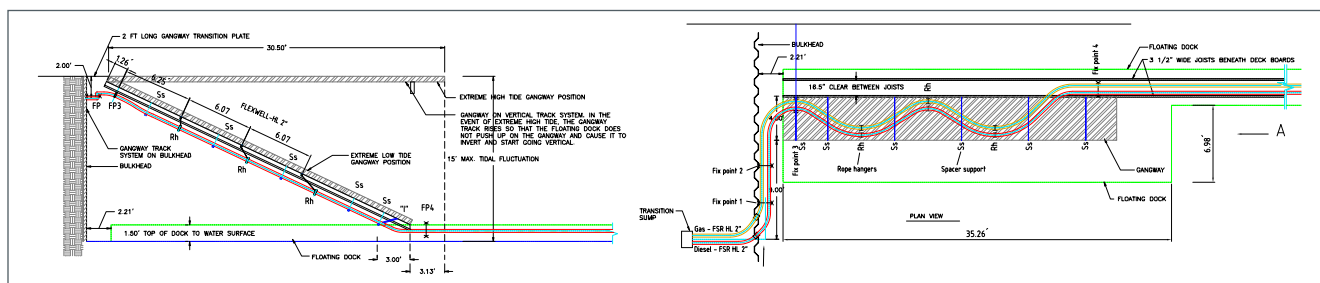
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engineers. They took nothing for granted, but checked every aspect, including the concept for tidal compensation we had developed. The result of this detailed and painstaking appraisal is that FLEXWELL-HL safety piping is today the only fuel piping for marinas approved for use on Long Island.

Installation of the piping was done in double-quick time under the supervision of BRUGG personnel. First of all the two pipes from land were pulled over the gangway into the sump in the dock and up to the fuel dispensers. Since the dock for the boats and the fuelling dock are independent of each other, the piping had to be kept freely moving and flexible for this transition too. After this phase of the installation was completed, the next stage was to lay the two lines in a serpentine under the gangway, which then compensates for the elongation diffe-

rences which occur twice a day as a result of tidal movements. After that the serpentine was placed in the frame fitted to the underside of the gangway. And last of all both pipes were fixed along the bulkhead, routed through two openings into the trench and led onto land. The piping was run into the sump about 3 metres away from the bulkhead and connected to the rest of the plant. The line had a length overall of c. 170 m per line with eight bends in each pipe.

Thanks to the good preparatory work of the wholesaler, the firm which performed the installation and our know-how, installation work was finished in four days. Three employees of the installing firm were also trained and certified in BRUGG FLEXWELL-HL safety piping during this installation.



Schematic diagram of the Wyncote plant.

To contact us and for further information, please fill in the following details and send them by fax to +49 (0)5031 170-170.

- Please send me detailed information material
 I have a project I am currently working on and would like to speak to you personally

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