



# **PORT ENGINEER INTERVIEW: JASPER VERSTREEPEN OF VIETNAM**

Hai Phong and Quang Ninh Provinces, Vietnam



A trained construction crew works at night at a busy commercial port in Vietnam repairing damaged concrete piles. The crew is working until dawn to take advantage of low tide and to maintain a minimal service interruption during the repair. Photo courtesy PileMedic® by QuakeWrap Inc.



# JOB STORY



Not part of this complete breakfast: Tanker meets concrete mooring jetty early one morning at a busy commercial port, causing damage to concrete dolphin as well as the ship. Photo courtesy PileMedic® by QuakeWrap Inc.

Port Engineer Jasper Verstreepen is based in Vietnam and in charge of implementation of marine infrastructure repair and renewal projects for a majority of the region. He and QuakeWrap President/CEO Prof. Mo Ehsani worked together on the jetty repairs resulting from the tanker collision of 2016. Today, in 2020, Mr. Verstreepen is gracious enough to answer questions for a PileMedic® by QuakeWrap Partner Profile focusing on international ports.

**Q: Please give us your formal name, title and current professional designation.**

**A:** Jasper Verstreepen, Engineering Manager, Head of Engineering Department and in charge of all marine and civil construction design and implementation works for an industrial zone and port infrastructure projects greater than 3,000 hectares (approximately 7,400 acres) in Vietnam.

**Q: Which city or county are you currently located?**

**A:** The Haiphong and Quang Ninh provinces of Vietnam.

**Q: Please mention the type of projects you have been involved, in relation to marine or port infrastructure repair and rehabilitation. Where have these been located?**

**A:** My experience is mostly in repair works of jetties

(dolphin structures and vertical RC piles) after collisions. I also have experience with improvement of jetty structures due to 'outcoming rebar' (exposed rebar) and failing concrete surfaces, typically from a lack of spacers or proper formwork during the concrete casting phase at the time of construction, often many years prior. All of these experiences were in Vietnam.

**Q: Can you describe the repair project that you and Prof. Ehsani worked on, and what made it unique compared to other marine repair jobs you've worked on?**

**A:** Back in 2015, the dolphin structure of our jetty was seriously damaged after collision by a vessel. From a diving survey after the collision, it was reported that the vertical RC pile at the corner of the dolphin was broken, and several other piles, as well as the dolphin's surface contained cracks.

# JOB STORY

Divers wrapping the concrete pile and FRP rebar with PileMedic. Photo courtesy PileMedic® by QuakeWrap Inc.



One advantage of PileMedic laminates over standard jackets is the ability to rapidly repair piles of any materials located in tight spaces. Photo courtesy PileMedic® by QuakeWrap Inc.

Divers wrapping the concrete pile and FRP rebar with PileMedic before filling the annular space with underwater grout. Photo courtesy PileMedic® by QuakeWrap Inc.



# JOB STORY



Post project group shot with lots of smiles including QuakeWrap President/CEO Prof. Mo Ehsani, third from left, and Project Engineer Jasper Verstreep, fifth from left. Photo courtesy PileMedic® by QuakeWrap.

In the past, a similar accident with similar damage was repaired by a method of installing more additional vertical piles around the broken pile, to form a brace (a time consuming and expensive repair method). This time, in 2015, a different repair method was selected, as we selected the repair solution of PileMedic. The advantage was that the broken pile could be repaired and reinstated up to the required bearing capacity and strength value, and no additional piles needed to be installed. This reduced cost and timing in repair method.

**Q: Mo mentioned that those piles repaired by PileMedic are still holding up well. Do you have some pics and what did you think when you saw how well these repaired piles held up?**

**A:** After the collision in 2015, we observed cracks at the top surface of the dolphin. Since the repairs have been completed (now almost five years ago) none of the earlier cracks on the top surface ever returned. So this tells us the repair method is still effective.

**Q: International infrastructure repair represents its own unique challenges depending on location of the job.**

**Please describe a few of these challenges, and why it is advantageous for a company to have you on the management team for their most important projects.**

**A:** The application of PileMedic repair was the first experience (with pile encapsulation) for the local contractor and his installers, including the divers. Mo and I witnessed and managed the entire repair process, even up to the early morning hours as we had to take advantage of the low tide at night. Experienced project management to support a PileMedic application makes a huge difference to ensure an efficient preparation of the works (to minimize the downtime of continuously ongoing jetty operations), and ensure maximum efficiency and compliancy with all QSHE standards and technical requirements during the installation works.

The repair works were executed at the 10000DWT jetty of a busy oil- and gas commercial port. As the jetty is usually full time booked throughout the year, it was of essential importance to reduce the installation time to a minimum, in order to minimize interruption and potential down time of ongoing vessel operations.

As a side note, Prof Ehsani's presence during the repair works made a huge impact on the successful and rapid

**EXPERIENCED PROJECT MANAGEMENT TO SUPPORT A PILEMEDIC APPLICATION MAKES A HUGE DIFFERENCE TO ENSURE AN EFFICIENT PREPARATION OF THE WORKS (TO MINIMIZE THE DOWNTIME OF CONTINUOUSLY ONGOING JETTY OPERATIONS), AND ENSURE MAXIMUM EFFICIENCY AND COMPLIANCY WITH ALL QSHE STANDARDS AND TECHNICAL REQUIREMENTS DURING THE INSTALLATION WORKS.**

# JOB STORY

completion of the project, as he was able to overcome the language barrier and guide the labor team in the initial step-by-step for the PileMedic application procedure.

**Q: Based on your experiences, can you give us an overhead view of the state of international marine and port infrastructure, and the efforts to maintain and renew this critical component of economic development for many countries.**

**A:** Ports around the world are suffering more and more from aging and quality downgrading. Due to the fact that several port infrastructures around the globe were built a long time ago, in combination with old-school building techniques (no usage of appropriate concrete for salty environment, no usage of proper spacers/formwork, lack of supervision during the construction works, etc.) and lack of maintenance (in development countries they believe they save cost by avoiding general maintenance, which is absolutely wrong, of course).

Besides, many owners of port infrastructure postpone or cancel necessary repair and maintenance works due to lack of budget or simply ignorance. If they would be more aware about new techniques such as PileMedic, which is a time and cost saving technique, it would definitely change their decision taking process on selecting an appropriate repair method.

**Q: Please feel free to add any details about your partnership with Mo and PileMedic® by QuakeWrap that were not asked to this point.**

**A:** With over 15 years of international experience on port and marine projects at five continents, I have a relatively wide network of global professionals (consultants, contractors, governmental officials, etc.) within my range.

An increase of PileMedic's product awareness all around the globe, and especially in development countries, will definitely create more recognition of the PileMedic technique, so designers and engineers can consider this technique for implementation at their respective projects too.

Promotion of the product as a worldwide construction technique and via building material exhibitions, as well as through Engineering Departments and Port Authorities, might be just a few ways to boost the PileMedic® brand. I remain on standby with this experience and with any assistance that may create new business opportunities for organizations charged with repairing and maintain these critical infrastructure. ■

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*More information including a video of the actual 2016 jetty/ship collision can be found at [PileMedic.com/videos](https://www.pilemedic.com/videos) (<https://www.pilemedic.com/videos.html>)*