



Doubling the capability in the same facility

The solution to use both parts of the basin at the same time

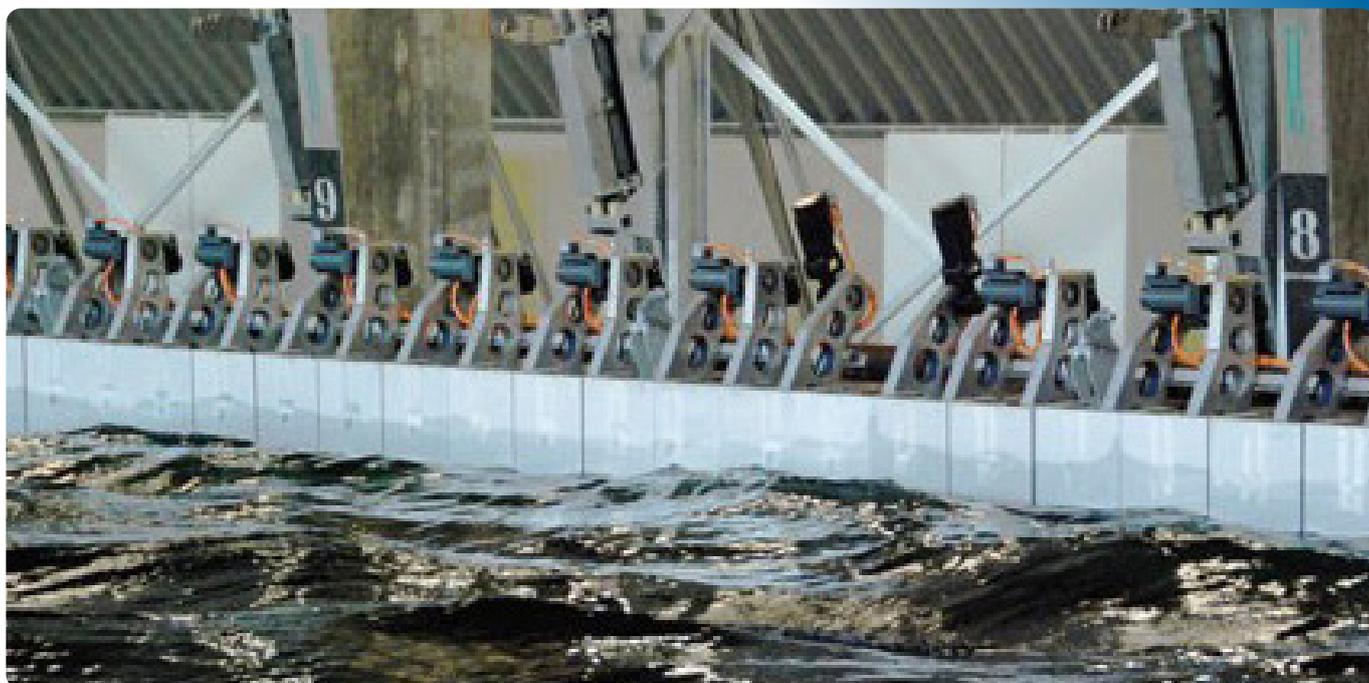
About 30 years ago Van Halteren Technologies, or Hydraudyne as was the name at the time, installed a wave generation system for a facility operated by the Indonesian government. This facility is built for hydrodynamic and offshore construction research, and the technology previously allowed for research to be done in either the shallow or the deep part of the basin. VHT was asked to upgrade and revitalize the technology, and came back with a solution that allowed both parts of the basin to be used at the same time.

The previous hydraulic system was in operation for around 30 years, so the facility's operators decided it was time to replace it with something more in line with the technology of today. Van Halteren Technologies,

having provided the first system, was familiar with the facility and suggest the unique solution of splitting the basin into two, and changing all wave generation systems from hydraulic to electric.

The reason for suggesting the division of the basin was simple – more operational hours and increased research capabilities. Where previously it was only possible to research the behavior of materials in either shallow or deep water, it's now possible to utilize both at the same time.

Each basin has its own specific wave generator system which is optimized for the intended use. All of this generates more income for the facility, and gives researchers more data in a shorter time frame.



Addition by division

The new system with double the testing capacity was only possible because the facility operator was willing to install a new, reinforced dividing wall between the two basins.

VHT suggested a concrete wall and gave inputs from an engineering perspective. This meant offering advice on construction and tolerances. Then VHT installed two electrical wave generation systems, with each producing high-quality waves in each part of the basin.

The previous experience with this facility was an essential piece of the puzzle, as VHT knew the dimensions of the basin and knew what would be possible. Then the solution came as a result of collaboration, innovation and engineering expertise.

Improved capacity with increased efficiency

Ships and offshore constructions are significant investments, and hydrodynamic testing is an essential part of the design process. To be able to test materials in different conditions and in different water depths at the same facility is extremely valuable, and can save significant amounts of time and money for the companies investing in these structures.

The new system is also better for the facility operator, as not only can they generate more income from research, but the systems run more efficiently than the hydraulic equivalents. They use less power, require less maintenance and are easier to service, all while offering better performance.

Waves of potential

As a result of this successful project, there are potential opportunities to carry out similar work in the future. This is due to a number of factors, not least the trust and cooperation between everyone involved.

It's important to be able to trust each other, but knowledge and past experience in this field is of great value too. They have been to our manufacturing plant in The Netherlands, and have been able to ask questions to our engineers and see the system during the manufacturing process, which showed the quality of the production and the assembled system. This helps open doors for future projects.