

## References

# Record-breaking intake cooling system in the Philippines



## Uponor involvement



## Record-breaking intake cooling system in the Philippines

New challenges are where the Project Services Department at Uponor Infra feels most comfortable and can demonstrate its continuously developing expertise. The aim on this occasion was to provide a seawater intake cooling system – a pipeline, intake structure and chlorination line – for the 420MW extension of the Pagbilao Coal Fired Power Plant on Luzon Island in the Philippines.

### Project Facts:

Location	Completion
Luzon Island, Philippines	2016
Building Type	Product systems
Industrial	Heating and cooling

Project Type  
Uudisrakentaminen

CCT Constructors Corporation is a customer of Uponor Infra, a subcontractor of Daelim, the main contractor for the end client and owner of the plant, Team Energy.

The 146m pipeline will provide the 19m<sup>3</sup>/s seawater flow with a service life of 30 years. An DN/ID3,000mm Weholite pipe and a recordbreaking intake structure made of Wehopanels – the largest PE intake head in the world – were used to build the pipeline. The pipes came from Thailand and all of the prefabricated parts for the intake head were delivered in containers from Uponor Infra’s Vaasa factory in Finland. The huge dimensions of the tower – the screen part had a 13.5m diameter – and local restrictions on lifting equipment inspired the Project Services design engineers to do their utmost to find the best solution for the tower’s fabrication and installation.

The welding of the panels, manoeuvres to flip the huge covers, the ballasting of the internal walls, the lifting operations, the connection stages between the top and bottom part – all of these were designed and planned meticulously in the Vaasa Project Services offices, to ensure yet another successful installation by the Uponor Infra team.

Less than 24 hours were needed to launch, transport, sink and connect the pipe to the onshore chamber, saving a great deal of time and money for the customer by minimising the auxiliary equipment and diving hours.

### **Extremely demanding dimensions**

The welding works began at the end of July 2016, the pipe was ready for launching on 23 August and the intake head was finished on 1 October, on the same day that the pipe was launched. After this, due to a delay in the dredging works, Uponor's crew returned to Finland, resuming their tasks at the end of November when they rounded off the works with the submersion of the intake head.

The extremely demanding dimensions of the intake head challenged the Project Services welding team or "Weholite Samurai" (they only enter the battlefield when groomed to perfection...). Their skills, professionalism and hard work were once again evident in the successful delivery of this project, a new milestone in the Weholite World.

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