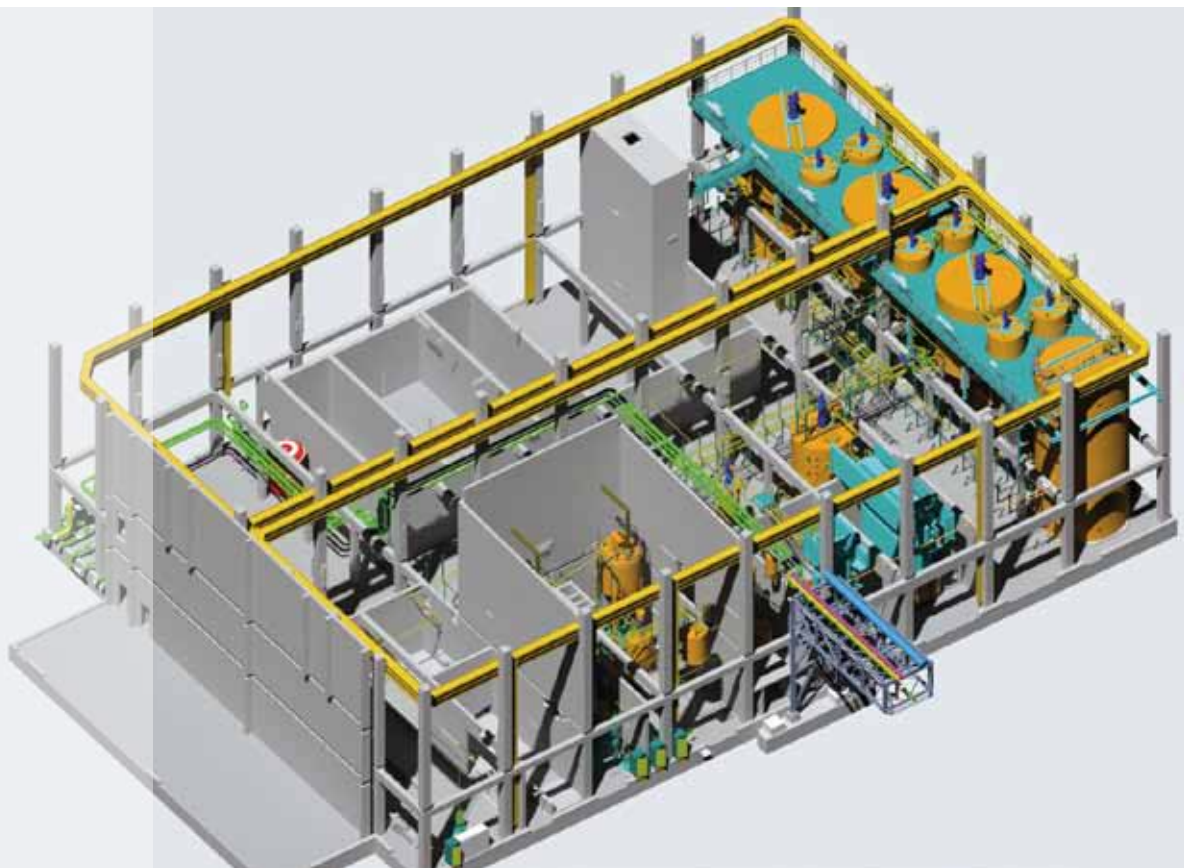


Flue Gas Washing Water Treatment Plant for the Power Plant Maasvlakte 3

Design, Construction and Commissioning of a FGD Waste Water Plant



AMIANITIT WATER MANAGEMENT

Project Information

Products and Services

Drinking Water

Process Water

Waste Water

ICA Technology

Operation and Finance

FGD Maasvlakte 3

Erection of a FGD Waste Water Treatment Plant became necessary, because a new Coal Power Plant was built in Maasvlakte. Maasvlakte itself is a huge industrial area and part of the Rotterdam port. The new Coal Power Plant is known as Maasvlakte Power Plant 3 (MPP3). This plant has a gross capacity of 1,100 MW which is comparable with 7 % of the energy consumption in the Netherlands. PWT Wasser- u. Abwassertechnik GmbH was awarded by E.ON to design, build and commission the FGD Waste Water Treatment Plant for a value of approx. 4 Mio. Euro to treat the highly contaminated waste water resulting from wet desulphurisation.



Treatment is realised by a three stage chemical and physical plant with selective heavy metal removal. Design included the process design, 3D plant layout and pipe engineering as well as instrumentation and functional design for automation. In addition, the power plant specific requirements for high quality and documentation were to fulfil. Design started at the beginning of 2010, the erection of the plant in September 2010. The plant is ready for operation in the first half of the year 2012.

Technical Data

Size of Plant

Treatment capacity 30 m³/h (6 - 36m³/h)

Relevant Substances

- ≈ Calcium sulphate contents (gypsum) up to 12 g/l
- ≈ Variable heavy metal concentrations Hg, Se, Tl, Cd, Ni, As depending on used coal in power plant process

Design

Dynamic treatment from 6 to 36 m³/h

Treatment stages

- ≈ Oxidation
- ≈ 3 stage precipitation plant with selective sludge removal
- ≈ Final treatment with pH-value correction
- ≈ 2 stages sludge dewatering
- ≈ Chemical dosing stations
- ≈ Lime milk preparation stations
- ≈ Chlorine dioxide production



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