

CURRICULUM VITAE



R.A. de Heij MSc (Robert)
Senior civil engineer Hydraulic structures and Soil mechanics

Profile

Robert de Heij studied Civil Engineering at TU Delft at the department of Hydraulic engineering and graduated at the department soil mechanics. He is employed by Witteveen+Bos since April 1999. He works as a senior civil engineer and project director within the field of Hydraulic structures and geotechnical engineering, he is active in the following areas: navigation locks, infrastructure, quay walls, shipyards, land reclamation, foundation design and underground construction .

Personal

Years of birth 
Nationality 
Sex 
years with firm 22 years
office location Utrecht, Netherlands

Career

2020 - date Witteveen+Bos, Business unit manager Hydraulic structures and Structure dynamics
2014 - 2020 Witteveen+Bos, Business unit manager Hydraulic structures and Geotechnics
2007 - 2013 Witteveen+Bos, group leader construction and geotechnical expert groups
2014 - date Project Director for Hydraulic structures and Geotechnical projects
1999 - date Witteveen+Bos, project manager, senior geotechnical advisor, advisor Hydraulic structures

Experience

2020 - date Project Director for Dam safety projects for mine tailings storage facilities of VALE in **Brazil**

2019 - 2021 Senior civil engineer in technical management team Dutch ministry of Public works for **IJmuiden Navigation lock** the Netherlands for hydraulics and Geotechnical engineering.

2019 - 2021 Project Director for Via15; A new highway in the Netherlands connecting 2 mail corridors A12 and A15 engineering scope >5 MEUR.

2018 - 2019 Project director and sr civil engineer for the feasibility study for the a **navigation channel and locks to bypass the Itaipu dam in Paraguay. Total head difference 120 m**

2017 senior civil engineer Remediation works water intake Burullus, **Egypt**
Assessment of water intake structure and advice for remediation of the concrete structure

2016 - 2017 Technical Advisor of tender management **Navigation lock Terneuzen**
Tender phase new navigation lock Terneuzen Netherlands

- 2014- 2015 Technical manager Tender phase **sea lock IJmuiden** (DBFM) . Responsible for integrated design and coordination within Tender Team . Member of dialogue team and co-author EMVI document Risk management plan.
- 2014-2016 Project manager for a project in which 23 berths for the Port of Rotterdam is being upgraded for the purpose of creating proven safe berths.
- 2013- 2014 Project manager and Technical advisor Vopak Masterplan. A program in which the existing Vopak terminal capacity in the Port of Rotterdam will be optimized by construction of new jetties, extension of existing jetties and the construction of a new manifold.
- 2012 -2013 Technical manager for the reference design for the **third Lock for the Beatrix Lock complex** in the Netherlands. lock dimensions 25x270 m. Design included landscaping design and EIA.
- 2011-2012 Project manager for a risk inventory of 88 hydraulic structures of the Dutch ministry of public works. The inventory included safe operation and maintenance for movable bridges, navigation locks and weirs.
- 2011 Geotechnical advisor for the tender design for the widening of the Juliana canal in the Netherlands.
- 2010 Project leader Risk assessment hydraulic structures for the Dutch directorate for public works and water management. RAMS analysis for 23 hydraulic structures located in the river Meuse
- 2009 discipline leader for FEED design of artificial islands in the North Caspian Sea, **Kazakhstan**. Partial standardized HUB and Drilling centres were designed for full field development (client: KWAC/Shell)
- 2006-2012 Project leader for the Design and contracting and subsequent Client representative during construction for a ship collision provision and building pit in the IJ-lake near the city centre of Amsterdam, Holland.
- 2008 Project leader for the tender design for the **third set of Locks for the Panama canal**. Witteveen+Bos was responsible for the lock head design (lock gates dimensions 57x31x10 m). Because of the seismic conditions in the Panama area, the seismic loads were governing in the design. (client: Grupo Unidos por el Canal)
- Discipline leader Geotechnical design for the Preliminary design for the project Federation island in Sochi, **Russia**. This proposed artificial island is located in the Black sea near Sochi. The major design issue was the combination of soft soil conditions, deep water and seismic condition. (client: M-industry)
- 2007 Assistant project leader for underground constructions for the concept phase for the project Glinki Moika in st Petersburg, **Russia**.
- 2006 Project leader and advisor for a preliminary design for a new shipyard in Sattahip, **Thailand**. For this shipyard a 300 m long launch quay for new ships and a multipurpose repair quay were designed
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- 2006 Advisor for a preliminary design for a large underground parking garage in Moscow, **Russia**. The project was sited close to monumental buildings in the city centre.
- 2006 Project engineer during the construction of a RO-RO quay wall in Vlaardingen, Holland. Project engineer for the tender phase for the "Oosterweelverbinding" in Antwerp, **Belgium**. Geotechnical design of a immersed tunnel and construction of a temporary dock

- 2005 Geotechnical advisor for a PESP study/preliminary design for the revitalisation of the island 'New Holland' in city of St Petersburg, **Russia**.
- 2005 Assistant project leader for the design and production of contract documentation for a series of 4 quays of 300 m stretch in the harbour Eemshaven, Holland.
- 2005 Project engineer for Final design for railway extension for Vleuten-Amsterdam Rhine canal. Responsible for design of the foundation with Bored piles with casing with diameters of 1,4 and 1,6 m. Determination of stiffness for this piles required special attention
- 2004 Project leader and geotechnical advisor for the determination of the integrity of the piled foundation of the new terminal at the Princes Juliana international airport of **St Maarten**.
- 2004-2005 Project engineer for the final design of Ice barriers for the oil production islands in the North Caspian Sea, **Kazakhstan**. The dams were designed based on Plaxis analysis and ice investigation programs. (client: KDPC/Agip).
- 2004 Geotechnical advisor / FEM specialist for the final design of shallow foundations of two concrete cantilever bridges for the upgraded Dutch highway N242 near Alkmaar, Holland.
- 2004 Structural engineer / FEM specialist for retaining walls for Tender design of immersed tunnels in Coatzacoalcos in **Mexico**, Tessalonki in Griekenland en Valencia in **Spain**.
- 2004 Project engineer for the designs for an oil jetty in the port of Aktau (Munaidaria) and a jetty for the Karaganski marine fuelling station in Bautino bay, **Kazakhstan**.
- 2003-2004 Structural engineer/geotechnical advisor for the basic design and detailed design for a shipyard in the port of Aktau, **Kazakhstan**. A team of Witteveen+Bos carried out the design activities in the Aktau branch office together with the local partner Nipi Neftegas. The works comprised a launch quay, an outfitting jetty and onshore reclamation with drainage system.
- 2003 Geotechnical advisor for the foundation of the extended IBIS hotel in Amsterdam near the Central Station. The new building located above the railway tracks on the same location as a former railway bridge.
- 2003 Structural engineer/geotechnical advisor for the tender design of the Muuga Coal Terminal in Tallinn, **Estonia**. An important restriction is found in de presence of Cambrian Clay. The elevation of the top of this layer is found between CD-7 and CD-29 m. This extreme hard clay layer will be used as foundation layer (client Ballast-Ham dredging/Skanska EMV SA).
- 2002 Geotechnical advisor for the basic design of the 'IJzeren Rijn'; a railway line for cargo between Belgium and Germany.
- 2002 Structural engineer for two large building pits in Amsterdam which were partly located in the water the 'IJ' in very soft soil conditions.
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- 2001-2002 Structural engineer in design team of the contractor of the High speed rail link between Rotterdam and Breda, the Netherlands. Detailed design of immersed tunnels for the river crossings 'Dordtsche Kil' and 'Oude Maas' (design & construct contract). Tasks assigned: detailed design combi walls of the trenches;
- 2000-2001 North-South line Amsterdam, the Netherlands
Project engineer for Finite element predictions (Diana) for Settlement risk assessment for the Amsterdam bored metro link (North-South line). 2D FEM analysis for settlement risk

assessment along the full alignment of the North-South line. Participated in design team for innovative concrete lining and joints concepts.

Education

1999 Technical University Delft, Higher Technical Education Civil engineering, Hydraulic structures and Geotechnics Specialisation Locks and Quay walls

Languages Dutch: excellent English: good Spanish: intermediate

Memberships Royal institute of engineers (KIVI)
CEN TC396 committee: Earthworks using hydraulic fills,
PIANC,



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Alexander de Heij
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