Royal HaskoningDHV has extensive experience in intakes, outfalls and marine pipelines. During the past 50 years we have been involved in delivering many of these schemes around the world, including:

- subsea water supply pipelines
- wastewater treatment works outfalls
- mine tailings outfalls
- seawater air conditioning
- oil and gas transfer pipelines
- intakes and outfalls for power stations, desalination plants and industrial cooling water systems.

We have detailed knowledge of the whole spectrum of issues within this specialist field, from the planning and consenting process to determining the hydrodynamic climate, outline and detailed engineering and construction supervision.

Our experience includes:

- investigation, project inception and planning
- design
- transport system hydraulics and pumping

- recirculation, dispersion, dilution, current and wave numerical modelling
- environmental assessment and the consenting process
- construction administration and supervision
- engineering diving services
- operational problem solving, condition assessment and maintenance
- expert witness

We have unparalleled knowledge of coastal process engineering in the marine environment and substantial experience of design techniques and complete knowledge of the wide variety of options available.

We develop innovative, practical and flexible environmental engineering solutions that are targeted to your requirements, maximising value and delivering robust results.
Innovative solutions

Pipelines
With unrivalled experience in marine pipelines we offer innovative solutions for your individual project challenges. We have delivered many global projects that span the complete range of pipeline materials and construction techniques, in sizes ranging from 150 millimetres to four metres, for oil and gas, water and sewage.

Working in partnership with you from the outset, we deliver reliable, cost effective solutions to meet both your current and future needs with minimum maintenance demands.

Transport system hydraulics
With our specialist knowledge within the hydraulics field we provide a broad range of consultancy services from functional design to detailed engineering. We use dedicated software tools to analyse and design pipeline systems, for both steady state and unsteady conditions.

The hydraulic aspects of the functional design for intakes and outfalls play an important role in:
- sizing offshore intake structure
- sizing pipelines to the pumping station
- pump submergence
- pump approach flow acceptance criteria
- operational pump control design
- anti-surge measures
- flow distribution of outfall diffusers

Coastal Engineering
We deliver the highest standard of quality and engineering excellence in coastal engineering, management and planning. The evaluation of many tasks involves the application of numerical modelling techniques. Our specialist software ensures a leading role in the use of tested and proven modelling systems for dilution, dispersion, thermal recirculation and sedimentation.

Our combined engineering experience and modelling capability is directed and managed through each stage of a project’s development, irrespective of project size. This ensures all relevant aspects are fully researched and investigated which provides a sound basis for implementation.

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