

Water pipelines

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Ausenco is a leading global provider of engineering and project management services to the resource and energy sectors. We combine ingenuity with insight to deliver effective end-to-end solutions for our clients.

Our professionals offer expertise across every aspect of the resource and energy sectors — in areas including mineral processing; pipelines; transportation systems; ports and terminals; infrastructure; and conventional, renewable and alternative energies.

We're also experts in optimising performance through tailored operations and maintenance solutions, and in providing environmental and sustainability strategies that deliver benefits for projects, communities and the environment.

We're skilled in every phase of the project lifecycle. From initial concept through to operation, our people can assess, plan, cost, design and construct ingenious solutions that add value and support your return on investment.



We offer complete water pipeline solutions from concept to commissioning.



Bao Tou (Bai Yun E Bo) Iron Concentrate, Water and Thickened Tailings Systems, under construction, China

Ingenious pipeline solutions

For more than 30 years, our people have participated in the development of pipelines around the world, helping clients to transport a diverse array of products and liquids in challenging terrain, extreme climates and remote locations.

In addition to water and wastewater pipelines, our expertise extends across slurry, tailings, oil, gas, ethanol and alternative fuels pipelines. In fact, our personnel have participated in the development of the vast majority of long-distance slurry transportation systems constructed since 1979.

We also offer our clients expertise in pipeline SCADA and telecommunications systems. Our specialities include developing SCADA solutions for remote locations—stand-alone, self-sustaining systems that require a minimum of local staff and maintenance.

Our services include complete pipeline solutions from concept to commissioning, including:

- feasibility studies and conceptual design
- route reconnaissance and evaluation
- laboratory and loop testing programs
- complex hydraulic modelling
- basic and detailed engineering
- leak detection systems
- pipeline operations and simulation software
- pipeline SCADA and telecommunications
- construction management
- start-up and commissioning
- pipeline operations optimisation and maintenance
- operator training and operations support.

Reducing the global footprint with sustainable water pipeline solutions

We put our ingenuity and vast pipeline engineering expertise to work delivering water and wastewater pipeline solutions. We provide the full range of services, and ensure your project is delivered successfully from start to finish.

We have designed and delivered innovative water transport solutions for projects across the globe with both mining and civil applications.

Our water pipeline project experience includes:

- reclaim water pipelines
- desalinated water pipelines
- freshwater pipelines
- seawater pipelines.

Our experience



Project

Bao Tou (Bai Yun E Bo) Iron Concentrate, Water and Thickened Tailings Systems

Location

China

Client

Bao Tou Steel Group

Year

2010

Description

Ausenco performed a complete range of engineering services for the Bai Yun E Bo pipeline system, which includes one of China's longest freshwater pipelines as well as an iron concentrate pipeline and tailings transportation system.

Serviced by just one pump station, the 130 km water pipeline was designed to transport 2,500 m³/h of water across an arid region in support of both ore beneficiation and the livelihood of nearby communities. Ecological considerations played a key role in its design.

Design and construction of the pipelines were extremely challenging, as the project is located in the Inner Mongolia region, where temperatures drop as low as -34°C.



Project

CP Mining Water, Tailings and Concentrate Pipelines

Location

Australia

Client

China Metallurgical Group Corporation (MCC)

Year

2012

Description

The CITIC Pacific (CP) Sino Iron Ore Project will be one of the largest magnetite mining and processing operations in the world when complete. As part of this project, Ausenco was selected to perform a full array of services, ranging from feasibility studies and engineering through construction supervision for an iron ore, water, and tailings pipeline system.

The water component of this project included a 30 km, 48-inch diameter pipeline which will transport 5,833 m³/h of desalinated water; a 30 km, 30-inch diameter water return pipeline which will transport 3,000 m³/h, and an 8 km, 30-inch diameter rubber-lined tailings return water pipeline.



Project

Climax Robinson Lake

Location

USA

Client

Climax Molybdenum, a Freeport-McMoRan Company

Year

2011

Description

Ausenco was retained to rework designs for the new Robinson Lake Pump Station (RLPS). The client required a design which would allow the three vertical turbine reclaim water pumps to be removed later in the project lifecycle and replaced with four larger pumps. Since the RLPS building was already under construction at the time of award, the layout for the pumps and piping required some creative thinking.

Ausenco worked with the Climax project engineering team to develop a piping and equipment layout which would meet the design requirements while still allowing subsurface pipeline entry and exit to and from the building for freeze protection without undermining the building foundations.