

Success Story**Durrat Al Bahrain SWRO Plant****Market Served****Water****Location** Bahrain**Scope** Design, Supply,
Installation, Testing
and Commissioning**Client** Energy Central
Co. B.S.C.**Duration** 6 months**Summary**

Durrat Al Bahrain is an ambitious project, an island and resort development, in the south of the Kingdom of Bahrain. The project matches the size of the city of Manama, the capital city of Bahrain. The Durrat Al Bahrain SWRO Plant offers a green and environmentally conscious solution to serve the irrigation needs of the entire Durrat Al Bahrain development. Irinatech has met the complete electrical requirements for this 4,000 cubic metre desalination plant while complying with the local and international standards.

Services

Sea Water Desalination Plants operate on a very high pressure pumps owing to the fine membranes in the Reverse Osmosis (RO) unit. After the necessary pre-filtration, sea water is passed through the RO membranes under extreme pressure using high pressure pumps. Special drives and control systems are required to control the motor speed for this job. Irinatech designed the Motor Control Center (MCC) to monitor and control these high pressure pumps thus optimising their performance and improving their life. Another MCC was also designed and manufactured that incorporated the control and operation of the rest of the plant components which included the various dosing pumps, filter feed pumps, raw water pumps, flushing and cleaning pumps, and blowers, etc. This was only possible using the years of experience that Irinatech possesses in the industry of switchgear manufacturing.

One of the main challenges for the plant was the potential threat of Corrosion to the equipment. Irinatech, with its years of experience in the Middle East market, mitigated the risk by the selection of most suitable material for the plant best suited for the harsh weather particularly in the coastal areas of Bahrain.

Mechanical installations of the entire Cable Management System was carried out at an elevated level thus reducing the damage that was possible by installing it at the base level. From the transformers to the switch gears, through the motors, pumps, control panels and all process instruments, all the power, control and protection cabling works were carried out by Irinatech. The scope was not limited to the above but also included the final electrical testing and commissioning works for the system.

From project initiation, Irinatech was actively involved as an active partner for the preparation of electrical and mechanical layout drawings which ensured a smooth transition into the execution phase of the project. Irinatech's project scope was successfully approved by Bahrain's Electrical Regulatory Authority which was one of the key acceptance criteria for this project.

Irinatech at a glance

We contract to local, regional and multinational corporations and public institutions. Our general scope of work includes Engineering, Procurement, Construction and Handover to end-user. Our current growth strategy focuses on leveraging opportunities in the emerging markets of the Middle East, South Asia and Africa. Primarily focused in the power

infrastructure market, we work across a range of industry sectors including energy, water, telecommunications and infrastructure.

Our services include:

- Turnkey Construction
- Technical Support Services
- Engineered Products

Name	Amna Sohail
Telephone	+973 17 38 22 83
Facsimile	+973 17 38 22 84
Email	info@bh.irinatech.com

