

Desalination plant description

The 585 MW combined cycle gas fired power plant and 150.000 cbm/day desalination plant is located in on Sea Port area in the Middle East.

The power section of the plant uses three Siemens SGT5-2000E gas turbines (formerly known as V94.2) driving three electrical generators, each fitted with Heat Recovery Steam Generators (“HRSG”), which utilize the exhaust heat of the gas turbines to generate HP and LP steam. The HRSGs are dual pressure natural circulation with a horizontal gas flow. The manufacturer of HRSGs is Doosan Heavy Industries (“DHI”). The HP steam is supplied to one extraction-condensing steam turbine to complete the combined cycle. The steam turbine manufacturer is Alstom (now taken over by GE), one of the world leading suppliers of steam turbine technology. The LP steam produced from the HRSGs and from the extraction of the steam turbine is supplied to the thermal desalination plant.

Four conventional Multi Stage Flash (“MSF”) desalination units are installed in the Plant. Each unit is designed to generate a net output of 37.500 cbm/day at design conditions. The manufacturer is DHL, one of the most experienced suppliers of MSF type desalination units. Each unit has 17 heat recovery stages and 3 heat rejection stages.

