

# WATER PIPELINE SUB-STATIONS



PROJECT NAME	WATER PIPELINE SUB-STATIONS
LOCATION	DAMMAM-RIYADH, SAUDI ARABIA
CLIENT	SCECO/WESTINGHOUSE
CONSTRUCTION PERIOD	22 MONTHS

This project involved the construction (including complete supply of materials) of three 115/13.8 KV, 30/40 MVA outdoor-type sub-stations situated along the main Dhahran-Riyadh highway, with the modification of an additional seven satellite electrical sub-stations at locations throughout the Eastern Province. These were designed to provide power for the booster pump stations of the 500-kilometre pipeline through which desalinated water is pumped from Jubail (in the Eastern Province) to the capital, Riyadh.

The job involved the provision of considerable logistics and life support facilities and services to enable crews and equipment to operate efficiently in the different remote locations while ensuring completion by the deadline.





The water pipeline sub-stations were of vital importance for the city of Riyadh to save the depletion of important artesian wells water reserves.

The work included:

- General site preparation, rock excavation and fencing of the sub-station sites, each with an area of 30,000 square metres.
- Supply and erection of three pre-engineered buildings for the switchgear and controls equipment.
- Supply and erection of 1,500 tons of structural steel for the A-frames and high-voltage bus bars and breakers.
- Supply and installation of an HVAC package system for the control rooms.
- Installation of all underground duct banks, high-voltage cables, control cables, high-voltage jumpers, high-voltage insulators, SF-6 switchgear, disconnect switches, aluminium tubular bus bars, lightning protection, earthing grid, street and yard lighting, as well as the supervisory control and data acquisition (SCADA) and communications system.

