

Port Said Power Plant – Intake & Outfall line replacement due to soil settlement issues

Julien Herbin¹

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ABSTRACT

Port Said Power plant is a 682.5 MW gas-fired conventional thermal power plant located on the coast of the Mediterranean Sea, approximately 45 km southeast of Port Said, Egypt.

The plant was erected in 2001 and is now owned and operated by EDRA as part of their portfolio in North Africa & Middle East.

The power plant is using 2 intake pipelines in GRP ID2300 to supply water for cooling system and 2 Outfall pipelines in GRP ID 2300 for hot water discharge.

Leakages have been observed on the 4 lines and a first surveys has shown both GRP pipe damages and pipes disconnection at coupling locations.

EDRA contracted GEOCEAN to perform additional surveys during Power plant scheduled maintenance shutdown [22/10/16] and then carry out FEED study to assess the suitable remedial actions to be performed to maintain Plant performances.

The main issue appeared to be differential soil settlement, and GRP pipes conventional coupling systems are known to be very sensitive to such soil conditions.

The challenge was to engineer a solution to remove the GRP pipes and replace them by a pipe system resistant to differential soil settlement and to implement the new system during the very short period of the annual plant shutdown.

¹ Julien Herbin, Geocean SAS, julien.herbin@geocean.com, France

