

# CASE STUDY

## Raw and Demineralization Water Treatment Plant

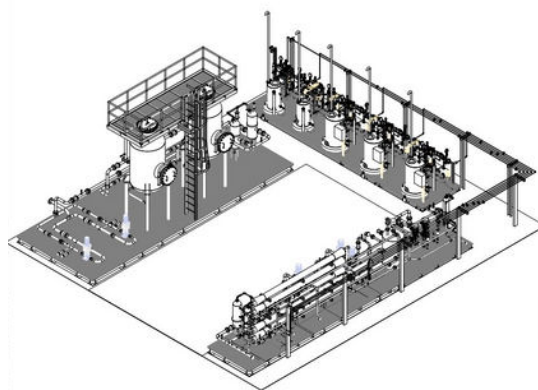
### Peerless

**END USER:** Sonatrach – Algeria

**PURCHASER:** Petrofac International Limited - EPC

**LOCATION:** Algeria

**PROJECT DESCRIPTION:**  
Complete containerized water solution using different technologies to reduce the TSS and TDS with other pollutants



ISO VIEW

**SITUATION:** Petrofac was awarded the Tinhert field development project EPD -2 contract to develop the oil field, including a raw and demineralization water treatment plant located in Algeria.

**CHALLENGE:** The raw water will be received from multiple well sources. The high-temperature water will have fine suspended solids with a high phosphate level, which can form deposits on the RO membranes and block the permeate flow. To provide a reliable water source to the oil field, a raw water treatment plant is required to supply utility water, and the same filtered water shall be fed to double-pass RO to produce demineralized water per the desired water quality requirements.

**SOLUTION:** Peerless provided a complete containerized water solution using different technologies to reduce the TSS and TDS along with other pollutants and treat the raw water to meet the utility water quality requirements and Demin water quality.

**PACKAGE:**

- 2 x 100% Multimedia Filters
- 2 x 100% Micron Filtration
- 2 x 50% Air Cooled Water Chiller
- 2 x 100% Double Pass RO
- Chemical Dosing Stations
- Local Control Panel equipped with redundant PLC and HMI
- Replica HMI

**ENVIRONMENTAL BENEFITS:**

Utilizing the existing raw water source and converting it to a reliable water source can be used in different applications.

**CECO ADVANTAGE:** CECO Peerless optimized the design of the potable water package using reverse osmosis simulation software before construction. The RO membrane was selected and configured to achieve the required DM water quality.