

ARPECHIM Refinery ETP, Romania

Long-term plant operation & technical modifications



WABAG Water Services SRL (WWS) Romania was awarded the contract for the operation and maintenance including technical adaptation works of the existing mechanical/biological effluent treatment plant of the Arpechim Refinery in Pitesti.

The plant treats 30,000 m³ of

industrial wastewater daily, contains high levels of oil and specific contaminants such as phenol, ammonia and hydrogen sulphide. In line with the required treatment performance, the wastewater plant has several treatment stages, which facilitate direct discharge into surface water.

The plant has been operated by WABAG starting in April 2009. In 2016, the contract was extended by O&M for pumping station and potable water treatment plant, together with optimization measures for enhancing efficiency of plant management.

Features

- Refinery-ETP: 30,000 m³/d
- Operations & Maintenance including technical plant optimisation works
- O&M: 2009-2019



Client
OMV PETROM SA

Type
General Contractor

Award of contracts

O&M: 2009
Plant optimization - Stage 1: 2008
Plant optimization – Stage 2: 2016

Maximum hydraulic load
30,000 m³/d

Raw water
Effluents from petrochemical
production facilities

O&M
Start: 01.05.2009
End: 30.06.2019

O&M
Staff-No.: 65



Main plant components of the Refinery ETP:

- Mechanical Separator 1 and 2 for separation of oil in the wastewater.
- Slop oil treatment plant
- Central treatment plant for chemical and biological treatment including sludge treatment
- Laboratory
- Facilities for maintenance

Plant modernisation & upgrade – Stage 1:

- Upgrade of the biological treatment by increasing the aeration system capacity:
 - Installation of new submersible mixers in cascade 1 (future denitrification stage)
 - Installation of new aerators in cascade 2
 - Installation of new blowers and adaption of air pipes
 - Installation of new electrical control panel
- Installation of a slop removal system in the homogenisation basin:
 - New floating scimming device to remove slops
 - Installation of a submersible pump for discharge
 - Installation of a new gravity separation tank
 - Civil works for foundation and piping
 - New control panel for operation of new system
- Improvements in the health and safety standards and equipment of the plant:
 - New handrails, stairs, ladders and platforms
 - New steel and concrete covers
 - New bridges, safety chains and gratings
 - New safety equipment as lifejackets, safety showers and first aid material
 - New portable Draeger multigas analyzers

Operations & Maintenance

- Technical and commercial plant management
- Efficient day-to-day operations
- Continuous maintenance & repairing
- Quality management according: ISO 9001, ISO 14001, OHSAS 18001
- Training and integration of personnel
- Reporting to client and public authorities