

ARSENIC REMOVAL AT A WATER UTILITY COMPANY, HUNGARY



Tiszagyenda, Hungary, 2022



Tiszamenti Regionális Vízművek Zrt.



water utility operator



drinking water treatment



arsenic removal AsMET adsorbent



220 m³/day, Qmax 16m³/hour

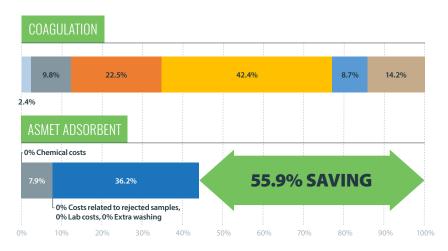
Arsenic-removal AsMET technology was installed at the drinking water plant of a settlement in Hungary, which was implemented in a long-term lease scheme that supports cost-effective development investment.

- scope of the project: treatment and stabilisation of hectic and high (average 80µg/l) arsenic levels in water production wells
- · capacity: 220 m³/day Qmax 16m³/hour
- before the project: the arsenic was neutralised by adding large amounts of iron oxide, but this coloured the drinking water yellowish-brown and created large amounts of arsenic sludge
- achievements: more than 55% reduce on the operating cost of stable arsenic removal using AsMET technology and stable arsenic content under the regulated limit value
- financing: financing facility was provided to support investment
- realization: in a long-term lease structure that supports costeffective and developmental investment



COMPARISON OF THE TWO TECHNOLOGY'S OPERATING COSTS

Operating costs of the regenerable adsorbent (AsMET) based arsenic removal technology as a percentage of arsenic removal coagulation technology costs (Tiszagyenda project, Qmax. 16 m³/h, avg. 80µg/l arsenic concentration)



- Chemical costs: NaClO, iron III sulphate (-100%)
- Maintenance: coagulation: change filter, replacement / AsMET: assemble system maintenance (-19.2%)
- Costs related to rejected samples (-100%)
- Lab costs, above self-control (-100%)
- Extra washing due to water quality (-100%)
- Depreciation (coagulation)
- AsMET rental (depreciation incl.)