REFERENCE / CASE STUDY

Municipal Water Treatment

Location: Pachuca, Hidalgo, Mexico

Technology: Katayst Light (a.k.a. Katalox Light)

WATCH WATER
a Water Company

BACKGROUND

Watch Water is a global leader in providing the best and most effective solutions for water and waste water treatment.
This case study focuses on Watch Water's approach towards cleaner municipal water, specifically targeting the Alamo Mine area. This project aimed to tackle pollutants, like iron and manganese, ensuring safer and reliable water for the local community.

PROJECT BACKGROUND

Mining operations often leave a lasting impact on the quality of nearby water sources, with elevated concentrations of iron and manganese being common byproducts. These contaminants not only compromise the ecological balance but also pose significant health risks to local communities relying on these water sources.

In response to the imperative need for pristine municipal water, a transformative water treatment initiative using **KATALYST LIGHT** was implemented. This comprehensive project was designed to combat pollutants, notably iron and manganese, ensuring a reliable and safe water supply for the local community.

WHAT IS KATALYST LIGHT?

KATALYST LIGHT is a revolutionary advanced filtration media with a unique gamma coating of Manganese Dioxide (10%) on the high capacity filter material 'Zeosorb' allowing it to remove various contaminants like **iron, manganese, H2S, and other heavy metals** from water. A combination of mechanical filtration, catalytic precipitation, and subsequently adsorption are the core strengths of Katalyst light. It does not require any regeneration chemicals under ideal conditions. The only maintenance required is intermittent backwashing. It is extremely light weight and hence require very Less backwash water.

KATALYST LIGHT is certified according to NSF/ANSI/CAN - 61 standards for drinking water applications and has met the NSF/ANSI 372 lead free compliance.
With a bulk density similar to water, it is extremely light weight and helps is reducing energy consumption while backwashing.The major advantage of Katalyst-Light is the slower head loss which leads to longer operation time.

TECHNICAL DATA

The treatment process was meticulously designed to address the unique challenges posed by Alamo Mine's water composition. Initial treatment stage employed chlorination to prepare the water for subsequent filtration using **KATALYST LIGHT.**

Flow Rate	576 m^3/h (2536 gpm)
No. of Tanks	7
Dimensions of each tank	48" x 120"
Amount of Katalyst Light per tank	5665 Liters (1400 ft^3)
Total Katalyst Light media used	39650 Liters (200 ft^3)
Contact Time	4 min
Backwash Flow	396 m^3/h 1744 (gpm)

RESULTS & CONCLUSION

The implemented treatment process exhibited exceptional results, showcasing a remarkable removal efficiency of 99.98% for manganese and 73.4% for iron.

	Iron	Manganese
INLET	0.188 ppm	0.05 ppm
OUTLET	2.622 ppm	0.005 ppm
Removal Efficiency	73.4%	99.98%

The excellent exit levels of iron and manganese underscore the **KATALYST LIGHT's** success in purifying the municipal water supply to levels surpassing regulatory standards. This visionary water treatment initiative stands as a testament to the commitment to providing communities with water of the highest quality.

WATCH WATER GMBH
FAHRLACHSTR. 14, 68165 MANNHEIM, GERMANY
INFO@WATCHWATER.DE | +49 621 87951 0
WWW.WATCHWATER.DE