

TURBOCOAG® TREATMENT FOR MINING WATER

Avid Water Technology provides advanced water purification via its patented TurboCoag® technology to treat acid mine drainage, tailing pond, and mining process water contaminated with heavy metals, suspended solids, and microorganisms.

Putting a new spin on water treatment.

IDEALLY SUITED FOR REMEDIATION OF:

- Arsenic and Lead
- Heavy metals
- Mine tailings, process, or wastewater
- Suspended solids
- Microorganisms, including e-coli

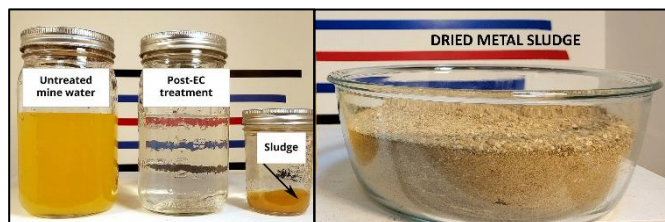


FEATURES

- Commercial models from 25 to 200 GPM per reactor
- Controllable throughput
- Continuous water treatment
- Self-cleaning system
- Passivation-free anodes, aluminum, or iron
- Sludge-free reactor
- Higher level of suspended solids handled
- Strong flocculant is easily filtered / quickly settled

TURBOCOAG® SPECIFICATIONS

Design Flow Maximum (GPM)	200
System Power Requirement: Typical	40 kW
AC Power Requirement	480 VAC 3Ø
Dose Rate Range Aluminum (PPM)	37-150
Piping Connections (NPT)	4 x 2"
Nominal pH Requirement Range	6 - 8



1kg metal rich sludge from 250 gallons AMD, ready for recovery. 10x less waste sludge than lime treatment.

CASE STUDY: ARGO MINE

The Argo Mine west of Denver flows acid mine water at approximately 300 GPM. The lime treatment process currently in use raises the pH of the water from approximately pH 2 to 11, which precipitates out heavy metals and generates 3.2 tons of sludge daily which are trucked to a local landfill. Avid processed a sample from the Argo mine, producing significantly less waste sludge as a result. Third-party laboratory verification of TurboCoag® treatment results are displayed in the chart to the right.

TurboCoag® significantly reduced the metals in all tests, meeting or exceeding the EPA release standard. All heavy metals were sequestered in the heavy metal precipitate sludge as expected. The sludge—which passes the toxicity characteristic leaching procedure (TCLP)—can be disposed of in any landfill while the treated water can then be released to the environment.

TurboCoag® is a cost-effective alternative to chemical water treatment via its triple patented electrocoagulation (EC) reactors.

ARGO ACID MINE DRAINAGE

ELEMENT	RAW	TREATED	REMOVED
Al	34825	580.67	98.29%
As	7.57	0.55	92.69%
Cd	70.17	0.105	99.85%
Ce	300.97	0.075	100.00%
Co	113.28	0.556	99.51%
Cr	28.01	3.95	85.91%
Cu	2688.0	7.83	99.71%
Fe	85915	1343.53	98.44%
Mn	96187	297.66	99.69%
Ni	179.29	8.54	95.24%
P	37.55	DL	100.00%
Pb	298.55	DL	100.00%
Sb	3.72	0.38	89.87%
Se	9.00	1.29	85.73%
Si	23416	759.14	96.76%
U	35.63	0.48	98.66%
V	115.29	0.04	99.97%
Zn	0.96	0.11	89.04%

DL = below detectable limit
Measurements in µg/L (PPB)
Single pass treatment, not optimized