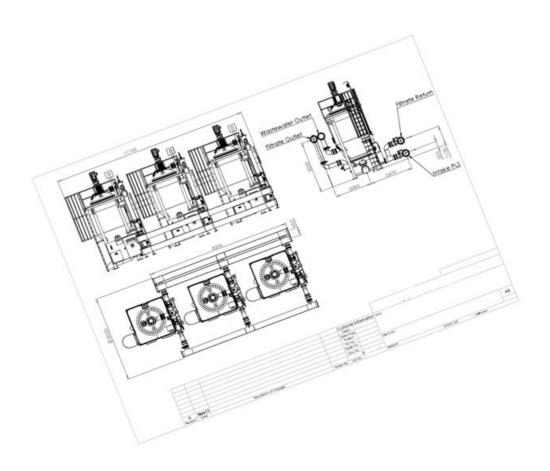


### **Textile Media Filters Case Studies**





## River Water Filtration Plant Intake water for CIP Gold Plant



Project	Martabe Gold Mine, Sumatra, Indonesia
Request	<ul> <li>Design filter plant, Fabricate, Supervise Install, Commission, Train operators, with project management by Ausenco Engineers</li> <li>Raw water TSS up to 500mg/L, main contaminants are clay silt particles and process precipitated iron</li> <li>Filtrate less than 0.5mg/L at nominal capacity 140m³/hr/plant with 2 filter tanks</li> <li>Service – 24/7/365, Online Availability &gt;95%</li> <li>Pressure Vessel Design Code - AS1210 + 4mm corrosion allowance.</li> <li>Fully PLC automated hands free filters</li> <li>Status communication by electrical signals to plant control computer</li> <li>All documentation and training in dual language</li> <li>Manufactured in China with independent customer inspection</li> <li>Performance Guaranteed design</li> <li>Extended Product Warranty</li> </ul>
Description	<ul> <li>Raw Water and Filtrate tank levels are PLC monitored to maintain safe operation and operation on demand.</li> <li>The PLC can on off signal a chemical pre-treatment plant when required.</li> <li>The filters are fully automated with multiple criteria based control including filtrate turbidity analysis capability</li> </ul>
Commission Date	April 2012
Project Status	Manufacturer's design has more than fulfilled all design expectations and performance expectations.  As of Jan 2013, no replacement consumable parts have been purchased by the customer.



#### Filtration plant for Alkaline PLS Heap Leach Gold Mine

Security filtration prior to Ion Exchange resin columns



Project	Mongondow Gold Mine, Sulawesi, Indonesia
Request	<ul> <li>Design, Fabricate, Supervise Install, Commission, Train operators with project introduction by Kappes Cassidy Associates.</li> <li>Alkaline Sodium Cyanide PLS from Dump Leach, main contaminants are clay silt particles</li> <li>Turbidity of PLS feed can exceed 500mg/L TSS</li> <li>Filtrate less than 5mg/L</li> <li>Capacity 200m<sup>3</sup>/hr/plant</li> <li>Service – 24/7/365 with Online Availability &gt;97.5%</li> <li>Fully PLC automated hands free filters, with optional manual override.</li> <li>Electrical Status communication to plant control computer</li> <li>All documentation and training in dual language</li> <li>Mild Steel – Epoxy internal coating</li> <li>Pressure Design Code ASME (BVPC) + 150% overdesign factor.</li> </ul>
Description	<ul> <li>PLS flows from the dump pad to a short residence storage tank, then to the filter feed pump.</li> <li>Backwash conducted in the raw water.</li> <li>1 x FM-UB-2625 model Fabric Media Water Filters – fully automated with backpressure or time criteria based control.</li> <li>Filtrate reports directly to a lon Exchange column.</li> </ul>
Commission	August 2005
Project Status	Manufactures design and process knowhow has more than fulfilled all design expectations and performance expectations.



# Filtration plant for Alkaline PLS Silver Mine

Security filtration prior to Merrill-Crowe Process



Project	Twin Hills Silver Mine, Queensland, Australia
Request	<ul> <li>Design, Fabricate, Supervise Installation, Commission, Train operators, with project management by REG Mineral Processing Services.</li> <li>Alkaline Sodium Cyanide PLS from heap Leach pads collection pond, main contaminants calcium silicate precipitates</li> <li>Filtrate less than 5mg/L</li> <li>Capacity 200m³/hr/plant</li> <li>Service – 24/7/365 with Online Availability &gt;97.5%</li> <li>Fully PLC automated hands free filter, with optional manual override.</li> <li>Modbus communication to plant control computer</li> <li>Mild Steel – Epoxy internal coating</li> <li>Pressure Design Code AS1210</li> </ul>
Description	<ul> <li>PLS flows from the collection pond through the filter to the de-aeration tower of the Merrill-Crowe circuit.</li> <li>Backwash conducted in the PLS.</li> <li>1 x FM-UA-2125 model Fabric Media Water Filters – fully automated with backpressure or time criteria based control.</li> </ul>
Commission	August 2011
Project Status	Manufactures design has more than fulfilled all design expectations and performance expectations.



#### Filtration Plant for Return Dam Water Kalgoorlie Nickel Smelter

Security filtration for Process Water Recycling



Project	Kalgoorlie Nickel Smelter, Western Australia
Request	<ul> <li>Design, Fabricate, Supervise Installation, Commission, Train operators.</li> <li>Design specifications by BHP Billiton Nickel West.</li> <li>Return water from decant collection pond, main contaminants ferric arsenate and hydroxide precipitates plus silicate silt particles</li> <li>Filtrate objective less than 1mg/L, Arsenic level to be lower than strict environment license requirement.</li> <li>Capacity 40m³/hr/plant with mean flow 32m³/hr</li> <li>Service – 24/7/365 with Online Availability &gt;97.5%</li> <li>Fully automated hands free filter, with software control from smelters' master plant control computer with optional manual override.</li> <li>Modbus communication to plant control computer</li> <li>Stainless Steel 316</li> </ul>
Description	<ul> <li>PLS flows from the collection pond through the filter to the deaeration tower of the Merrill-Crowe circuit.</li> <li>Security filtration for process water recycling and site discharge.</li> <li>Backwash conducted in the PLS.</li> <li>1 x FM-A-0825 model Fabric Media Water Filters – fully automated with backpressure, time criteria and filtrate turbidity based control.</li> </ul>
Install Date	November 2011
Project Status	Manufacturer's design and supply services have been fulfilled.