About Us
Atlantic Pumps bring a simple commitment to industrial dewatering and pumps for handling abrasive applications – we respond to your needs ahead of your expectations.

Whether it’s enquiries or deliveries, questions or queries, our founding principle is to respond to customers’ needs as quickly as practically
Metal Recycling

As a valuable commodity that can be recycled endlessly without affecting its properties, metal is widely recycled very effectively. In the metal recycling process, water is widely used and re-circulated through various processes - during which it often picks up small abrasive solids and fine metal particles, which leads to an extremely abrasive fluid to be pumped. Some of these processes include:

- Dust suppression/collection
- Washing
- Cooling
- Separating different materials

The SlurryPro (for higher concentrations of solids) and Audex pumps (for sumps and lower solids percentages) excel in the above applications, being hard wearing, long lasting pumps designed to handle aggressive fluids.

Companies we work with:
Sims Metal Management

Plastic Recycling

Plastic recycling is a complicated process, mainly because the different plastic types that need to be separated have such similar properties. However, the drive to reduce dependence on fossil fuels means that new and innovative methods of separating them are being devised continually.

In plastic recycling, pumps are commonly used in the washing stage, where the crushed/shredded waste is mixed with a cleaning fluid, and during the separating stage, where chemicals are added to the plastic mix to help segregate certain types of plastic. At the end of each process, pumps are also used to recirculate the dirty water back to the beginning to be used again.

The plastic solids contents, plus the other waste and the chemicals added into the process make for a complicated pumping application that the SlurryPro heavy duty pumps excel in, due to their long lasting internal components and simplicity of maintenance.

Companies we work with:
MBA Polymers
Biomass (AD, Anaerobic Digestion)

Biomass, also known as Anaerobic Digestion, is the use of organic waste to create methane gas with a digestate fertilizer as a by-product of the process. In Biomass, the waste is usually mixed with water to create a slurry, which is then left to decompose in a sealed vessel for around 40 days in which time the methane is formed and collected. During this time, it requires agitating to ensure the most efficient extraction of methane from the waste.

Due to the large and irregular solids contents in the waste, a hard wearing, robust pump is needed both for the initial mixing and the agitating, such as the SlurryPro centrifugal slurry pump. Not only can it handle solids very effectively, but it also has wide internal tolerances meaning that even with significant amounts of wear it still pumps efficiently.

For initial mixing and transporting the waste, pumps like the Audex AW submersible range are often used on these sites due to their large solids capability and built in agitators.

Companies we work with:
Biffa Horsham, Biffa Poplars

Recycled Process Water

Nearly all industrial recycling plants use water at some stage in the process, usually for applications such as:

- Washing
- Sorting/segregating different types of waste
- Cooling (heat exchangers)
- Dust suppression
- As an additive to the main waste, so as to be able to transport it.

This means that once the water has been separated from the waste at the end of the process it normally contains particles from the waste, such as silt (in aggregate recycling), metal fines (metal recycling), etc – when this fluid is put back into the process it makes it difficult to pump as it is now an abrasive fluid.

SlurryPro hard wearing centrifugal pumps, with their heavy duty linings, and Audex submersible pumps are ideal for recovering this fluid as they are designed to handle abrasive fluids efficiently.
Landfill

Landfill, executed in an old quarry or other similar excavation, usually requires emptying of the residual water before and during its use. Once it is drained, a liner is placed inside to prevent contaminating fluids from seeping into the ground around and then waste is placed on this liner.

Common pumps on landfill sites are self-priming centrifugal pumps, such as the Audex AD range, and small submersible pumps, often pneumatically operated.

The Audex AD pump range is a proven, hassle free self-priming pump available powered by electric or diesel energy sources, developed with ease of maintenance and customer peace of mind as a key focus. Being mounted on a durable trolley design gives this pump a great flexibility on site while also covering the most frequently needed duty points.

Companies we work with:
Augean Thornhaugh

Recycled Aggregates

In a similar process to a conventional quarry, recycled aggregates are created using materials from demolition sites as raw material instead of virgin rock that has been extracted from a quarry.

Usually processed through a crusher followed by a wash plant, this recycling process creates silt and small solids laden water that needs to be pumped to extract the full value and return the water to the beginning of the process. Some typical pump applications include:

- Silt underflow
- Clean water feed
- Filter press
- Cyclone feed
- Water recirculation

The SlurryPro (for higher concentrations of solids) and Audex pumps (for sumps and lower solids percentages) excel in the above applications, being hard wearing, long lasting pumps designed to handle aggressive fluids.

Companies we work with:
JC Balls, Neal Soils, Yorkshire Aggregates
Audex submersible pumps have been developed for use in the toughest and most abrasive applications and environments. Specifically, they are in use by many of the world’s largest aggregates and recycling companies, in the heaviest of industrial applications as dirty water pumps.

Audex submersible pumps are used in many industries including: mining, quarrying, recycling, cement plants and industrial dewatering. With many unique design features they are the submersible pump of choice for many operators in these fields. Their ability to withstand wear from abrasive, highly corrosive fluids is legend.

About the AW Range (below)

The Audex AW range is ideal for handling corrosive and abrasive applications. The range offers exceptional service life with minimum running costs and repairs. Reliable, industry-proven and affordable, the pumps are backed by our Pump Servicing Division.
Audex AD Range *(below)*

In common with the whole Audex range, the AD series has been designed for tough, rugged environments. The range is designed with the quarrying, construction and industrial dewatering industries in mind. They are well able to handle abrasive dewatering and dirty water applications but if you have any concerns regarding your particular application our engineers will be glad to help.

**Why Choose the Audex AD Range?**

- The AD range has been developed with ease of maintenance and customer peace of mind as a key focus.
- They have been used extensively with an excellent reliability record and great customer feedback.
- Audex AD pumps cover the most frequently needed duty points.
- They are available with a choice of diesel or electric drive, from a number of different manufacturers, to meet customers’ requirements.
- The durable trolley design gives great flexibility whilst protecting the unit against onsite wear and tear. These pumps are also available on heavy duty skid bases for less mobile applications.
- Clearly, availability is critical with these pumps due to the nature of their use. That’s why we hold large stocks of these pumps, offering great lead times to ensure that you never need to be left high and dry.
If you’re looking for a better slurry pump experience, including superior wear life, reduced lifetime cost and ease of ongoing maintenance there is quite simply no alternative to SlurryPro.

Silver Series

Upgrade with interchangeable technology

The SlurryPro Silver Series is a heavy duty, proven range of horizontal and vertical slurry pumps in a wide range of sizes, available with both high chrome and different grades of rubber wearing parts. The SlurryPro Silver Series pump and spares range allows you to continue using your current pump and pipework configuration

Vertical - SV Series

- This heavy duty range features a cantilever shaft design that eliminates any bearings or seals in the fluid end.
- An ideal pump for heavy slurry wash down and spill duties.
- A full range of material options including complete elastomer lined pumps and hard metal options for corrosive and abrasive media duties.
- Pumps in all sizes can be configured with a range of column lengths and impeller designs. They are ideal for corrosive coarse particles and high concentrations of slag pulp and are widely used in the metallurgical, mining and coal industries.

Horizontal SS Series

- A complete range of sizes are available across the full selection of pump types and materials.
- Components come in a range of elastomer and hard metal types and materials to suit any application, for maximum abrasion and corrosion resistance.
- The removable cartridge-type bearing assembly facilitates easy on-site maintenance procedures.
- A range of seal types are available to suit every requirement, including mechanical shaft seals to eliminate gland sealing water.

Spares & Parts

SlurryPro are committed to the production of high quality spares at fair prices. Slurry pump parts and spares are available in rubber and high chrome as well as in the unique SlurryPro PPC material which is manufactured here in the UK to incredibly high standards. These slurry pump parts are also interchangeable with spares for most other slurry pumps and we can guarantee substantial savings in almost every instance. In addition, we work with our key clients to ensure unrivalled service levels through our unique stock management solutions.

For further information enquire today.

Product Features

- A complete range of slurry pump parts and spares are available across the full selection of pump sizes.
- Components come in a range of elastomer and hard metal types and materials to suit any application, for maximum abrasion and corrosion resistance.
- Competitive pricing
- Rapid delivery times
- Unique stock solutions
- Global availability and expertise

SlurryPro 377

SlurryPro 377 material is a high density polymeric with excellent resistance to abrasion and chemical attack. It is available as impeller and volute material in SlurryPro horizontal pumps. It provides an excellent alternative for brines, fluids with crystallization and sludge chemicals, among others. It has the same dimensions as other coating materials such as SlurryPro 360 (rubber) and SlurryPro 331 (long-lasting high chrome) so it is interchangeable without modifying the pump.

377 Key Points:

- Temperature range - 100 c to 80 c
- Excellent impact resistance
- Low friction coefficient for better pumping efficiency
- Lightweight and extremely robust
- FDA approved for contact with food
- Excellent chemical resistance (ask for specific chemicals)
Gromatex products are designed and manufactured to provide a long lasting but simple solution to containing and transporting abrasive fluids. A focus on heavy duty, abrasion resistant rubber and elastomer materials for pipework, coupled with a unique modular concept, the Gromatex range brings a whole new experience to the market.

Tried and tested in the harshest applications across the quarrying and mining industries internationally, Gromatex products have a reputation for being a cost effective solution to the challenge of moving abrasive fluids.

Among the heavy duty rubber lined products included in this range are flexible hose, pipework (such as bends, tees and other similar parts) and hydro-cyclones – all long lasting, simple products designed to contain abrasive fluids.

One of the key points of the range is the simplicity for the end user across all the products, from the design aspect to the fact that all common sizes are available in stock. Modular construction means the places that have the most wear can get the best attention.

Ultimately our aim is to reduce our customer’s maintenance and downtime anxiety and this drives us on to create ever tougher and more resilient products. Easy to specify and order from stock, designed to resist abrasive fluids for longer and flexible but strong, Gromatex - containing your abrasive fluids. Easy.

<table>
<thead>
<tr>
<th>Model</th>
<th>Feed chamber</th>
<th>Inlet size</th>
<th>Max</th>
<th>Slurry concentration</th>
<th>Standard cut point</th>
</tr>
</thead>
<tbody>
<tr>
<td>C15</td>
<td>380 mm</td>
<td>4”</td>
<td>55 m³/h</td>
<td>0 – 25%</td>
<td>63 (63-63) microns</td>
</tr>
<tr>
<td>C20</td>
<td>500 mm</td>
<td>6”</td>
<td>83 m³/h</td>
<td>0 – 20%</td>
<td>63 (33-76) microns</td>
</tr>
<tr>
<td>C26</td>
<td>660 mm</td>
<td>6”</td>
<td>110 m³/h</td>
<td>0 – 18%</td>
<td>75 (40-102) microns</td>
</tr>
</tbody>
</table>
Bends (45° and 90°)
45° and 90° Long radius bend.
Sizes available: 4”, 6”, 8” and 10”.

Hose Tails
To connect a flexible hose to a flange.
Sizes available: 4”, 6” and 8”.

Reducers
Concentric bell reducer. Sizes available: 4” to 3”, 6” to 4” and 8” to 6”.

Tees
90° Tee connection.
Sizes available: 4”, 6” and 8”.

Straight Lengths
Straight lengths of pipe, flanged.
Sizes available: 4”, 6”, 8”, 10” and 12”.

Rubber Lined Hose
Rubber lined flexible slurry hose with clamp couplings. Sizes available: 2” to 18”.

Bespoke rubber lined pipework parts available by request, contact us on 0800 118 2500
VARISCO SELF PRIMING PUMPS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description Part No</th>
<th>Outlet (inches)</th>
<th>Solids (mm)</th>
<th>Max Head (m)</th>
<th>Max Flow (l/m)</th>
<th>Power (kW)</th>
<th>Voltage</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>P11676</td>
<td>JE 2-100 JE 2-100 G10 MT20</td>
<td>2</td>
<td>17</td>
<td>14</td>
<td>430</td>
<td>1.1</td>
<td>415</td>
<td>£745.00</td>
</tr>
<tr>
<td>P11677</td>
<td>JE 2-120 JE 2-120 G10 MT20</td>
<td>2</td>
<td>25</td>
<td>19</td>
<td>700</td>
<td>2.2</td>
<td>415</td>
<td>£926.00</td>
</tr>
<tr>
<td>P11678</td>
<td>JE 2-180 JE 2-180 G10 MT20</td>
<td>2</td>
<td>15</td>
<td>37</td>
<td>800</td>
<td>5.5</td>
<td>415</td>
<td>£2,124.00</td>
</tr>
<tr>
<td>P11679</td>
<td>JE 3-100 JE 3-100 G10 MT20</td>
<td>3</td>
<td>25</td>
<td>11</td>
<td>1000</td>
<td>2.2</td>
<td>415</td>
<td>£979.00</td>
</tr>
<tr>
<td>P11680</td>
<td>JE 3-140 JE 3-140 G10 MT20</td>
<td>3</td>
<td>28</td>
<td>19</td>
<td>1300</td>
<td>4</td>
<td>415</td>
<td>£1,916.00</td>
</tr>
<tr>
<td>P10061</td>
<td>JE 3-180 JE 3-180 G10 ET20</td>
<td>3</td>
<td>27</td>
<td>37</td>
<td>1300</td>
<td>7.5</td>
<td>415</td>
<td>£2,520.00</td>
</tr>
</tbody>
</table>

About

Varisco pumps are well engineered pumps which have been designed for solids handling applications where longevity and reliability are key. A large number of other sizes and power ratings are available on request.

Features

- Replaceable wear plates
- Self-priming
- Wear resistant construction
- Built in non-return valve

Applications

- Water transfer
- Sump emptying
- Dewatering
Lowara VERTICAL MULTISTAGE PUMPS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part No</th>
<th>Max Head (m)</th>
<th>Max Flow (l/m)</th>
<th>Power (kW)</th>
<th>415v</th>
<th>voltage</th>
<th>List Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>P10154</td>
<td>3SV25F022T/D Series 3SV</td>
<td>1016LC651</td>
<td>180</td>
<td>73</td>
<td>2.2</td>
<td>415</td>
<td></td>
<td>£1,575.00</td>
</tr>
<tr>
<td>P10155</td>
<td>3SV31F030T/D Series 3SV</td>
<td>1016LC711</td>
<td>230</td>
<td>73</td>
<td>3</td>
<td>415</td>
<td></td>
<td>£1,823.00</td>
</tr>
<tr>
<td>P10156</td>
<td>5SV18F030T/D Series 5SV</td>
<td>1016LC951</td>
<td>135</td>
<td>140</td>
<td>3</td>
<td>415</td>
<td></td>
<td>£1,484.00</td>
</tr>
<tr>
<td>P10157</td>
<td>5SV23F040T/D Series 5SV</td>
<td>1016LD001</td>
<td>174</td>
<td>140</td>
<td>4</td>
<td>415</td>
<td></td>
<td>£1,685.00</td>
</tr>
</tbody>
</table>

About

Lowara have long been a market leader in manufacturing multistage water pumps. They offer a huge range of high quality pumps to suit many requirements. A large number of other sizes and power ratings are available on request.

Features

- Stainless steel construction
- Very high efficiencies

Applications

- Mains water pressure boost
- Wash down hoses
- Clean water transfer
- Dust suppression
CASE STUDY
RECYCLING COMPANY REPLACES PROBLEMATIC PUMP WITH SLURRYPRO

Start Date: May 2017
Atlantic Pumps Representative: Nathan Rowles
Client: Shanks Waste Management Ltd.
Address: South Kirby Business Park, Brigantian Way, South Kirkby, Pontefract, WF9 3TH
Phone Number: 01977 624 660

Background

Shanks Waste Management Ltd. is an internationally renowned recycling company with various locations around the globe, exclusively focused on a “waste to product” program – i.e. extracting the maximum value from waste rather than disposing of it in the most efficient manner.

Shanks’ Pontefract site has recently been upgraded to reduce the amount of waste sent to landfill, create extra employment and ultimately recycle at least 52% of the waste produced in the district. It was this site that contacted Atlantic Pumps in April 2017 regarding their rotary lobe pumps, which were being used to pump slurry. The issues they were having and wanted to solve were a short product life on the wearing parts and they were also struggling to find parts available on a short lead time.

While the positive displacement rotary lobe pumps they were using are excellent for pumping clean, viscous products, especially at higher pressures and low flows, the fact that these pumps depend on very close clearances between the moving parts of the pump meant that with the particle laden slurry they wore out very quickly. This lead to extended and repeated downtime and dramatic losses of efficiency (i.e. pump output).

Solution

With a promptness characteristic of Atlantic Pumps, Sales Coordinator Nathan Rowles visited the site the same day and specified a SlurryPro heavy duty 6x4 centrifugal pump with Atlantic Pumps innovative new sliding base to facilitate maintenance. This pump is not only built to pump extremely abrasive slurries but can also take a lot of wear and still maintain its designed duty point.

Thanks to Atlantic Pumps’ large stock of SlurryPro pumps and spare parts, the pump was in stock with a two week lead time to build. When new wear parts are required, they can be sourced from Atlantic’s extensive stock of pumps and spares in Sheffield, all available for next day delivery.

The SlurryPro pump was installed and has been operational since 31st May 2017 with no issues to date, relieving the site of what had been a problematic item of equipment.

For further information on any of the subjects covered in this case study, please call our team on 0800 118 2500 or email info@atlanticpumps.co.uk.
7 CAUSES OF SUBMERSIBLE PUMP FAILURE
AN ESSENTIAL READ THAT WILL HELP YOU AVOID EXPENSIVE DOWNTIME

1. Reverse Rotation
This is where the pump is wired incorrectly meaning the motor runs backwards. When this happens, very little water will be pumped but it does serious damage to the pump, polishing the impeller and leading to cavitation*.

2. Dry Running
This is where the water level drops to a point where the pump cannot draw a decent amount of water and/or starts to create a lot of disturbance in the water. This will quickly lead to cavitation*, damaging the impeller and diffuser, and quickly destroying the pump. It also causes the seal rubbers to dry out and crack which allows water into the motor.

3. Running on the Right of the Curve
This is where there is less vertical head than the pump is designed to handle, which makes the pump less efficient. At an extreme this causes suction cavitation indicated by the sound of marbles being pumped and pitting around the centre of the impeller.

4. Specific Gravity
Submersible pumps are not designed to deal with high levels of solids and will usually quickly fail in slurry applications. Exceeding 1.1 – 1.2 specific gravity is a no-go, this effectively constitutes a sand slurry.

5. Cable Damage
This includes internal damage often unseen when the cable is jarred externally. It is vital that if a cable has been gashed or yanked that this is checked. The seal arrangement where the cable enters the pump body is a weak spot and the air seal can very easily be broken. Even a few drops of moisture can make the pump fail.

6. Dead Head
This is where the pump has more vertical head than it is designed for, i.e. a valve on the discharge has been closed. This causes something called discharge cavitation which is indicated by the sound of marbles being pumped, and pitting around the impeller tips and inside of the pump casing. At an extreme this can make the pump shaft break.

7. Not Allowing for Discharge Piping
Discharge piping creates friction loss and it is vital that this calculation is taken in to account when specifying submersible pumps. Otherwise it will lead to dead heading, see above.

*Cavitation - This is the formation and accumulation of bubbles around a pump impeller. This tends to form in liquids of any viscosity as they are being transported through and around a pump system. When each of these tiny bubbles collapses or bursts, it creates a high energy shock wave inside the liquid. Imagine throwing a stone into a pond. The circular ripples which are created in this process are similar to cavitation bubbles exploding. The difference here is that due to the sheer number of bubbles creating these shock waves, the impeller and other pump components can be eroded over time.