

**GROMATEX**

**CONTAINING  
ABRASIVE FLUIDS**

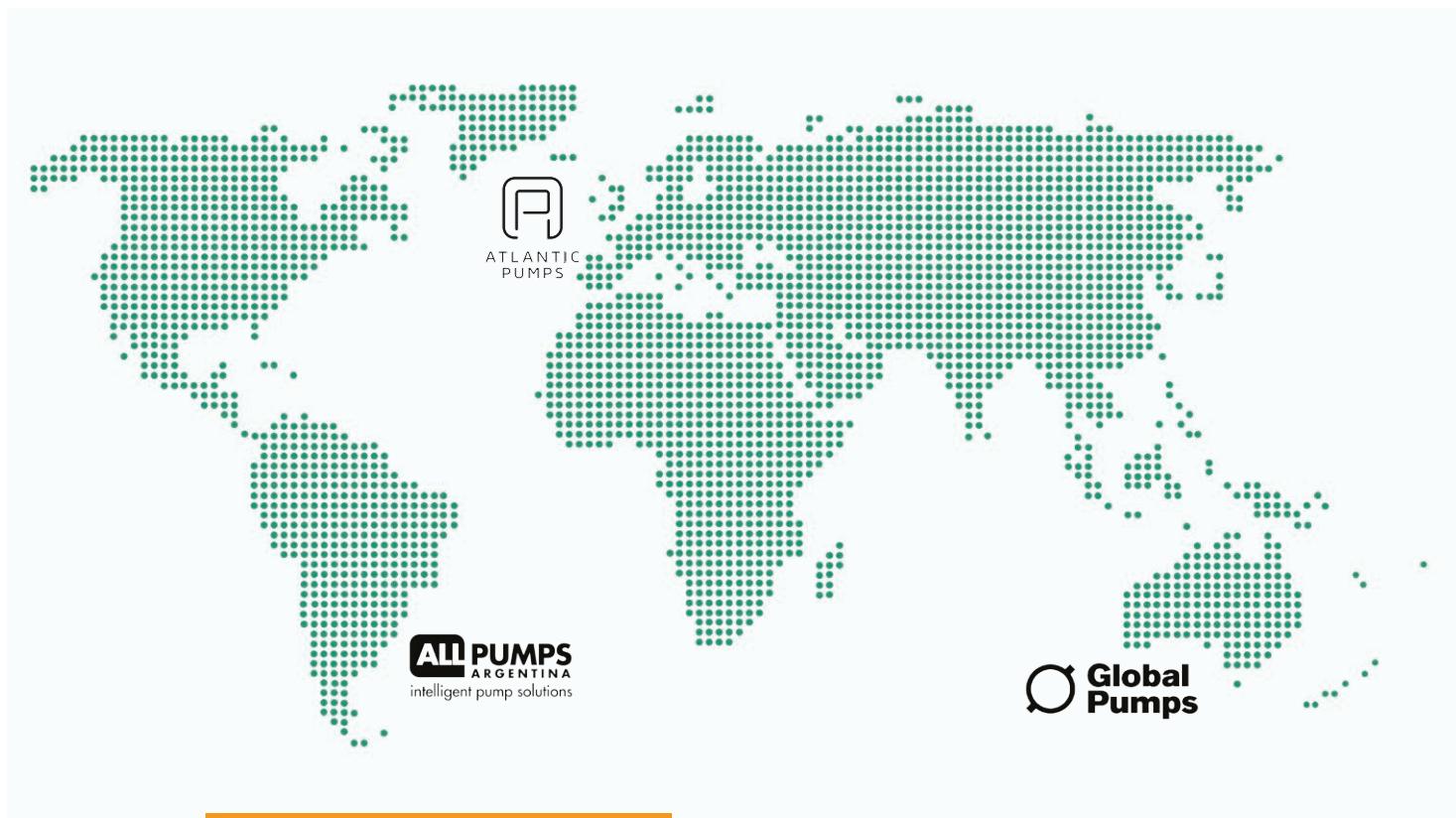




## Providing pump solutions to industry, globally

Intrax is a global leader in specialist pumping equipment for difficult and challenging industrial applications. We are best known for excellence in bringing innovative and cost-saving ideas to our customers as well as offering unrivalled levels of customer service and response times.

Our combined wealth of experience and technical know-how in highly sophisticated applications has allowed us to work closely with the engineering teams on large-scale projects across the globe firmly establishing us as their trusted partner.



### GROMATEX

### an Intrax brand

#### Expertise

Intrax tackles aggressive and abrasive pumping challenges that conventional pump manufacturers shy away from. An in-depth cross organizational knowledge of aggressive fluid handling and an association with leading polymer developers and foundries globally provides a level of expertise disproportionate to the individual companies and brands.

#### Understanding

The Intrax companies and brands have truly evolved to relieve customer pain points and hence bring a refreshingly different approach to the rigid stance often taken by market incumbents. Intrax products have also evolved intelligently, influenced by individual customer's demands, and this progress is on-going.

#### Energy

Our partners often comment on the energy and motivation within our companies and how enjoyable it makes their interactions with us. We think that this is because of the ethos of our brilliant, highly-trained workforce who have been recruited to deliver cutting-edge solutions without the prejudices of a lifetime of offering conventional and often outdated technology.

#### Innovation

A relentless drive to improve on the status quo of high value pump installations. Intrax has a culture of market disruption bringing value to customers, ranging from small, yet significant, product modifications which address regional challenges, to in-depth R&D and new product designs.

# GROMATEX

## THE GROMATEX STORY

### "CONTAINING ABRASIVE FLUIDS"

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.



# GROMATEX - CONTAINING ABRASION



## Rubber Lined Bends

Protect an area that gets high wear

See pages 6 and 7 for details



## Hydrocyclones

Lined with the highest quality abrasion resistant rubber

Available in 3 sizes with parts available separately

See pages 12-15 for details



## SlurryPro Vertical Slurry Pump

This heavy duty range features a cantilever shaft design that eliminates any bearings seals in the fluid end

# ASIVE FLUIDS ON YOUR QUARRY

## Straights

With a full range of accessories

See pages 6 and 7 for details



## Hosing

Available in any length and a variety of widths

See pages 8 and 9 for further details



## SlurryPro Centrifugal Slurry Pumps

Proven, heavy duty pumps in a wide range of sizes

# RUBBER LINED PIPEWORK



**GROMATEX rubber lined pipework has been specially developed for the quarrying industry, and offers a combination of mechanical strength and abrasion resistance.**

**The development of a modular configuration gives you the ability to focus on areas of the highest wear, and makes the replacement wear parts much easier.**

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## BENDS (45° & 90°)

- Long radius bend
- Sizes available: 4", 6", 8" and 10"



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## REDUCERS

- Concentric bell reducer
- Sizes available: 4" to 3", 6" to 4" and 8" to 6"



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## TEES

- 90° Tee connection
- Sizes available: 4", 6" and 8"



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## HOSE TAILS

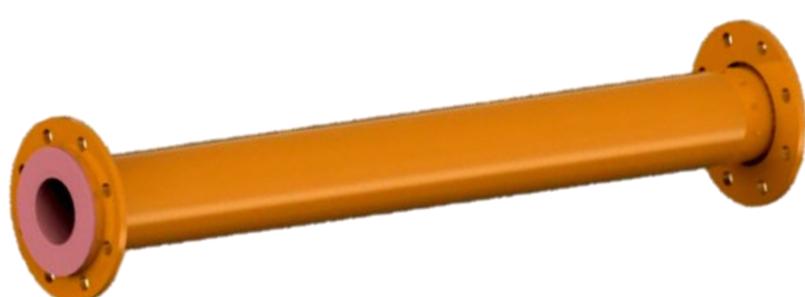
- To connect a flexible hose to a flange
- Sizes available: 4", 6" and 8"



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## STRAIGHTS

- Straight lengths of pipe, flanged
- Sizes available: 4", 6", 8", 10" and 12"



# RUBBER LINED HOSE

**GROMATEX™ hose is a premium rubber lined hose that has been developed for handling abrasive and solid laden slurries.**

It is manufactured in the UK to a high standard and is rigorously monitored during production to ensure consistent high quality. The hose is lined with natural rubber which is vulcanized together during production. It has a maximum working pressure of 10 bar which allows this hose to be used for a large number of applications. The hose is supplied with aluminium split clamp flanges for speed of installation and maximum versatility.



Unlike many other slurry pump manufacturers, we don't charge to the nearest 10m length. Instead we can cut to the exact length required and can fit end couplings for you if required. This means you're not paying for short sections of hose you'll never use. We also hold 4", 6" and 8" hose in stock for immediate dispatch.



W.P. Bar	I.D. inches	O.D. mm	Average Weight kg/m	Thickness (mm) Wall	Bending Radius (mm)	STD. Coil Length (m)
10	2	51	75	3	12	300
10	3	76	113	7	18.5	350
10	4	102	133	8	15.5	500
10	5	127	160	12	16.5	650
10	6	152	189	14	18.5	750
10	7	178	213	16	17.5	1000
10	8	203	238	18	17.5	1750
10	10	254	289	22	17.5	2000
10	12	305	344	28	19.5	2500
10	14	356	407	37	25.5	3000
10	16	406	458	47	26	3500
10	18	456	512	55	28	4500

I.D. = Internal diameter. O.D. = Overall diameter

<b>Application:</b>	For pneumatic and hydraulic transport of abrasive materials
<b>Temp range:</b>	-30 deg C to +80 deg C
<b>Pressure rating:</b>	10 bar nominal pressure
<b>Electrical continuity:</b>	No
<b>Lining:</b>	Black natural rubber blend - Hardness 40-45 shore A. Antistatic and abrasion resistant
<b>Reinforcement:</b>	Opposing layers of high tenacity polyester tire cord with embedded steel wire helix
<b>Cover:</b>	Black CR blend, oil, abrasion and weather resistant. Corrugated finish
<b>Lengths available:</b>	76-152mm - Up to 61m 203mm - Up to 40m 254-457mm - Up to 12m



# BESPOKE ENGINEERING



**GROMATEX have the ability to design, manufacture and rubber line products for mineral processing equipment.**

## CASE STUDY

Brighton Concrete Plant & Wharf is a CEMEX owned site situated in Portslade, East Sussex. In June 2018 we were contacted by Site Manager, Andy Roberts who was seeking to replace a rubber lined sand hopper base.

Being situated so close to the coast, nature's elements had caused the hopper to rust extensively. In addition the hopper was also leaking. We were able to offer rapid support to Mr. Roberts, thanks to our engineering capabilities at Gromatex. Gromatex designs and manufactures rubber lined products for mineral processing equipment with the company producing bespoke, high quality, long lasting products that are resistant to abrasive fluids.

Following his phone call, we met Mr. Roberts on site the next week and measured up for a bespoke replacement hopper. The requirements were then passed to the team at Gromatex in Sheffield who quickly set about designing and fabricating a new 2m x 1m hopper. The project was completed without issue and installation of the hopper took just one day.

"Myself and the team really enjoyed working on this project" said Mark McCreadie, part of the Atlantic Pumps Sales team and who made the initial site visit. "It demonstrated our ability to engage with the customer's needs quickly and take the difficulty out of producing bespoke, non-standard items for his wash plant".

**GROMATEX work closely with clients to produce bespoke, high quality, long lasting products that are resistant to abrasive fluids.**



# HYDROCYCLONES



**GROMATEX**  
**hydrocyclones**  
**are lined with the**  
**highest quality abrasive**  
**resistive rubber which is**  
**designed to work in the**  
**toughest applications.**

**The rubber has a shore hardness of 40IRDH and an abrasion resistance of 108.**

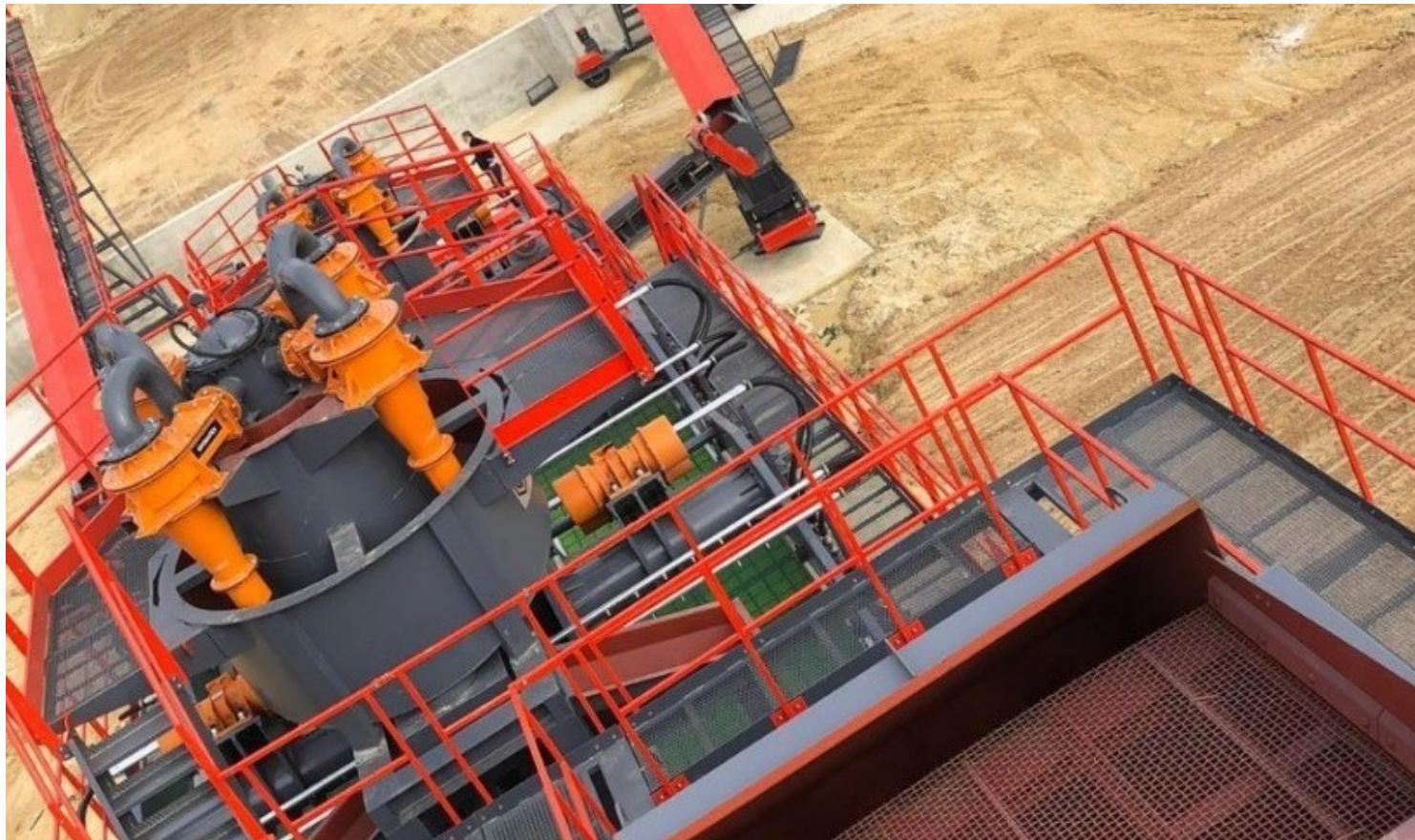
**The rubber is hot vulcanised to the steel body at pressure to ensure a top quality seamless liner.**

## WHAT IS A HYDROCYCLONE?

A hydrocyclone is a device used for the classification of sub sieve materials typically below 200 microns. The material (in slurry form) is fed into the feed chamber at pressure, using a centrifugal pump. The centrifugal pump is paired with a cyclone to ensure optimal feed rate for the cyclone to perform efficiently.

## PRESSURE WITHIN THE CYCLONE

Due to the conical shape of the cyclone, as the material makes its way down the cone, the pressure increase creating a vortex within the centre of the cyclone capable of lifting particles caught within it, carrying them up through the overflow of the cyclone



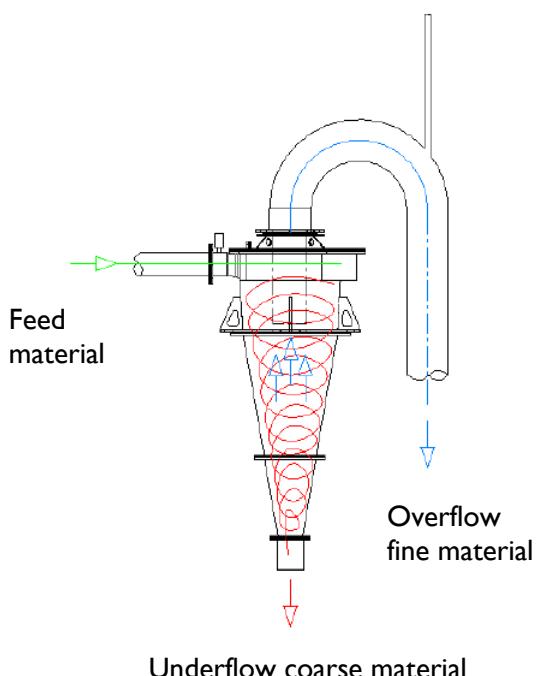
Above: Gromatex hydrocyclones on a Wash Plant in Turkey

Bottom right: Fluid flow and partial motion

## HOW THE SEPARATION OCCURS

The cyclone separates the solid particles due to their relative settling rate. The separation of the solid particles occurs due to centrifugal force which is created within the body of the cyclone.

As the material is fed in tangentially, the solid particles are accelerated against the walls of the cyclone. The force within the cyclone acts greatest on the largest particles and are forced against the wall of the cyclone. The smaller finer particles find themselves drawn towards the centre of the cyclone. The finer particles in the centre of the cyclone are caught in the vortex and carried up through the overflow, allowing the coarser particles to continue falling and eventually leaving through the underflow.



# HYDROCYCLONES

## PUMP REQUIREMENTS

Gromatex cyclones can be paired with any brand of centrifugal slurry pump, however care must be taken to ensure that the pump feed rates and operation pressures are optimal with the cyclones requirements to ensure optimal operating conditions and maximum efficiency. Gromatex recommend using SlurryPro's centrifugal pump range. We can specify and supply pumps according to your specific requirements. As a rule the tables below indicate typical pairings.

### SINGLE PUMP / SINGLE CYCLONE SETUP

Cyclone Type	Cyclone Size	Pump Size	Max Output
C15	380	4-3	Up to 100 TPH
C20	500	6-4	Up to 150 TPH
C26	660	8-6	Up to 200 TPH



### SINGLE PUMP / DOUBLE CYCLONE SETUP

Cyclone Type	Cyclone Size	Cyclone Qty	Pump Size	Max Output
C15	380	2	6-4	Up to 100 TPH
C20	500	2	8-6	Up to 150 TPH
C26	660	2	10-8	Up to 200 TPH

When dealing with cyclo-pacs, i.e. more than two cyclones arranged in a cluster it is advisable to contact Gromatex and our engineers will take on board each specific application and can advise on the set up required.

## CYCLONE PERFORMANCE & TUNING

### OPERATING VARIABLES

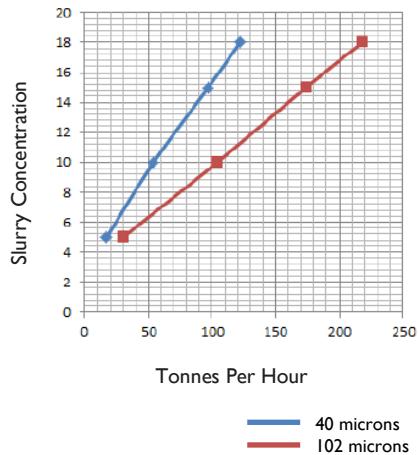
During the operation of the cyclone there are certain variables that will change and can affect the performance of the cyclone. The two main variables to be concerned about are feed solids concentration and feed pressure.

### CYCLONE VARIABLES

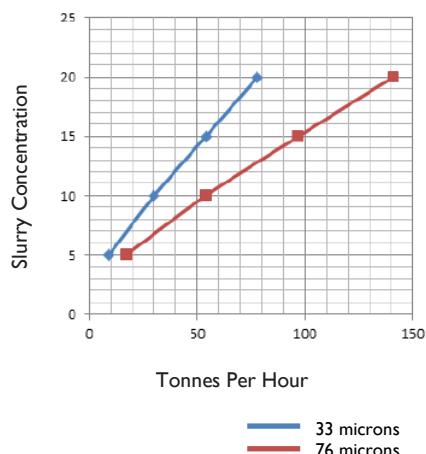
Certain parts within the assembly of the cyclone can be altered to change or tune the properties of the cyclone. Cut points can be managed by changing the inlet diameter, the vortex finder and most easily the spigot assembly. Gromatex carry a full range of spigots and vortex finders which are available upon request.

Cyclone Type	Cyclone Size (mm)	Typical Cut Point
C15	380	63 microns
C20	500	63 microns
C26	660	75 microns

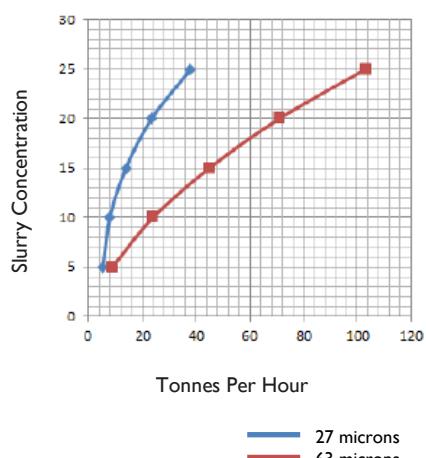
## C26



## C20



## C15



## CASE STUDY

Collier Group is a family owned business operating near Edinburgh, Scotland, with divisions that deal with quarrying, ready mix concrete and blocks, recycling aggregates and haulage.

Their new, high output wash plant used on the quarry and to recycle aggregates not only allows them to produce aggregate to a high specification that is ideal for surface dressing but also enables them to cater to orders for large quantities. This wash plant produces quality concrete sand as well as various sizes of washed aggregates. However, they weren't satisfied with the performance of the cyclones on the plant as they weren't separating enough silt from the water, meaning their lagoons, where the water overflow is deposited, were filling up with silt.

Following a visit from an Atlantic Pumps sales engineer, Atlantic Pumps recommended a complete new Gromatex cyclone, with an adaptor kit to supply a direct replacement to the current unit. They also recommended an installation service to ensure a minimal amount of expensive downtime for the wash plant and hassle for its operators.

The new cyclone has now been installed and Collier group are delighted with its performance. Some of the benefits include:

- Higher throughput: The Gromatex equivalent to the previously installed cyclone can handle a higher flow, meaning they can process more aggregates through their plant
- Cleaner water overflow/better cut point: the quantity of silt exiting with the water over flow has reduced to about half of what it was, meaning less wear in the return pipework and less frequent maintenance to the settling lagoons.

One of the owners, Duncan Collier, was very impressed with the knowledge shown by the installation team and the effectiveness of the solution provided. On a recent visit, he commented that they wouldn't hesitate to recommend Atlantic Pumps for any pump, pipework, or cyclone requirements.



**ATLANTIC  
PUMPS**

HANDLING ABRASIVE  
APPLICATIONS

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