



**Aqseptence
Group**

Aqseptence Group at a Glance

Reliable Performance. Sustainable Results.

Preface

The fact that our world is going through both, an ecological and an economic transformation, is undisputed. In many areas we have already reached the limits of what our planet can tolerate. At the same time, new, promising technologies and opportunities appear on the horizon day after day, which have to be reviewed and considered.

In this era of deep change, it is important to hold on tight to fundamental convictions and to re-evaluate them. Companies doing business around the globe, such as Aqseptence Group, also face these ongoing challenges. Consequently, striking a balance between cost effectiveness and ecology on the one hand and the needs of society and the market on the other hand, is an important aspect to be considered in every decision we make.

Internationalization and the ever-advancing concentration of competition do not only call for assertive entrepreneurial foresight, but also strong social competencies. This helps us successfully walk the tightrope between economical necessities, ecological sustainability and the requirements imposed by international legislators.

Our confidence is based on our comprehensive competencies, proven expertise and decades of experience in the fields of filtration,

separation and water technology. We take the stance of an innovative group of companies that is committed to its traditions, its successful corporate history and to progress.

Our open-minded approach allows us to embrace new paths, to be creative and come up with concepts that resolve what appears to be impossible and to be daring – these are the qualities to attain the best results for our customers' specific demands. Our structures and processes are aligned in such a manner that they enable our employees to evolve to the best of their personal capabilities and to allow us to be as close to our customers as possible from the geographic perspective. Hence, we are flexible and we always deploy a solution-driven approach. This enables us to accommodate the ever-changing external scenarios and to adequately address our customers' individual wishes.

Our employees have all qualifications, experiences and the level of motivation it takes to pursue our ambitious goals.

Let yourself be surprised by this brochure with our products and solutions, our expertise and our true global footprint.

Yours sincerely,
the Management Board of the Aqseptence Group

About Us

Aqseptence Group is a leading global supplier of specialized products, equipment and system solutions for filtration, separation and water technology for various applications and unites some of the most renowned brands of the industry, serving industrial and municipal customers for more than 100 years.

Insights

Aqseptence Group has a proven global footprint with locations in Europe, North and South America, Asia and Australia and employs 1,400 people.

With our well known key brands: **Airvac®**, **Diemme® Filtration**, **Geiger®**, **Johnson Screens®**, **Noggerath®**, **Passavant®** and **Roediger®** we provide components and complete solutions for water and wastewater management including the transportation by vacuum technology systems, screening and filtration technologies for separating solids from liquids and gases. We produce and manufacture our components and machines in our own fully integrated production facilities around the globe.

In line with our ambition to satisfy our customers needs and establish long-term partnerships, we combine our global reach with local presence and customer proximity, and complement the expertise and strength of an international group with our distinct service mentality.

Our Mission

We improve our customers performance through reliable, high-quality customized solutions and thereby contribute to the sustainable usage of our world's most precious resources.

Our Ambition

To be the leading multi-niche specialist and most trusted partner for our customers while consequently living up to our responsibility towards the environment.

Describing best what has been driving us for decades!





Our Key Brands



Airvac

Sewerage systems – proven vacuum technologies for collecting and conveying wastewater in municipal, industrial & various other applications.



Diemme Filtration

World-wide leader in solid/liquid separation technologies, manufacturing a cutting-edge range of filter presses and thickeners for industrial and mineral processing.



Geiger

A leading provider of water intake systems for power plants, desalination, irrigation, water plants and other industrial applications.



Johnson Screens

The leading screen manufacturer and solution provider for industrial filters, water well and architecture with its trade mark Vee-Wire® as well as products for oil and gas applications.



Noggerath

Equipment for mechanical waste water treatment, solid/liquid separation, conveying, compacting and treatment of residues.



Passavant

Well-recognized brand in the field of water and waste water treatment which provides a broad product portfolio for both municipal and industrial applications.






Roediger

German engineering in the service of water management – proven vacuum technologies and innovative solutions for the responsible handling of water.

Our Applications

Aqseptence Group provides a wide range of applications in the fields of filtration & separation and water technology. With our flexible, cost-effective and fully integrated solutions we are able to offer a full range of products and systems to our customers.

	Key Brand	Market	Page
Water Treatment Systems	 Passavant	<ul style="list-style-type: none"> Water and waste water utilities 	8-9
	 Noggerath		
	 Johnson Screens		
Water Intake Systems	 Geiger	<ul style="list-style-type: none"> Power Potable Water 	10-11
	 Johnson Screens		
Vacuum Technology Systems	 Roediger	<ul style="list-style-type: none"> Municipalities Transportation 	12-13
	 Airvac		
Water Well Screens	 Johnson Screens	<ul style="list-style-type: none"> Water resource Agriculture 	16-17
Industrial & Architectural Screens	 Johnson Screens	<ul style="list-style-type: none"> Food & beverage Pulp & paper Architectural OEM 	18-19
Oil & Gas Screens	 Johnson Screens	<ul style="list-style-type: none"> Petrochemicals 	20-21
Filtration & Thickening Systems	 Diemme Filtration	<ul style="list-style-type: none"> Mining Other industries 	22-23
Mining Screens	 Johnson Screens	<ul style="list-style-type: none"> Mining 	24-25

Water Treatment Systems



Insights

With our Water Treatment's product portfolio, driven by the brands Passavant® and Noggerath®, we cover a broad range of water and waste water treatment processes. Focusing on headworks, mechanical treatment and biological solutions deployed in municipal and industrial water applications, we also provide full-service for our installations worldwide - consultancy, engineering, repair, maintenance, spare parts, training, assembly and commissioning.

Over 70% of our planet is covered with water. Keeping in mind that water is the driving force of all nature. When we consider that only approximately 3% of the entire water resource is fresh water, it is up to us to handle this resource sensibly and make innovative water systems more valuable and important than ever before.

Broad Portfolio

- **Headworks**
Various elements of inlet works/headworks for solid/liquid separation, water intake, conveyance and steering of water flows by means of shut-off devices,
- **Biological treatment**
Biological processing of the wastewater and separation of soluble organic substances; system solutions to improve process efficiency,
- **Sludge treatment**
Sludge processing as a basis for economic disposal methods and extraction of raw materials,
- **Fine and micro-sieving/screening**
Separation of extremely fine particles as the final stage of the treatment process by means of advanced rotary drum, micro and under-drain screening systems,
- **Pump technologies,**
- **After-market and field services.**

Benefits

- Increase productivity and cost-efficiency,
- Comprehensive high-quality solutions,
- Reduction of interfaces due to a broad portfolio.

Case Study

Insights

Casa Colorada Profunda Pumping Station, Mexico City, Mexico

Mexico City decided to build pumping stations to prevent flooding in the eastern and northern districts of the city. The purpose was to collect rain-water from the channels during heavy rains. The water is then pumped into lagoons and temporary stored to relieve the wastewater treatment plant. After the rain event, the water is released into the treatment plant.

Challenge

Aqseptence were ask to design a reliable pre-screening system upstream of the pumping station with a depth of 26 meter, including shut-off devices prior and after the screens with high water pressure and large dimensions to be able to shut of the plant for maintenance.

Solution

The pumping station was designed for 40 cubic meter per second, equipped with 20 pumps, each operated by diesel engines with 20000 horsepower each. Our scope of supply consisted of three Passavant Cable Operated Bar Screens (4 meter wide and 26 meter installation depth), six Passavant gate valves, double spindle version with electronic drive (3,5 meter wide and 4 meter high) for a water pressure of 2 bar (or 315 tons), completely made in stainless steel (AISI 304) for residual and combined water.



Water Intake Systems

Insights

Our robust water intake screening systems by Geiger®, Johnson Screens® and Passavant® mechanically remove debris from sea, river or lake water. This pre-cleaned water can subsequently be used as cooling water for power plants, process water for industrial sites, chemical plants and refineries, or as source water for drinking water and desalination plants, both onshore and offshore.

Our product range includes bar screening and trash raking machines, mesh/travelling band screens, large rotating drum screens for onshore/open-channel pump bays, and our Johnson Offshore Intake Systems™ (JOIS™) with submerged passive screens. The aim is to protect pumps and other downstream equipment such as condenser tubes and membranes from the carry-over of debris. Currently, our machines are installed in more than 2,000 highly-sensitive plants worldwide (both Greenfield (new plants) and Brownfield (modernisation of existing plants)). The customized design of our solutions has been proven to lower operating costs, whilst providing maximum reliability, performance, quality, precision, and particle-free water for subsequent processes.



Broad Portfolio

Our water intake solutions are suitable for the screening of:

- Cooling water (thermal power plants),
- Process water (industrial sites, chemical plants and refineries),
- Raw water (water treatment plants, firefighting channels, drainage channels and irrigation),
- Source water (desalination plants).

Benefits

Compared to air cooling, water-based cooling allows for a better heat rate/greater energy efficiency with regard to power plants. Further benefits are:

- A reduction in investment and operational costs,
- A saving in the space required for installation due to the compact channel design (Geiger MultiDisc®),
- Best technology available (BTA) in terms of fish protection (316b standard),
- Heavy-duty and robust solutions with zero-carry-over of debris.

Customers often install our Geiger MultiDisc® Travelling Water Screens to minimize spatial requirements/footprint, and to optimize heat rates thanks to the zero-carry-over design, for both new plants and the modernisation of existing intakes.

Case Study

Desalination Plant Barka, Oman

Insights

The desalination plant located in Barka 4, Sultanate of Oman will produce a total of 281,000m³ per day of potable water output. The project is structured as an independent water project (IWP) and is being realized with a SWRO-membrane process.

Challenge

The project included the delivery and installation support of a state-of-the-art seawater intake solution to extract the raw water removing debris to provide highly efficient pre-treatment along 3 main inlet channels.

Solution

Our customer Suez-Degremont decided on implementing the Geiger MultiDisc® solution due to its reliable pre-filtration, helping to minimize installation time and concrete structures. To provide the desalination plant with screened source water along 3 main inlet channels, 3 Geiger Cable-Operated Bar Rake Cleaners were installed for coarse screening, and 3 Geiger MultiDisc® 500 for fine screening/filtration. We implemented the Geiger® Cathodic Corrosion Protection System based on impressed current (ICCP) to protect the equipment from galvanic corrosion in seawater, and minimize MIC (microbial) corrosion. Our machines typically have a lifetime of more than 30 years.



Vacuum Technology Systems

Insights

Clean water – the most precious resource in the future. Keeping it clean for the next generation and using it carefully is a core responsibility for decision makers and planners. Now more than ever, financial investments and infrastructure projects have to fit into this new scope of environmental accountability.

Facing this challenge with proven technology is the mission of Vacuum Technology Systems with its brands Airvac® and Roediger®. Our technology prevents leakage into groundwater and uses up to six times less water than traditional systems. Vacuum technology solutions have one thing in common: Each system is customized and individually designed, which results in a unique range of products, services and applications: Whether it is a residential area, a holiday resort, a marina, an airport or a train depot, utilizing Airvac® or Roediger® Vacuum Technology Systems provides a safe, cost-effective and reliable solution for your collection needs.

Broad Portfolio

We offer integrated wastewater solutions with three core product areas: innovative vacuum based collection systems, state-of-the-art supply and disposal systems as well as services for waste water treatment plants.

Our portfolio of products and services offers a broad spectrum of solutions for your specific wastewater problems:

- Vacuum sewer systems can replace traditional sewage piping networks and septic tanks in municipalities as well as in marinas,
- Vacuum sanitation technology for ships, buildings or mobile entities,
- Supply and disposal systems for airports, hospitals or train depots,
- Sewage works services offering complete system solutions.

Benefits

- Installation of pipe horizontally and vertically results in high degree of flexibility and space-saving,
- Reduced construction period,
- Cost savings up to 50% compared to conventional gravity systems,
- Closed system with no infiltration/inflow or leakage.

Case Study

Insights

Roediger Vacuum Sewer System, Gerasdorf, Austria

In the early 1990's the town decided to install a sewer system. In an effort to choose the most cost-effective solution, the city compared costs of a gravity sewer system with a vacuum sewer system – the first time this happened in Austria. The results showed that the total costs of a vacuum sewer system was 35% less compared to a traditional gravity sewer system.

Challenge

- Tough topographic conditions such as a flat terrain and high groundwater levels,
- Absolute need to protect the groundwater,
- Short period to install a new sewer system,
- Community with a tight budget.

Utilizing vacuum sewer technology for the town of Gerasdorf, Austria solved all of these challenges with one economical solution.

Solution

The Roediger® Vacuum Sewer System installed in Gerasdorf, Austria has been in operation for over 25 years. Up to this point, we have installed over 2,800 collection chambers and 4 vacuum stations in this area. During the construction of the vacuum sewer system from autumn 1990 until autumn 1992, 34 km (over 21 miles) of sewer pipes were installed. The short construction period was achievable because a vacuum sewer system is easy and fast to install: small pipes and shallow/narrow trenches result in less dewatering and significantly less surface restoration.



The History of Aqseptence Group

Johnson screens®

- 1904: Foundation of Johnson Screens by Edward E. Johnson
- 1960: French subsidiary factory opened, Chatellerault
- 1987: Renaming in Johnson Filtration Systems Inc.
- 1991: Australian subsidiary factory opened, Brisbane
- 2004: 100-year anniversary of the brand Johnson Screens
- 2011: Acquisition of the company MAIND
- 2013: Acquisition by Bilfinger Water Technologies GmbH

DIEMME

- 1923: Foundation of the brand Diemme by Melandri & Deggiovanni
- 1970: Filtration technologies are expanded to other industrial processes
- 1998: 75-year anniversary of the brand Diemme
- 2011: Acquisition by Passavant-Geiger GmbH

GEIGER

- 1891: Foundation of the Geiger'schen Fabrik by Carl Geiger
- 1934: Renaming in Maschinenfabrik Geiger
- 1991: 100-year anniversary of the brand Geiger
- 2000: Renaming in Brackett-Geiger
- 2005: Acquisition by Passavant-Geiger GmbH
- 2016: 125-year anniversary of the brand Geiger

PASSAVANT

Timeline: 1652, 1850, 1900, 1925, 1950, 1980, 1990, 2000, 2005, 2010, 2015, TODAY

- 1652: **IT ALL BEGAN WITH** Foundation of the Michelbacher Hütte by Graf Johannes zu Nassau-Idstein
- 1884: Continuation of the business by Adolph Samuel Passavant
- 1917: Continuation of the business by Wilhelm Passavant, son of the founder
- 1980: Renaming in Passavant-Werke AG
- 1984: 100-year anniversary of the brand Passavant
- 1987: Renaming in Passavant-Geiger GmbH
- 1999: Merger with Roediger-Anlagenbau and renaming in Passavant-Roediger Umwelttechnik GmbH
- 2004: Renaming in Bilfinger Berger Umwelttechnik GmbH
- 2006: Renaming in Passavant-Geiger GmbH
- 2009: 125-year anniversary of the brand Passavant
- 2013: Renaming in Bilfinger Water Technologies GmbH
- 2016: Renaming in Aqseptence Group GmbH

ROEDIGER

- 1842: Foundation of the company by Peter Roediger
- 1942: 100-year anniversary of the brand Roediger
- 1950: Development of the Vacuum technology sector
- 1999: Merger with Passavant Werke-AG & renaming in Passavant-Roediger Umwelttechnik GmbH
- 2009: Divestment of the sector Sewage treatment of the Passavant-Roediger Anlagenbau to Drake & Scull
- 2017: 175-year anniversary of the brand Roediger

AIRVAC®

- 1969: Foundation of the company by Bryce Burton & Renaming in Airvac in 1971
- 1994: 25-year anniversary of the brand Airvac
- 2005: Acquisition by Passavant-Geiger GmbH

NOGGERATH

- 1884: Foundation of the company by Ernst & Max Noggerath
- 1926: Renaming in NOGGERATH & Co.
- 1984: 100-year anniversary of the brand Noggerath
- 1993: Renaming in NOGGERATH GmbH & Abwassertechnik
- 2003: Acquisition by Passavant Roediger Umwelttechnik GmbH
- 2009: 125-year anniversary of the brand Noggerath

Johnson Screens

Diemme Filtration

Geiger

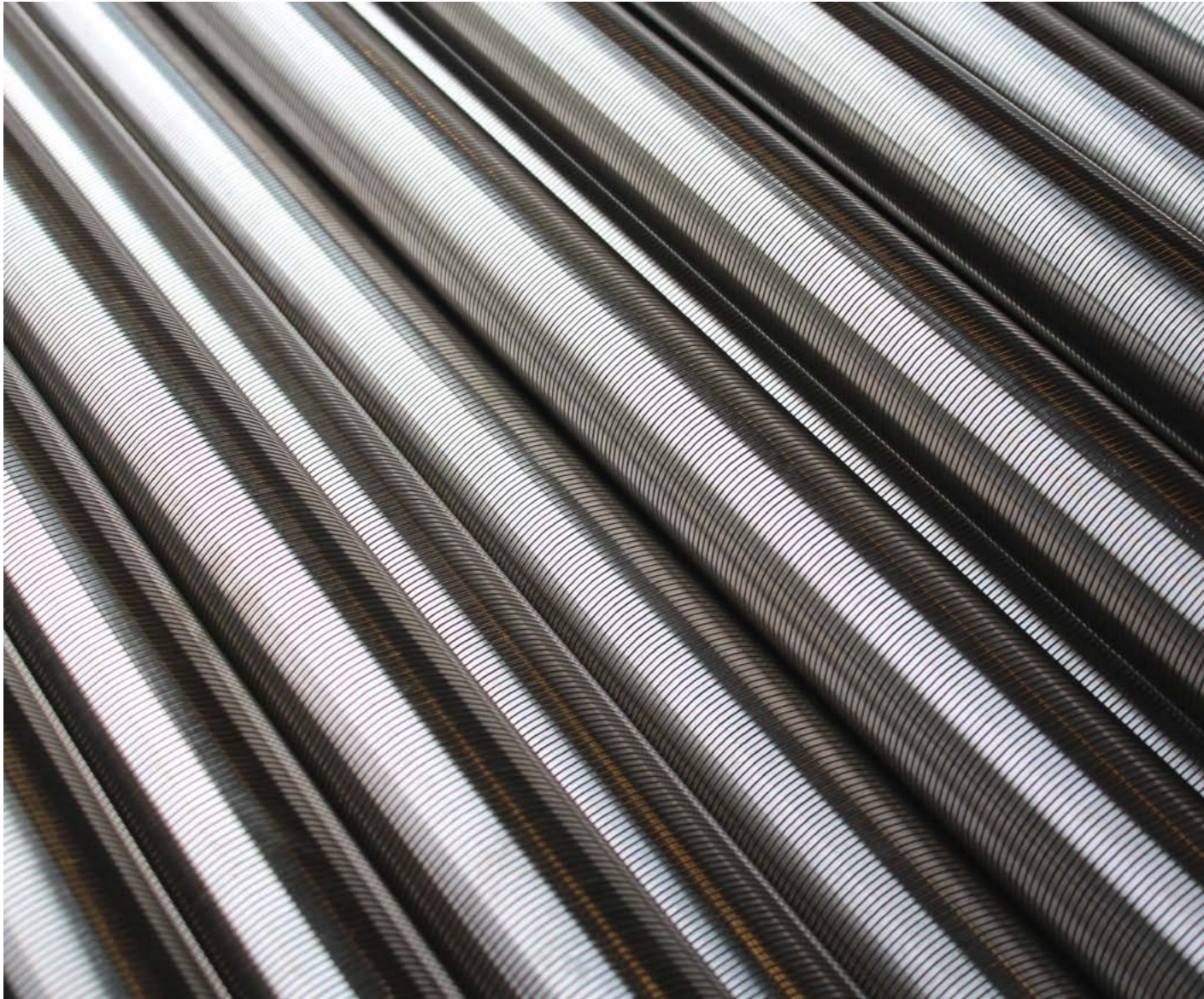
Passavant

Roediger

Airvac

Noggerath

Water Well Screens



Insights

Aqseptence Group offers a broad range of Johnson Water Well Screens® that are indispensable for a highly efficient and productive water well. Johnson Screens' is recognized as the premier brand in stainless steel and PVC Vee-Wire® well screens, plus quality environmental monitoring well products, PVC casing and drop pipe, well treatment chemicals, speciality fittings and a variety of accessories for building and maintaining a water well.

Groundwater is a priceless resource lying beneath the earth's surface. Johnson Screens' products have played a vital role in the groundwater market for over a 100 years. Johnson Screens' revolutionary continuous-slot profile wire technology has become the well screening industry standard around the world.

Broad Portfolio

- Vee-Wire® Stainless Steel Screens,
- PVC Vee-Wire® Water Well Screens,
- Slotted PVC screens,
- PVC drop pipe, casings and accessories,
- Water Well end fittings and connections,
- Pre-packed screens,
- Nu-Well well rehabilitation chemicals.

Benefits

Johnson Well Screens' are essential for:

- Improving well and pumping efficiency, and lower operating costs,
- Maximizing well yield with minimal screen length,
- Optimizing sand control and extending well service life,
- Reducing well maintenance.

With the Johnson Screens' brand, comes the necessary technical support for designing, building and maintaining an efficient and productive water well.

Case Study

Insights

City of La Porte, Indiana, USA

The City of La Porte, Indiana, was planning the construction of a new well in its Warneke field. Existing wells in this field were underreamed, gravel packed completions drilled by reverse circulation and had been plagued with decreased specific capacity.

Challenge

The city's contractor worked with the city engineers on presenting the Muni-Pak product. Despite an initial concern about proper packing and adequate production from a pre-pack design, the city chose the Muni-Pak solution for several reasons:

- The pre-pack design assures uniform packing of entire screen interval,
- The slim pack afforded improved development over an underreamed completion,
- Ceramic or glass bead packs are hydraulically superior to conventional silica sand.

Solution

After successful placement of the Muni-Pak screen, the new well was developed without a problem, and a 24-hour pumping test was conducted. The well produced 805 GPM with a specific capacity of a 24.6 gal./min./ft. drawdown. This production is compared favorably to the existing wells in the Warneke field which had much larger underreamed holes.

Johnson Screens' solution for improving gravel packing is the Muni-Pak screen. This pre-packed screen eliminates the need for a larger borehole, simplifies installation and reduces the overall time required time to drill and develop a well.





Industrial & Architectural Screens

Insights

Aqseptence Group brand of Johnson Screens' Industrial and Architectural products, offers a wide range of screens that are being used in food and beverage, pulp and paper manufacturing, architectural and construction elements and parts for OEM applications – providing low operation and maintenance costs, while providing maximum performance and functionality.

Broad Portfolio

A broad portfolio of innovative solutions is available in following areas:

- **Food and beverage processing**
Specialized screens and equipment for the bio-fuel, corn wet milling, ethanol, malting and brewing, starch and sugar industries,
- **Pulp and Paper**
Screens and other equipment for water clarification, cleaning, dewatering, pulp screening and fractionation, fiber retention, drying and other solid/liquid separation processes,
- **Architecture**
Architectural screens can be specialized to suit different construction projects. The ornate, yet-structural quality of architectural screens, is a stunning element to any architectural or construction project,
- **OEM Screens**
Specialized screens and equipment that are manufactured to meet the demanding specifications of original equipment manufacturers in various markets and industries.

Benefits

The products of Industrial & Architectural Screens are known for great strength, long service life, design adaptability in a variety of architectural applications, and a very high level of efficiency in solid/liquid applications.

Case Study

Insights

New Cageless Paddle Screen design improves processes

A Corn Wet Milling facility in the Upper Midwest of the United States need a new process to speed up maintenance and changes outs, and reduce the potential of work place injuries.

Challenge

New health and safety standards were being implemented in the plant to reduce the number of workplace injuries at the facilities. Also, a product was needed that would speed up maintenance, change out times and reduce downtime in the plant. The current product in place was a caged paddle screen which was the industry standard, and produced by a number of companies at a lower price point.

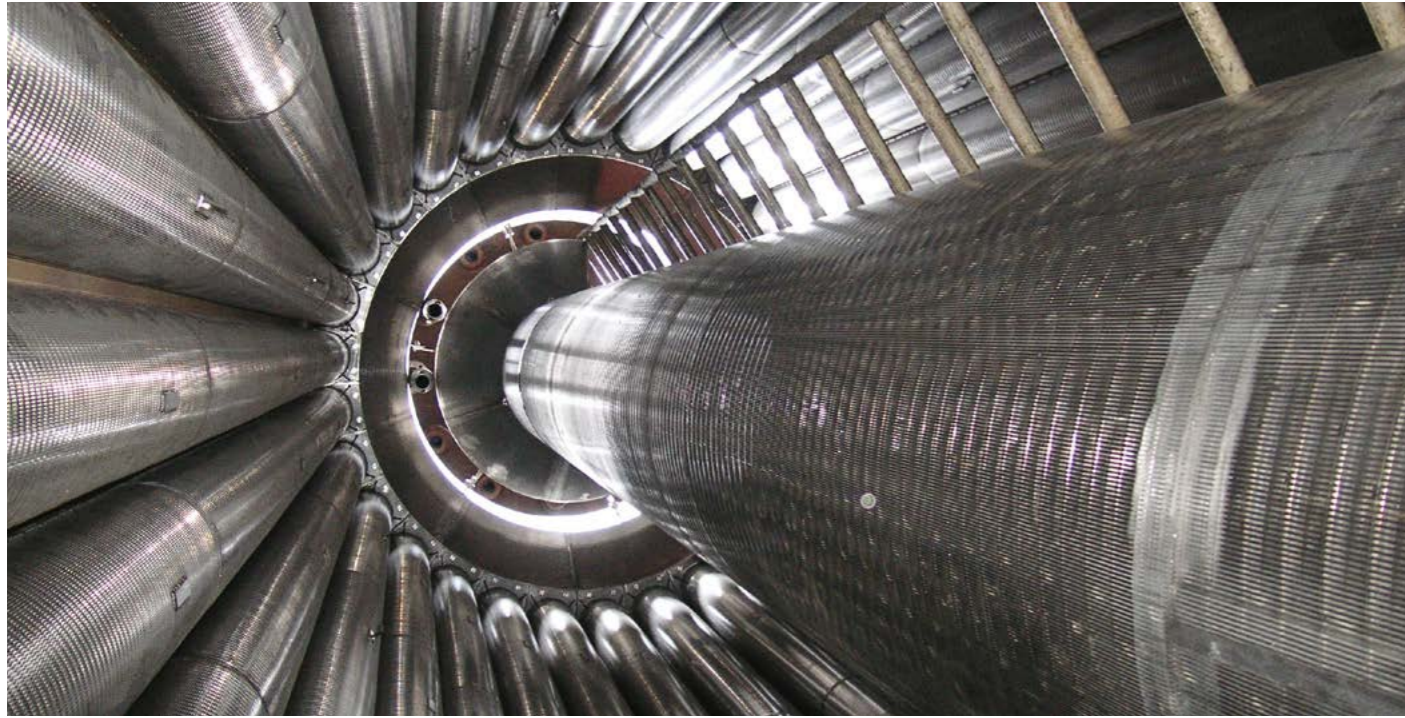
Solution

A meeting was scheduled for plant supervisors and the Global Engineering Manager to review the new design of the Cageless Paddle Screen. The newly designed Cageless Paddle Screen removed 120 pounds from the traditional design. By eliminating that additional weight from the screen a number of advantages were gained:

- The need for a lifting device to remove the screen from the machine was no longer needed. Maintenance and occasional change outs could be done by a two-person team quicker, with a greater reduction of back injuries.
- The risk of hand injury was reduced drastically because of the reduction in weight of the screen.
- A greater amount of open area was gained because there was no cage to block the back side of the screen. This provided better dewatering and lower energy use.



Oil & Gas Screens



Insights

Oil & Gas Screens consists of Johnson Screens® products which are used with two major parts of the oil and gas industry: Hydrocarbon Processing and Upstream Oil and Gas Well Screens.

Hydrocarbon Processing Reactor Internals utilize Johnson Screens' products to facilitate chemical reactions which produce everyday commodities like gasoline, natural gas and many plastics. In the Oil & Gas Upstream market our sand control expertise provides optimal solutions for cased or open holes, delivering highly durable products and superior performances to meet the most demanding client's specifications.

Broad Portfolio

Our products are integral part with all the major processes such as:

- **Refining:** Catalytic reforming, hydrocracking, hydrotreating, molecular sieve, MTBE, sulphur removal, catalyst regeneration, HDS, alkylation, isomerization and hydrogen,
- **Petrochemical:** Ammonia conversion, paraxylene, propane, PTA, styrene monomer dehydrogenation, gas dehydration, methanol, LAB, cumene, PSA, mercury removal and benzene absorption,
- **Natural Gas:** Molecular sieves, activated and promoted alumina, activated carbon, silica gel, amine, glycol, sulfur plant, mercury removal, IGCC and coal gasification,
- **Sand Control for Downhole Oil & Gas Well Completions:** Direct wrap technology to provide the most robust and reliable "wrap on pipe" assembly for sand control performance versus slip on pipe screens. Screens for conventional gravel packing, screens for high pressure gravel packing, premium and prepacked screens, fittings, accessories and special/custom made screens.

Benefits

- Longevity of the Johnson Screens' product lifecycle has extended clients production and operational capabilities minimizing losses and costly unexpected shutdowns,
- Years of experience in engineering and production provide a wealth of knowledge to the customer creating longterm relationships,
- Support services offered during emergencies where time sensitivity is critical to our clients needs.

Case Study

Insights

Johnson Screens' Support Grids Solve Leakage Issues of Molecular Sieve

A natural gas plant in the Southern United States installed Johnson Screens' Vee-Wire® support grids in their molecular sieve dehydrators to replace the mesh grating assembly that was becoming an increasingly greater maintenance issue and molecular sieve containment problem.

Challenge

A natural gas plant added an additional vessel to increase plant capacity. The engineering firm that designed the vessel supplied a mesh grating assembly support grid. Shortly after installation the plant began to have maintenance and leakage issues with the mesh and grating assembly, leaking molecular sieve and requiring several shutdowns to patch and repair the assembly. As a result, the dehydrator lost molecular sieve that moved through the plant, causing costly and difficult maintenance problems and diminishing plant capacity.

Solution

Johnson Screens' designed a new Vee-Wire support grid to replace the mesh grating assembly. After completing the new grid, Johnson Screens' field service representatives provided the installation services. The field service team first removed the leaking mesh grating assembly. Then the Vee-Wire support grid was installed using J-bolts to prevent uplift of the bed support during operation. Rope packing was installed between the vessel wall and the grid OD to prevent the possibility of bypass at the vessel/grid interface. The expensive maintenance problem was solved in the molecular sieve dehydrator vessels.





Filtration & Thickening Systems

Insights

Filtration & Thickening Systems includes Diemme® Filtration advanced filter presses for solid/liquid separation processes and high rate thickeners.

Driven by our commitment to research and development, we study and develop innovative systems and solutions within the delicate process of solid/liquid separation, thus continuously widening and strengthening our unprecedented experience that started in 1923. Decades of experience in the filtration industry have enabled us to develop a comprehensive range of equipment and systems able to meet or exceed our customers' requirements in terms of performance, reliability, safety and operational costs.

Broad Portfolio

Our filtration technologies are globally used in various industrial sectors such as:

- Metals & Mining,
- Chemical & Pharmaceutical,
- Ceramic, Construction & Dredging,
- Food & Beverage,
- Oil & Gas,
- Wastewater Treatment & Power.

Benefits

We provide:

- Comprehensive support and assistance to customers covering all stages from the identification to the implementation of a solution,
- Ability to project, design and supply complete sludge dewatering plants based on highly customized and engineered to order solid/liquid separation technologies for the process industry,
- Continuous technological improvement thanks to our commitment to research and development,
- Spare parts, full service, remote and scheduled maintenance programs.

Case Study

Gold Mine Tailings Dry Stacking Plant, Russia

Insights

Our customer was looking for a safe and environmentally friendly alternative to the existing technology of tailings disposal for its gold mine in northern Siberia. The Diemme® Filtration dewatering plant supplied by Aqseptence Group included four large membrane filter presses model GHT F, specifically developed for massive throughput of high filterability slurries.

Challenge

The tailing pond was close to exhaustion and a technically viable solution had to be found, developed and delivered within a few months in order to prevent the mine operations from being stopped.

Solution

The Diemme® Filtration's technical and economical proposal consisted on a tailing dewatering plant comprising four fully automatic filter presses model GHT 2500-F20, able to dewater up to 5400 t/d of dry solids. This solution met all customer's needs reaching a cake residual moisture lower than 15%, which was an extremely important factor in the Arctic region considering winter freezing conditions. The tailings dry stacking technology using filter presses offered a better OPEX compared to the existing pond disposal and a much shorter implementation of the solution compared to any other technology evaluated by the client for the same purpose.





Mining Screens

Insights

With total ownership of the manufacturing process of Johnson Screens® stainless steel Vee-Wire®, polyurethane, centrifuge baskets and sieve bends, Mining Screens offers a comprehensive and innovative range of screen media solutions for your mineral processing applications. Our products are tough and effective, designed to maximize production yield and maintenance efficiency.

Our mining screen systems are used in coal, iron ore, gold, copper, phosphate, lead, zinc, bauxite, sand, gravel and many more applications. We are committed to providing research and development delivering technical solutions on product and process improvements to optimize your business.

Broad Portfolio

Our range of products and services include:

- Resi-Flex™ Systems - available in a range of materials including Vee-Wire®, Polyurethane, Perforated Plate and Rubber,
- Johnson Screens® Sieve Bends,
- Johnson Screens® Centrifuge Baskets,
- Johnson Screens® Woven Wire Screens,
- Johnson Screens® Servicing.

Benefits

In-house engineers can customize your separation and filtration solutions, offering higher performing products to solve your processing needs.

- Global network of technical personnel with vast experience,
- Remove moisture in coal preparation, which increases coal heating value,
- Improve density media recovery in coal preparation to optimize process costs,
- Satisfy classification and purity specifications dictated by the metals and minerals markets.

Case Study

Lake Vermont Coal Handling Processing Plant, Queensland, Australia

Insights

In early 2016 Aqseptence Group was contracted to supply and service Johnson Screens® Resi-Flex™ Vee-Wire® screens, Sieve Bends and Centrifuge baskets to the Lake Vermont Coal Mine Coal Handling and Processing Plant, located in Queensland, Australia. Lake Vermont Coal Mine produces hard coking coal and PCI coal at a rate of 12 million tonnes per annum.

Challenge

On commencing the contract Aqseptence Group identified a cracking issue occurring down the centre of the hard chrome panels located at the centre discharge area of the coking and deslime screens, resulting in a significant increase in panel consumption and operational costs of the screens. There was also evidence of support frame cracking and loosening bolts on the screen machine.

Solution

Due to the consistent location of the cracking events, Aqseptence Group Service Technicians suggested a frequency argument existed between the two exciter motors on the machine, which was later confirmed by resonance analysis. The opposing frequencies were meeting at the centre discharge area of the screen, causing the fatigued Hard Chrome treated panels to crack. Aqseptence Group proposed the existing panels to be replaced by Standard Panel Surface (304 Stainless Steel) with larger support fins. The performance of Johnson Screens® panels has delivered a 50% cost reduction from 12 to 6 cents per ton, equating to \$720,000 AUD per annum for the Lake Vermont Coal Mine.



Our Locations

Aqseptence Group is headquartered in Germany's Aarbergen, close to Frankfurt am Main. It operates via 14 legal entities across all key geographies, 23 fully integrated locations, further sales offices as well as Joint Ventures and a broad agent network.

Europe

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