

Spring 2019

AXIUM PROCESS News



www.axiumprocess.com +44 (0)1792 883 882 info@axiumprocess.com

GOING THE EXTRA MILE

Axiom Process' reputation as a leading manufacturer of bespoke process systems and stainless steel fabrications, has been built on years of diverse and practical experience designing and fabricating skids, frames and hygienic systems for challenging applications across a wide range of industries.



Our Mission, Vision and Values focus on the provision of quality products, engineering services and solutions delivered on time and to specification; maintaining an environment of continuous improvement where staff are empowered to be adaptable and flexible in order to deliver excellence. The following shows some of the developments that have taken place in the last few months towards fulfilling our Mission Goals and the commitment we have pledged to our customers:

- Design & build of our new plug and play, high specification membrane filtration pilot plant to help customers develop and optimise their processes
- **EconPLUS**, our new perforated filter range went into production to provide a reliable, robust and versatile solution that will suit most budgets
- Automation of our marking services, giving colour control and improved definition using our new laser marker
- Investment in further software upgrades to improve and enhance our 3D Milling Capabilities
- Employment of three new apprentice welders and fabricators to help meet future requirements for growth and specialist expertise
- Material Certification Portal now available 24/7 for customers to access their documents
- Increasing our network of agents in the Middle East, Singapore, Thailand, Indonesia and Malaysia providing wider local representation
- Opening of a new bright and modern reception area so that visitors feel truly welcome the minute they walk through our doors

PROCESS SKIDS, FRAMES AND SYSTEMS MADE TO CUSTOMER SPECIFICATIONS



- Filter Skids and Multiplex Filter Systems
- Mobile CIP skid units up to fully automated static stand alone CIP Systems
- Mixing Skids
- MF, UF, NF, RO Membrane Filtration Plants – Pilot, Fully Automated, Mobile
- Ion Exchange Units
- Mobile Pump Skids incorporating flow meters and instrumentation
- Mix Proof Valve Matrix including support frames and drip tray
- Shell and Tube Heat Exchangers and Condensor Units complete with Support Frames

PLUG AND PLAY MEMBRANE FILTRATION PILOT PLANT

NEW! Our innovative and adaptable membrane filtration pilot plant, together with our team of specialist engineers, can help companies develop and optimise their separation processes utilising Microfiltration (MF) and Ultrafiltration (UF) technologies. The new plant is designed to be 'plug and play' and can easily be integrated into an existing production process minimising the set up time for

companies wishing to conduct trials at their own site. Equipped with multiple interchangeable full-scale membrane modules including tubular, spiral, ceramic or hollow-fibre options, our new flexible system uses sophisticated data collection software and digital IO-Link instrumentation enabling an accurate and detailed representation of the physical separation/concentration level achievable from a representative process stream.



REMOVAL OF MICROPLASTICS FROM WATER STREAMS USING MEMBRANE TECHNOLOGY



Crossflow Membrane Technology (CMT), renowned for its success in the removal of bacteria, pesticides, suspended solids and colour from wastewater, is now a practical solution in the fight against the microplastic pollution found in most wastewater streams. CMT works as a physical barrier against microplastics because particulates cannot pass through the membrane on the basis of particle size, allowing only crystal clear commercially sterile, particle free water to be discharged. All the microplastic particulates and other separated impurities are safely retained in a low volume controllable form ready for further treatment.

INCREASED DEMAND FOR CONTAINERISED SYSTEMS

Our versatile, portable and practical, stand-alone containerised process systems are becoming mainstream for many applications across all sectors of industry.

From hygienic clean-room applications to beverage processing, digestate and effluent treatment systems, the benefits of a quick to install, self-contained process requiring minimal infrastructure is increasingly seen as a preferred option for capital investments.

The advantages of a secure portable asset include, ease of transportation or re-location, even to remote destinations, absolute control of quality during construction and the ability to conduct pre-delivery

commissioning procedures.

The end user benefits include, minimal installation time on-site,

minimal civil engineering and planning permissions, which translate into considerable time and cost savings.



NEW!

EconPLUS PERFORATED FILTER RANGE

RELIABLE LOW-COST PUMP AND INSTRUMENT PROTECTION FILTER

A versatile, low-cost solution for process systems, pump and equipment protection, our rugged EconPLUS stainless steel perforated screen filter is essential security for a wide variety of primary filtration applications.

- Certified 316L/1.4404 stainless steel construction
- Screen sizes include 2000, 3000, 4000, 5000, 6000, 8000 micron as standard (other sizes available)
- 4" OD-316L stainless steel housing
- In-line and 90° options as standard
- Out-to-in / in-to-out flow (either direction)
- Mechanical clearance seal (no 'O' ring to fail or replace)
- No loose parts – manufactured as a two piece construction internally



MATERIAL SELECTION IS CRITICAL

Selecting the right material for the right application is critical to the success of any design project, particularly for challenging environments such as those associated with high salt concentrations and corrosive chemicals.

Our bespoke designs regularly incorporate high performance engineering materials such as superalloys, Hastelloy®, Titanium®, Inconel®, Monel® and PEEK®.

FULLY AUTOMATED CIP SKIDS

Axium Process has extensive experience in the design and fabrication of fully automated CIP skids, complete with control panel, PLC and software.

Designing the optimum CIP System for a given application will ultimately depend upon a comprehensive understanding of the product being purged and cleaned, plant operating parameters, flows, temperatures and pressures in order to get the best results and enhance production processes.

Our specialist engineers have extensive process expertise and ensure that every aspect of the design is fully optimised to enhance plant hygiene and production efficiencies.



AXIUM PROCESS IS YOUR 'ONE STOP SHOP' specialising in design and customised fabrications, providing technical expertise and delivering engineering solutions.



AXIUM'S HYGIENIC STAINLESS STEEL FILTERS

A VERSATILE AND RELIABLE SOLUTION FOR A WIDE RANGE OF HYGIENIC APPLICATIONS:



BEVERAGE	Soft drinks, tea, concentrates, fruit juices (removes unwanted seeds, small stones or fibres from juices)
BREWING	Beer, cider, wine (pre-fermentation)
CHEMICAL	Varnishes, detergents, solvents, oil based coatings, paints/resins (prevents polymerised glue, paint or resins from getting into fresh streams)
CIP	Solution, debris capture
CONFECTIONERY	Sweet production, sugars, coca butter, chocolate mass (removes metals or other particles from the dense chocolate mass, while being able to allow through the fully melted viscous chocolate itself)
COSMETICS	Soaps, creams, shampoos, emulsions, essences
DAIRY	Yoghurts, butter, soft cheese, milk processing, powder mixing (homogenising powders into suspensions)
FOOD	Fats, sugars, flavourings, syrups, cooking oils, egg mass, molasses
INDUSTRIAL	Oils, greases, reclaimed oils, degreasing solutions
PHARMACEUTICAL	Fermentation broths, antibiotic creams, gels, toothpaste
PRE-FILTER FOR PUMPS	Prevents metal particles or parts from damaging pumps or other rotating machinery

NEW! Improved website navigation and Material Certification Portal now available

NEW! LITERATURE



www.axiumprocess.com

Hendy Industrial Estate, Hendy, Swansea SA4 0XP UK

Phone: +44 (0)1792 883882 Fax: +44 (0)1792 886049

Email: info@axiumprocess.com



Axium Process Ltd; Company registered in England & Wales No: 4432600; VAT registration: 793 7784 59



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