



AXIUM PROCESS ENTERS DYNAMIC GROWTH PHASE

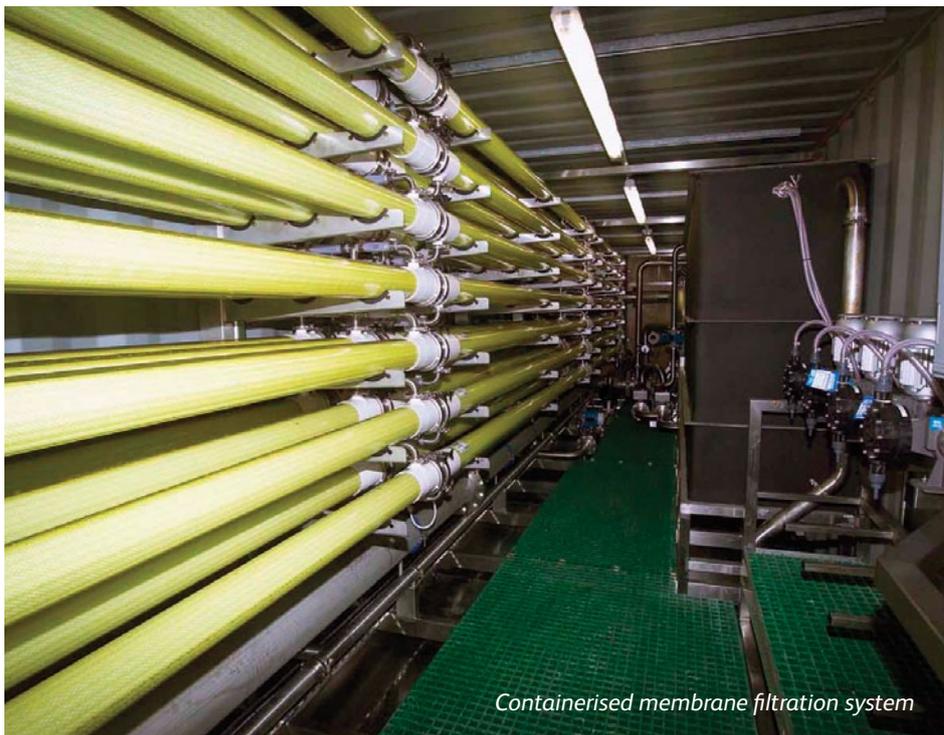
– ANNOUNCES BUSINESS DEVELOPMENT DIRECTOR DEREK DAVIES

Throughout the past year, Axium Process has continued to expand and flourish. Capacity, staff numbers, turnover, level of service and productivity per employee have all increased dramatically, as new opportunities have presented themselves.

Axium Process has invested heavily in new equipment and over the year saw its turnover increase by over 40%. Staff numbers increased by 25%, and individual productivity has increased significantly, which we see as a key performance marker.

The benefits of containerising membrane process systems, particularly for waste stream filtration and recycling has generated considerable interest leading to significant contracts from well known multinationals.

Long term contracts manufacturing high specification pharmaceutical components, an increased demand for high quality stainless steel systems globally, together with lean manufacturing procedures is driving the company forward.



Containerised membrane filtration system

FULLY OPTIMISED CIP SYSTEMS

Axium specialises in the design and fabrication of fully automated CIP Skids, complete with control panel, PLC and software.

To ensure that our customers' requirements are complied with, we assign a dedicated project engineer to each plant, who works closely with the customer from initial specification, design, procurement and manufacture right through to commissioning and sign off.

Every aspect of the design is fully optimised to enhance plant hygiene and production efficiencies.



WHAT'S NEW?

NEW PILOT PLANTS TO MEET DEMAND FOR MEMBRANE FILTRATION TRIALS

We are in the process of building two additional pilot plants which will be equipped with multiple interchangeable

membranes as well as using sophisticated data collection software and digital IO link instrumentation.

ELECTROPOLISHING

Further investment in our electropolishing facilities is helping to meet the demand for customers requiring pharmaceutical grade finishes.

FROM JELLYFISH TO AUTOMOTIVE PAINT, THERE IS AN APPLICATION FOR MEMBRANE FILTRATION IN ALMOST EVERY INDUSTRY

Our membrane filtration pilot plants, testing facilities, product and process expertise are being used across many different industries to help manufacturers determine if By-product separation, concentration, purification and clarification could potentially add significant value to their applications by creating new and sustainable revenue streams.

Pilot plant studies help determine at an early stage process feasibility, system design and evaluation of likely operating costs.

Our engineers will carry out trials on fresh feed supplied by the customer, provide a test protocol prior to the trial as well as a sample analysis listing and detailed interpretation of the results on completion.

Jellagen Pty Ltd is a Med-Tech business manufacturing non-mammalian next generation collagen products sourced from Jellyfish for application in 2D and 3D cell culture and medical devices.

The technology for commercial scale up and production was jointly developed with Axium Process following a successful series of trials at Axium's in-house test facility.

The production plant is a fully automatic separation process and incorporates the essential hygienic design requirements for pharmaceutical grade manufacturing.

Installation, commissioning and operational training was provided by Axium engineers to ensure batch to batch consistency and efficient operation.



Ransom Naturals Ltd (RNL) part of OBG Pharmaceuticals Group

Ransom Naturals Ltd, a leading developer and manufacturer of natural products and extracts, commissioned Axium Process to design and build a mobile ATEX Zone 1 rated membrane filtration system that would process an aqueous or solvent based extraction fluid to remove suspended solids and bioburden from raw plant extracts to meet tight production specifications.



HYGIENIC PROCESS PIPEWORK & SYSTEM INSTALLATIONS

When customers require specialist hygienic on-site installation services our certified engineers can attend site to carry out stainless steel fabrications and pipework installation or modification.



Available welding processes include Orbital or Manual TIG Welding, conforming to ASME IX and BS EN ISO 15614-1:2017 Standards.

Process pipework and utility systems include jacketed pipework, process, CIP, heating, glycol, steam, CO₂, gas, compressed air and chilled water.

We operate across a wide range of industries and provide a wealth of stainless steel expertise providing solutions that can meet the most rigorous industry standards such as those associated with the pharmaceutical industry. We specialise in stainless steel, Hastelloy® and Duplex Steels.

ROTOTHERM'S VIBRATION TEST SKID IS SOUND ENGINEERING

ROTOTHERM, a World Leader in the supply of industrial instrumentation and services, has developed a unique procedure which can measure sound resonance from fluid streams flowing through oil and gas industry pipelines.



As part of the testing process Rototherm commissioned Axium Process to help design and build a 316 stainless steel vibration test skid. Adjustments of upstream pressures are made by varying sized orifice plates with test pressures of up to 16 Bar.

CUSTOM MANUFACTURED PROCESS EQUIPMENT – TANKS AND VESSELS



Axium Process specialises in design and fabrication of hygienic stainless steel process equipment including high-end customised stainless steel tanks, pressure vessels, mobile transfer vessels and mixing vessels manufactured complete with integrated stirring systems and CIP processes.

Our welders and procedures are Notified Body approved to ASME IX, BS EN ISO 9606-1 and BS EN ISO 15614-1.

Welders and metal polishers are qualified to operate in confined spaces where weld integrity and surface finish is critical.

Full certification packs are routinely supplied including materials, weld maps, surface finish, non-destructive testing and Notified Body third party approval.

Unique Solutions for Chemical Industries (USCI)

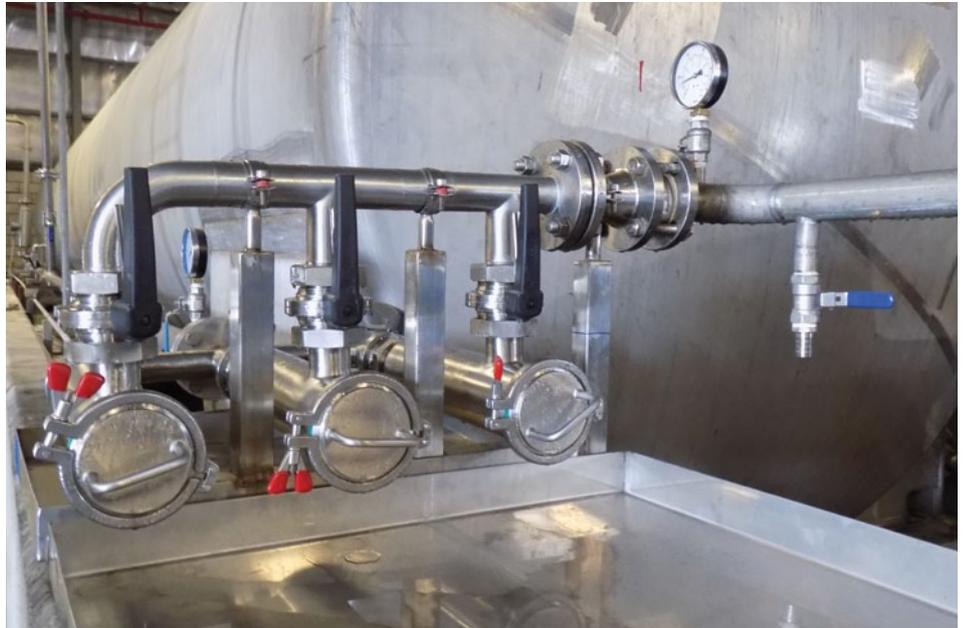
USCI, based in Jeddah, Saudi Arabia, is a manufacturer of anti-scalent chemicals used primarily in water desalination units to help prevent scaling and particulate fouling.

Following a contamination issue which was traced to an imported liquid raw material used in USCI's production process, the company decided to further increase its already stringent preventative safety measures with the introduction of a Pure-Screen Wedge Wire Triplex Filter System.



During inspection and quality control testing, the imported liquid raw material was found to contain small particles from a supplier's packaging material which could block anti-scalent injection points used on thermal desalination systems if this contaminant was found to be present in the final product to be shipped.

"To further enhance its product security, USCI decided to contact several companies to find the optimum preventative safety solution and eventually chose to install a Triplex



Filter Unit from Axium Process in the UK.

This decision was based not only on value for money but also on Axium's excellent back up and support during the procurement and specification procedures" states Paul Charlton, USCI's General Manager. "The filter unit has

now been installed for several months and as well as giving us the security we required for our product, the wedge-wire design of the filter has also given us the added benefit of "smoothing" and ensuring a consistent homogenous quality to the final packed product".

BESPOKE NON-DRIP HYGIENIC STAINLESS STEEL FILLING NOZZLES

Working in collaboration with key engineers from a leading UK Pharmaceutical Manufacturer, Axium Process has developed a new Hygienic Filling Nozzle design that has helped eliminate potential cross contamination or lost product with the associated down time caused by standard filling nozzles dripping excess material onto

bottles during the liquid filling processes.

The nozzle, which is manufactured from 316L stainless steel, underwent a series of rigorous trials across a number of applications and following validation has now been installed as standard on the majority of filling machines across the Manufacturer's site.



ONGOING INVESTMENT IN THE LATEST CNC EQUIPMENT KEEPS DEADLINES ON TARGET

Axium Process has recently invested in a further Doosan CNC DNM500S II vertical machining centre and CNC Lynx 220LSYA twin spindle machining centre, increasing our machining capacity for high end quality machined products such as filling nozzles, filter housings, cap chutes, manifolds and

adaptors associated with industries such as Pharmaceutical, Aerospace and Advanced Materials.

We routinely machine a variety of materials including Stainless Steel, Copper, Brass, PTFE, Inconel, Monel®, Hastelloy®, Aluminium, Tufnol®, and Delrin® plastic.

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



NEW LITERATURE



Hygienic Stainless Steel Systems and Fabrications

Delivering bespoke hygienic engineering design, fabrication and system solutions



PHARMACEUTICAL • BIOTECHNOLOGY • AEROSPACE • FOOD • BEVERAGE • DAIRY • CHEMICAL • TEXTILE

As seen on TV!

WHO would have thought that our filtration equipment would be seen in an episode of Doctor Who?



Doctor Who, filmed at the College of Engineering, Swansea University

AXIUM'S HYGIENIC STAINLESS STEEL FILTERS

Our 316L custom-built stainless steel filters are of a high specification and are simple and easy to maintain, providing filtration levels from 5 micron up to 6000 micron.

- 90°, Straight-through, In-line options
- Standard and compact options
- Full range of interchangeable filter elements
- End connections to suit customer requirements
- Easy-maintenance – no tools required for cleaning or access
- Suitable for backflushing, CIP, SIP duties
- Stand-alone, duplex, triplex, multiplex, large capacity and jacketed options available



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