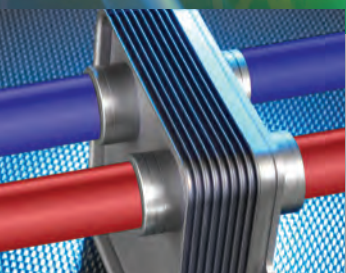


HEAT TRANSFER TECHNOLOGY

The latest news and views on heat exchanger technology from **BOWMAN®**

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Bowman units successfully operating under 'years of freezing conditions'



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Bowman in active role in fire protection system at King Shaka International Airport, Durban.

IF YOU CAN'T STAND THE HEAT... GET A BOWMAN COOLER!

How Bowman heat exchangers have solved a major cooling headache for a Portuguese river cruising company.

The river Douro is one of the most beautiful and economically significant rivers in Portugal and supports a thriving tourist industry based on river cruises that explore the upper reaches of the Douro valley. One of the leading companies is Barcadouro, who have operated a growing fleet of river cruisers from their base in Porto for nearly 20 years.

The latest addition to the fleet, "Independencia" is a flagship catamaran and the first vessel of its kind to operate on the river Douro. However, in preparing the vessel for river operation, a significant problem arose in cooling the ship's two on-board diesel powered generating sets.

Two John Deere industrial engines were installed to drive the two generators that provide electricity for all areas of the ship. However, poor ventilation in the engine room saw ambient air temperatures rise to over 50° C when the engines were run and the excessive heat that built up in the area led to a significant loss in engine power!

Barcadouro called in E J Bowman stockists, Transdiesel S.L. to come up with a solution that would take some heat out of the situation.



Transdiesel's engineers proposed a highly efficient cooling system based around a Bowman FH 200 header tank heat exchanger for cooling the engine jacket water, plus a Bowman FG 100 charge air cooler for the engine inlet air. Once installed, the new system successfully reduced engine room temperatures to just 25° C, restoring the engines full power. It also eliminated the possibility – and cost - of having to replace the existing engines with new units, had a suitable solution not be found. The new cooling system has proved extremely efficient, enabling the catamaran to go into full service on the river.

BIG SALES SUCCESS FOR OUR NEW 'BABY'

Since its launch at SPATEX 2015, our new super compact EC80-5113-1 heat exchanger has been astonishing customers with its powerful performance from such a small unit.

At just 368 mm overall – including the end covers – this incredibly compact heat exchanger can handle heat transfer of up to 25 kW, making it the perfect solution for smaller domestic pools, spas and hot tubs.



BOWMAN®

A World Leader in Heat Exchanger Technology

DOWN ON THE FARM WITH BOWMAN

Bowman plate heat exchangers provide vital link in rural biomass heating system

Oulton House Farm is a 500 acre dairy farm located on the Staffordshire/Shropshire border. In addition to its dairy herd, the farm has diversified into tourism, converting its traditional barns into seven high quality holiday cottages.

Owner, Arthur Palmer, planned to replace the existing oil fired heating with a renewable energy system to reduce energy costs and take advantage of the Renewable Heat Incentive. After a detailed site survey, local renewable energy experts proposed a new Biomass heating system based around a Twin Heat M-CS 80 kW boiler.

The system heats the cottages plus the main farm house from the centralised biomass boiler. Key to its success was the installation of Bowman heat exchangers to act as an interface between the old heating circuit and the new biomass boiler.

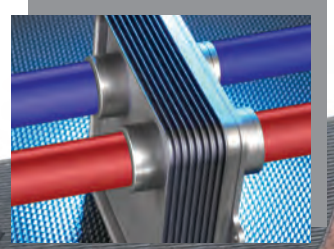
As the company explains, "Even after deep cleaning of the existing pipework and radiators, we always install a Bowman Plate Type Heat Exchanger to protect the new boiler from silt debris contamination."

"Over the years we've found the Bowman units not only provide efficient heat energy transfer between the new boiler and the heating circuit, but also give vital protection for the new boiler, helping to extend service life, reducing unplanned downtime for maintenance."

The system comprises the biomass boiler, a 2.5 Rotag automated fuel feeder, plus the flue system and pipework. They also laid insulated pipes to the farmhouse and the cottages, linking each one to the biomass system via seven individual heat meters, each with its own Bowman heat exchanger.

The new system has been running extremely efficiently, heating all properties as required, whilst significantly reducing energy costs.

Bowman Stainless Steel Plate Heat Exchangers provide a simple, but highly efficient method of transferring heat from one independent, low pressure water circuit to another. Their unique water flow arrangement offers high efficiency heat transfer and easy in-line installation that fits simply and neatly into either existing or new pipework. This unique flow method, plus the unit's compact design can also provide substantial space and cost savings for new installations.



LIFESAVING POWER IN THE ANTARCTIC WINTER



The British Antarctic Survey (BAS) has demonstrated its continuing confidence in Bowman products by ordering six new Bowman Exhaust Gas heat exchangers for their Halley VI research station.

The units will operate under the harshest sub-zero conditions on earth at the isolated research station on the Brunt Ice Shelf where temperatures plunge to - 50° C and snow falls for half the year.

The Exhaust Gas units are a vital part of the combined heat and power system (CHP) that

supplies energy for space heating, hot water, lighting, ventilation and electrical power. Without this CHP system, the resident BAS team, who live and work at the base could not survive.



ENERGY 4 POWER GOES LIVE

Bowman is sponsoring the Energy 4 Power Live one day conference and seminar which brings together the major players in independent power generation.

The event takes place in London on 17th November 2015 and Bowman will be presenting a paper on the benefits of waste heat recovery as well as having a stand at the exhibition. Whilst manufacturers and integrators have embraced the business and environmental benefits that result from offering a CHP solution through waste heat recovery, many companies have yet to discover this opportunity.

Bowman's presentation will showcase the opportunities for CHP system manufacturers and genset integrators to recover waste heat from diesel, gas or biogas powered engine generating sets, which can then be converted to a valuable 'free' energy resource suitable for a wide variety of uses, including hot water supply for district heating.



Engineering Manager, Dr Hezlin Ashraf-Ball, will be presenting a paper on the benefits of waste heat recovery.

'MISSION CRITICAL'

Bowman Header Tank Heat Exchangers are playing a key role in a 'mission critical' active fire protection system in use at King Shaka International Airport, Durban, South Africa.

In the event of an emergency, either during aircraft take-off and landing, or in the airport's bulk fuel stores, an active fire protection system pumps literally thousands of gallons of foam into the emergency area. This primary response helps support the airport's own fire and rescue teams, by delivering fire quenching foam to the scene almost immediately, which ensures the emergency is brought under control much quicker. Bowman header tank heat exchangers are now a 'leading brand' for active fire protection systems and have been installed on fire pumps throughout the world, helping to protect people and property in the event of an emergency.



DIVING INTO PONTYPRIDD



Bowman heat exchangers are delivering 21st century reliability and efficiency to a historic open air pool complex in South Wales.

Originally opened in 1927, Pontypridd Lido has undergone a £6.3 million redevelopment programme that has seen the Grade 2 listed 'Arts & Crafts' style facility restored to its former glory.

Bowman GK190 and PK 190 heat exchangers have been installed as part of a new heating system for the facilities three new heated pools; a 25 metre main pool, a children's activity pool and a splash pool for the toddlers. The design and installation was carried out by Advanced Pools Service Limited of Bromsgrove for their client, Wrightfield.

NEW FACES

Bowman is delighted to welcome a number of new personnel to our team and wish them every success in their new roles.



**Dr. Hezlin
Ashraf-Ball**
Engineering Manager



Tony Carter
Business Development Manager



Phil Allman
Marketing Manager

SEE US AT: METS 2015

Amsterdam 17-19th November 2015
The world's largest marine equipment trade exhibition

ENERGY 4 POWER LIVE

London 17th November 2015
The UK's major conference on independent power generation

SPATEX 2016

Ricoh Arena, Coventry
31st January – 2nd February 2016



MAKING A SPLASH AT SPATEX 2015!

Bowman was one of the 'stand out' exhibitors at the UK's leading swimming pool and spa exhibition.

SPATEX is the UK's premier pool and spa show and Bowman was back in fine style with a really strong presence in the market.

Our exhibition stand was one of the 'stand out' designs of the show and received many compliments from the organisers, visitors and other exhibitors.

SPATEX proved to be the perfect launch platform for our new compact EC80 unit, which received a very positive reaction from visitors. We also showcased our extended titanium tube stack range, which again was well received, as was our brand new swimming pool heat exchanger brochure.



EVEN COOLER SOLUTIONS FOR THE MARINE INDUSTRY



For over 60 years, Bowman has been providing efficient, reliable heat transfer solutions for the marine industry.

Now our cooling technology is at the heart of marine power applications for bow and stern thrusters, plus vessel roll reduction systems, which are increasingly specified on the latest yachts and leisure boats to precisely control the operation of these vessels, both at sea and in port.

Many of the latest systems use hydraulic power to control the operating system. In such systems, Bowman hydraulic oil coolers offer a high quality solution for cooling the hydraulic circuit that controls the thrusters and stabilisers.

FOR MORE INFORMATION

If you would like more information on any of the articles contained in this newsletter, or for technical data on any of our heat exchanger ranges, please contact us directly;

CALL:
+44 (0) 121 359 5401

FAX:
+44 (0) 121 359 7495

EMAIL:
info@ejbowman.co.uk

VISIT:
www.ejbowman.co.uk



EJ Bowman (Birmingham) Ltd
Chester Street, Birmingham B6 4AP, UK
Tel: +44 (0) 121 359 5401 Fax: +44 (0) 121 359 7495
Email: info@ejbowman.co.uk www.ejbowman.co.uk



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