



Welcome to the latest newsletter from HAT International, aimed at keeping all our customers up to date with the latest products and developments within our company, as well as some general news on what's going on in the industry. We trust you find it informative and we welcome any comments or suggestions you may have to improve the format.

If you wish to unsubscribe, simply reply at any time with 'UNSUBSCRIBE' in the subject box.

Latest Developments

NEW ORDERS

October and November saw orders arriving for **7 sets of glycol dehydration unit internals** for a Middle East client, and **1 set** for a European client for a project in South Africa. On the distillation side we received orders from Europe for a set of column **valve trays** for Scandinavia and a set of **frac trays** for Pakistan. Numerous orders were received for **random packing** for several UK clients including our **graphite raschig rings**. On the separation side, we received orders for applications in the Middle East, Asia-Pacific and Siberia for **vane and mesh demisters** as well as **multi-vane inlet distributors**. Last, but not least, we are supplying some **mesh flame arrestors** to a customer in the UAE and a solid-bed reactor **wedge-wire support screen** to Pakistan.

RECENT DELIVERIES

Recently completed orders include a large feed **inlet mixer-distributor** for a column in



Pakistan; a set of fixed **mini-valve stripper** column trays for a project in Asia; **vane & mesh demisters and inlet distributors** in a

range of stainless steels for projects in the UAE, Kazakhstan and Pakistan; and a wide range of internals including **inlet distributors, mesh, vane and swirl mist eliminators, baffles, bubble cap trays** and associated column internals for two condensate stabilisation plants for a Middle East client.



AlphaTRAY SBC

NEW PROJECT MANAGER JOINS HAT

Joining us in our UK Operations office in Newcastle-under-Lyme is Daniel Matthews. Daniel is a Mechanical Engineer and brings with him a breadth of experience in the design and manufacture of industrial filter systems.

ADIPEC EXHIBITION VERY BUSY

HAT International exhibited our product range recently at ADIPEC in Abu Dhabi where our Sales Manager, Raff Merola, and our Applications & Technology Manager, Kevin Levitt, met numerous existing and new customers. A big thank you to all those who took the opportunity to visit us.

SEASONS GREETINGS

In this last newsletter of 2008 may we offer you all our best wishes for Eid al Adha, Christmas and 2009!



The latest newsletters are available on our [website](#). If you would prefer to receive just a link when they are published, please let us know.



Industry & Market News

West Texas Intermediate Crude Oil \$/barrel



OIL SLIPS FURTHER...
Despite greatly reduced demand OPEC did not agree immediate cuts at its November meeting, sending crude prices below \$50/bbl at the start of December. Production cuts are mooted for later this month.

Nickel 3mo Unofficial \$/m tonne



NICKEL SINKS...
Nickel reflected industrial concerns and steadily lost value during October and November. The metal was trading at \$9.50/kg 3rd December.

United States Dollar - Euro



DOLLAR CONSOLIDATES...
The Dollar remained the favourite currency as other investments tumbled, building on gains in October. The key rates stand at £1.00 = \$1.48 and €1.00 = \$1.26 on 3rd December.

United States Dollar - GBP





EUROPE

INEOS has cancelled plans to build four biodiesel plants across Europe saying it remained committed to biofuels but couldn't warrant any non-essential growth capital expenditure in the current economic environment. All four plants - Antwerp, Belgium; Lavera, France; an unnamed site in Germany; and Grangemouth, Scotland - were scheduled for operation over the coming four years with a combined capacity of 2m t/y.

MIDDLE EAST

KUWAIT - Petrofac has announced that it has been awarded a KD147 million (US\$543 million) lump-sum contract by Kuwait Oil Company (KOC). The contract is for engineering, procurement and construction services for a new gas pipeline running from KOC's Booster Station 131 in North Kuwait to its liquefied petroleum gas plant located at the Mina Al-Ahmadi refinery.

IRAQ - Iraq should raise its oil exports to 2.5 million barrels per day next year, 25% more than planned, to cover a budget shortfall caused by tumbling crude prices, Finance Minister Bayan Jabor said.

ASIA - PACIFIC

KAZAKHSTAN - The Aker Solutions JV has received a Letter of Intent for the Kashagan full field development FEED contract. Shareholders in the Joint Venture company (K-WAC Limited) are: WorleyParsons, CB&I, and Aker. Agip KCO is Operator of the consortium comprising ENI, Shell, ExxonMobil, Total, ConocoPhillips, KazMunayGas and Inpex. The Phase II Project FEED Scope of Work includes onshore and offshore facilities and pipelines. There are also options for services post-Phase II FEED, and optional FEEDs for additional fields (Aktote, Kairan, and Kalamkas).

SINGAPORE - Jacobs Engineering been awarded a contract by Neste Oil Singapore to provide EPCM services for Neste's Tuas Power Scope project, which

will support the NExBTL Singapore renewable diesel facility that is currently being developed at Tuas, Singapore. The NExBTL renewable diesel plant, which is estimated to cost Euros 550 million, is designed for 800,000 tons per year. It will be the world's largest 'new generation' renewable diesel manufacturing plant and uses Neste's proprietary technology.

CHINA - Foster Wheeler has announced that, together with its consortium partner Wuhuan Engineering Company, it has been awarded contracts by Sasol and Shenhua to perform a feasibility study for an 80,000 bpd coal-to-liquids plant in the Ningxia Hui Region, the coal-rich western part of the People's Republic of China.

INDONESIA - The Indonesian government is expected to approve Inpex's \$20 billion floating liquefaction development plan for the Abadi field, on the Masela Block, by the middle of this month.

ELSEWHERE

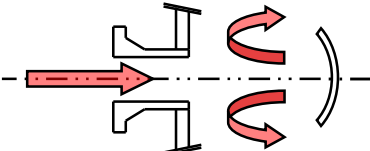
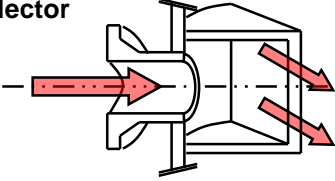
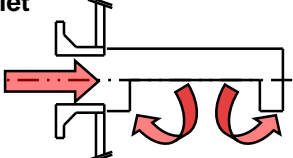
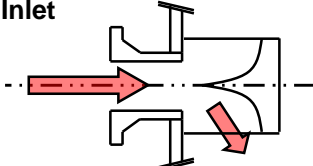
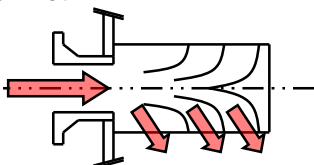
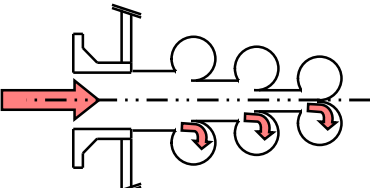
Amid rapidly deteriorating demand and sagging prices for steel. Germany's ThyssenKrupp has postponed its long-term financial goals, saying that even with steel demand picking up again in 2010 it may not reach its goal of making €5b/y in pretax profit by 2012, and possibly not even by 2012/2013. The world's largest steelmaker ArcelorMittal is much more exposed because it does a far greater share of its business on the spot market, and because of its large presence in commodity steel goods such as beams. The company last week announced it was responding to the "unprecedented destocking" in the steel industry by cutting production back by a third and cutting 2009 capital expenditure by \$1b to \$4.5b. It will also trim up to 9000 jobs - 3% of its global workforce - primarily among administrative staff.



*News items courtesy www.the-eic.com
www.upstreamonline.com and
www.tcetoday.com*

Feature:

Select an appropriate separator inlet distributor...

<p>No Inlet Deflector</p>	<p>With generous vessel sizing it is acceptable to avoid the use of an inlet deflector or distributor if the incoming fluid momentum is low.</p>
<p>Plate Inlet Deflector</p> 	<p>Basic, economic momentum breaker used for simple 2 phase (liquid + light gas load) inlet streams with a horizontal entry nozzle in the vessel head. Avoid use where foam or oil/water mixtures are possible, or where the vessel is not generously sized.</p>
<p>Tangential or Box Inlet Deflector</p> 	<p>Standard, robust device used for many 2 phase (gas/liquid) inlet streams. Tangential arrangement on vertical vessels or Box arrangement on horizontal drums. Do not use where foam is predicted. A sloping baffle plate is often located below the device to prevent the swirling action from disturbing the liquid.</p>
<p>Half-Pipe Inlet</p> 	<p>Standard, economic distributor used for simple 2 phase (gas/liquid) inlet streams with a horizontal entry into a vertical vessel. Use where liquid load is very low in comparison. Not as efficient as other devices so needs larger clearances to other internals.</p>
<p>Bifurcator Inlet</p> 	<p>A robust, device used for many 2 or 3 phase (gas/oil/water) inlet streams with high liquid content into a vertical or horizontal entry nozzle in the vessel. Do not use where foam is predicted, or where gas load is high, unless the separator gas space is adequate.</p>
<p>Multi-Vane Inlet</p> 	<p>A more complex diffuser used for 2 or 3 phase inlet streams with a horizontal entry nozzle in the vessel. Use where gas load in relation to liquid load is high for the vessel size. Use caution where foam is predicted unless the separator gas space is adequate. Multi vanes enable more compact vertical layouts to be used.</p>
<p>Multi-Cyclone Inlet</p> 	<p>A sophisticated device used for 2, 3 or 4 phase (gas/liquid or gas/liquid/solids) inlet streams with a horizontal entry nozzle in the vessel. Use where foam is predicted, or where momentum is high. Use with caution on FPSO's as the liquid level (seal) needs to be reliable. Effective as sand separators.</p>

Note: Special distributors for column feeds and reactors are available and will be covered in future issues.

