

## Automation in Oil & Gas Industry

Indian Oil & Gas sector has been growing at a decent rate making it one of the six core industries in India. While witnessing high consumption demands the industry alongside has also been facing challenges related to price fluctuations and also safety related issues of employees working on-shore.

In Oil & Gas Sector, Process Control is an important aspect, which faces the challenges of implementing newer automation technologies across both upstream and downstream processes. While achieving this, they need to meet the safety, operating and product quality standards. "The Investment in Automation by the Oil & Gas Industry will be strong and is forecasted to grow through 2013 "as per ARC's 5 year Market & Technology forecast through 2013.

Oil and gas producers are focused on production optimization and increasing reliability of their processing operations. Automation is needed right from offshore production, onshore production and transportation and processing. In all these processes there is a constant pressure to help control performance, reduce downtime, improve safety increase productivity and perform diagnostics. These objectives are achieved with automation systems like DCS, SCADA, PLC and with solutions that integrate these control systems with the enterprise systems thus enhancing the productivity.

Plant Intelligence has been streamlining and synchronizing manufacturing operations in real-time thus optimizing the production activities. In typical environment, there are plethoras of systems that work in isolation. Organizations want to keep their investments intact and need solution that will CONNECT – INTEGRATE – ANALYZE their processes and give management Key per-

formances Index that help take informed decisions.

Plant Intelligence solutions facilitate flexibility, reduce production costs and enhance profitability by:

- Improving visibility to expose hidden bottlenecks;
- Connecting disparate systems within the plant hierarchy for better integration;
- Reducing material waste which directly reduces cost and shortens cycle time to increase productivity;
- Cutting downtime to enhance OEE;
- Offering real-time information on customer orders across multiple plants;
- Data Acquisition from current as well as legacy systems at a centralized location;
- Generating KPIs, real-time visibility, and comprehensive reporting;
- Managing and optimizing productions processes with Manufacturing Execution Systems;
- Manufacturing Intelligence and Integration with SAP MII adaptive manufacturing capabilities.

With Sarla Technologies' vast experience in providing automation services for leading Indian Oil & Gas PSU's and services especially in tank farm management, terminal management systems, the company has become a partner of choice for the Oil & Gas industry.

It has already been providing its services and solutions through its engineering portfolio which is into Instrumentation Engineering, Automation Engineering and Electrical Engineering at various sites like – India, Norway, Saudi Arabia, Qatar, Brazil and Iraq. They have provided



automation services in vessel management, rig management, safety systems, deep subsea systems, gas compressors, gathering stations, water injection systems and power management for leading Oil and gas companies in the world.

As a Global Services provider, they have helped EPC's/ Process Consultants/OEM's and SI's to meet their changing customer demands of providing tailor made solutions on multiple platforms, migration of legacy systems to newer technologies at multiple remote sites. They provide Engineering Services, Site support and Commissioning services in Control, Instrumentation & Electrical Systems.

Sarla Technologies is an ISO 9001: 2008 and CSIA certi-

fied Global Engineering house providing Automation and Plant IT solutions across diverse industry verticals and having over 10 years of experience in the field of Industrial automation, Plant Intelligence, MES & ERP- Plant Data Integration. They are a part of US \$450 M+ Parekh Marketing group, an associate of Pidilite industries, which is a renowned corporate group in India. Having strong Global presence with offices in Mumbai - India, Dubai-UAE, Milton Keynes-UK, Pittsburgh-USA and Oslo-Norway, the company has been serving several global customers and increasing their productivity and cost efficiency.

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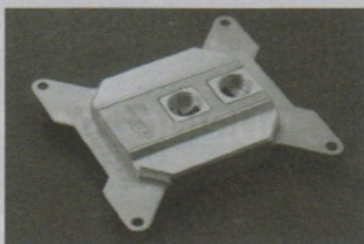
## New Uniform Open Metal Foam Gives Three Times the Cooling Power

Versarien is launching a novel, patented, open pore, metal foam, developed by the University of Liverpool, which combines extremely high thermal efficiency with mechanical strength and reduced weight. Initially focusing on porous copper products, Versarien intends to extend the technology to other materials, including aluminium, in the near future.



Formed with a lost carbonate sintering process (LCS), metal and carbonate powders are mixed together, then pressed and sintered before dissolving to remove the carbonate mixer. The process can produce metal foam with porosity up to 85% and homogeneous and controllable pore sizes between 50 microns and 5 mm.

The open pore structure allows coolant fluid to pass through the material, and the greatly increased surface area produces heat transfer rates which are around 300% greater than is possible with current technology. The manufacturing method distributes the pores evenly through the material, ensuring the mechanical and thermal properties are constant throughout each component, and can be repeated for batches of parts - which has been a problem with metal foams up until now.



The Versarien technology allows for the moulding of components to a net shape during the pressing process, enabling customers to take delivery of parts tailored to their exact needs. The small pore sizes which can be achieved

with LCS make it easy to produce far smaller open pore components than is possible with other technology, while larger parts and sheet material can also be manufactured using modular building techniques.

The simplicity and repeatability of the process enables products to be produced at competitive cost. Neill Ricketts, CEO of Versarien says, "LCS technology is a major step forward for the production of metal foams. Its exceptional properties can be applied to a wide range of industries, from semiconductor cooling to fuel cells, acoustic installations, and aerospace components where weight, rigidity and thermal conductivity are important. This exciting new manufacturing method will bring the advantages of metal foams to a much wider audience at an affordable cost."

### About Versarien Limited



Versarien Ltd is a new company that has been formed to exploit advanced porous copper alloys used in thermal control applications. Starting

operations at the beginning of 2011 the company is owned and run by its four directors and has the resources to exploit the potential \$7bn market in thermal management products. The LCS technology itself was initially developed at the University of Liverpool and was a runner up in the "manufacturing and process innovation" category at the 2010 Engineer Technology and Innovation Awards promoted by the Engineer magazine.

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