

MILITARY SYSTEMS

TECHNOLOGY

AEI SYSTEMS

weapon systems & military
aircraft spares to
customers around
the world

MOLECULAR PRODUCTS

global leader in chemical
technologies. carbon dioxide
removal, oxygen generation & the
filtration of hazardous emissions



**BREAKING
NEWS FROM...**

**AVON
BARRUS
CUMMINS
GROUPE SAI
PELI HARDIGG
STEATITE
WFW**

Image Courtesy of AEI Systems

EOD Solutions

Explosive and Ordnance Demilitarisation





Welcome to this edition of the Military Systems & Technology newsletter.

As an established web portal for the International Defence & Aerospace Industry, we strive to provide a comprehensive and detailed listing of Military Equipment Suppliers, Products and Services. This newsletter is designed to keep you up-to-date with latest news and events within the Defence Industry's Governing Bodies, Organisations and Companies.

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global leader in chemical technologies. carbon dioxide removal, oxygen generation & the filtration of hazardous emissions

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WEAPON SYSTEMS & MILITARY AIRCRAFT SPARES TO CUSTOMERS AROUND THE WORLD

Established over 50 years ago, AEI Systems is a UK BSI quality approved Company supplying weapon systems and military aircraft spares to customers around the world.



Aircraft Weapons Systems

Design Excellence

We specialise in the design, manufacture, test and support of a wide range of small to medium calibre military weapon systems for air, sea, land and dismounted soldier applications.

Reputation

Renowned for our aircraft cannon knowledge and expertise, AEI Systems is the Design Authority and 'Original Equipment Manufacturer' to BAE for the ADEN 30mm Gun system as installed in the Hawk advanced trainer aircraft.



Weapon Mount Systems

Through Life Support

Obsolescence management and continual product improvement has given rise to a new 'high rate of fire' revolver cannon. The ASPEN 30, with blast suppression, improved recoil systems and gas regulation catapults this ADEN 30 variant into the 21st century.

Numerous other aircraft weapon types are supported; M39, M134, MO32 and DEFA to name just a few.

Cost Effective Solutions

AEI's manually operated 20mm HS804 naval weapon systems offer cost effective gun solutions, while delivering an impressive punch.

In addition to the reliable AE20-NM naval weapon mount, we now produce belt-fed variants for prolonged target engagements. These mounts are in service around the world and are suitable for vessels of all size from RIB's to Frigates.

Innovative

For military vehicle applications; AEI has developed a lightweight all Aluminium cradle AE20-VM with spring assist yoke for the HS804 belt-feed weapon system. Mounting is adaptable to suit individual slewing ring or pedestal interfaces, with an in-house designed flexi-chute feed linked to the vehicle ammunition tank location.

New Markets

For the dismounted soldier; AEI is in the process of design and manufacture of a complete range of 7.62 millimetre bolt action and 12.7 millimetre semi-automatic tactical weapons. A 20 by 110 millimetre variant will be available within 12 months with a 30 x 113 millimetre variant will follow shortly after. These weapons bring new and innovative features to the market and are designed and built to military aircraft standards of quality and precision.

Barrel Production

Expand in Capabilities

AEI has expanded its manufacturing capability to include in-house barrel manufacture up to a maximum of 105mm, both constant and progressive pitch. This gives us the flexibility to rapidly develop weapon variants of our existing designs to fire the 20 by 102 and 25 by 137 millimetre rounds for naval and land vehicle applications in response to customer demands.

AEI Systems; Quality, Precision and Innovation



GLOBAL LEADER IN CHEMICAL TECHNOLOGIES. CARBON DIOXIDE REMOVAL, OXYGEN GENERATION & THE FILTRATION OF HAZARDOUS EMISSIONS



Molecular Products is a global leader in chemical technologies for the removal of carbon dioxide, the generation of oxygen and the filtration of hazardous or harmful emissions.

Globally, Molecular Products supplies a large number of the world's Navies with products to maintain a breathable atmosphere in submarines, by removing carbon dioxide and generating oxygen. Oxygen production is achieved by a full range of oxygen generators which are stored on submarines for use during



ROG - Rugged Oxygen Generator

maintenance of the central oxygen generation system or when additional oxygen is required.

Molecular Products' life support technologies extend into CBRN filtration, with the manufacture of leading edge adsorbents for the removal of airborne contaminants, including TICs and TIMs, for both personal and collective protective equipment.

The latest product to be launched by Molecular Products is an innovative new portable, rugged oxygen generator - the ROG. The ROG is an emergency medical grade O₂ supply for treatment of casualties at the point of injury. Un-pressurised and non-explosive, the ROG is designed for pre-hospital care in demanding environments.

Other key products areas and markets are: carbon dioxide absorbers for anaesthesia machines in healthcare; CO₂ scrubber material for commercial and recreational diving; carbon dioxide and carbon monoxide absorbers for mining and industrial safety.

Molecular Products is a privately owned business with direct subsidiaries in Europe, North America and Asia. Founded in 1924, the company has shown consistent growth through acquisitions and on-going investment in research and development. A highly skilled work force liaising closely with customers around the world has

helped establish Molecular Products as a global leader in its field.

ROG - Rugged Oxygen Generator

The ROG is an innovative medical oxygen generator designed for medevac via air, sea and ground-based medical support teams.

- Delivers medical grade O₂
- Unpressurised and non-explosive
- Portable and lightweight
- Resistant to extremes of temperature
- No maintenance, electricity, mixing or filling
- Live fire, shock and drop tested
- Rugged in design to withstand demanding operational rescue environments
- Cool Touch technology

The ROG is a rugged oxygen generator that gives immediate access to a lifesaving oxygen supply. Designed for pre-hospital casualty care in demanding environments, the ROG is an innovative development in medical technology that will help increase survivability of defence and security forces.

In austere environments, the ROG enables patients to be oxygenated at the point of injury via a safe, reliable and non-explosive source. Small and light enough to be carried in a medical bag, the ROG does not require any maintenance, electricity, mixing or filling. Rugged in design, the ROG is

portable, strong, durable and able to withstand robust use in rough terrain or confined spaces.

Unlike compressed medical oxygen cylinders, the ROG can be exposed to extremes of temperatures, operated in any orientation and has an extensive shelf life.

Activated Carbon Adsorbents

Molecular Products' Chemsorb line of products is an outstanding choice for many critical filtration applications requiring activated carbon filtration media including:

- NIOSH or EN qualified respirator cartridges
- CBRN protection
- Collective protection equipment
- General air filtration
- Toxic Industrial Chemical and Toxic Industrial Material (TIC and TIM) filtration
- Organic vapour, acid gas and amine removal
- Ammonia filtration
- Formaldehyde gas removal, mercury removal
- Non-woven activated carbon filter manufacture

Molecular Products manufactures highly efficient adsorbents for most gases that are not readily adsorbed by un-impregnated activated carbon. The



proprietary reagents used to impregnate these high activity carbons have shown superior results for the adsorption of specific airborne contaminants.

For acid gases such as sulphur dioxide, chlorine, and hydrogen sulphide, Chemsorb 1202 is unsurpassed in performance and safety of use. Chemsorb 620 and Chemsorb 1425 are designed for removal of ammonia and organic amines. For formaldehyde removal, Chemsorb 1505 is the most effective adsorbent on the market today. Molecular Products can also develop and manufacture impregnated carbons to fit custom specifications.

MPOG (Multi-Purpose Oxygen Generators)

The MPOG (Multi-Purpose Oxygen Generator) and EO2-30 provide a safe supply of oxygen for critical life support and revitalisation in submarines and safe havens.

Both the MilSpec MPOG and EO2-30:

- use a phosphorous match initiator mechanism that is both easy to use and easy to source
- are in service with NATO navies across the globe
- have a 10 year shelf life with no maintenance requirements
- have been shock and vibration tested to meet the requirements of a submarine environment
- are safer compared to pressurised and liquid oxygen systems
- give 380 litres of breathable oxygen per litre of storage space
- can be deployed in less than a minute

The MilSpec MPOG and EO2-30 use sodium chlorate technology to safely provide >98% purity. As a method of storing oxygen, sodium chlorate is roughly eight times more efficient than compressed air and twice as efficient as compressed oxygen.

Dive Grade Carbon Dioxide Absorbent

Military diving and submarine grade Sofnolime is a carbon dioxide absorbent, optimised for the removal of carbon dioxide from rebreathable gas in diving absorbers and submarines.

Dive grade scrubber material ensuring a safe, breathable air supply is maintained in closed circuit systems. It is optimised for the removal of carbon dioxide from recirculated air / nitrox / trimix in rebreathers and saturation dive systems.

Specific benefits to the diver include:

- High intrinsic carbon dioxide capacity
- Low dust formation
- Optimum performance contributing to a safer, longer dive

Three grades are available: D, L and S. The main differences between the three grades are particle size, shape, moisture content and testing regime. These grades also have differing absorption characteristics under various environmental conditions.

Hi-Cap Absorber

The Hi-Cap is a large scale absorber with proven capabilities for CO₂ and CO absorption in life critical applications such as submarines.

The absorber design provides the increased use efficiency intrinsic to the larger scale absorber unit. It also provides a package that is easily handled and stores efficiently for long periods of time without degradation of performance or requiring any maintenance. The materials used are all long term compatible with the absorber.

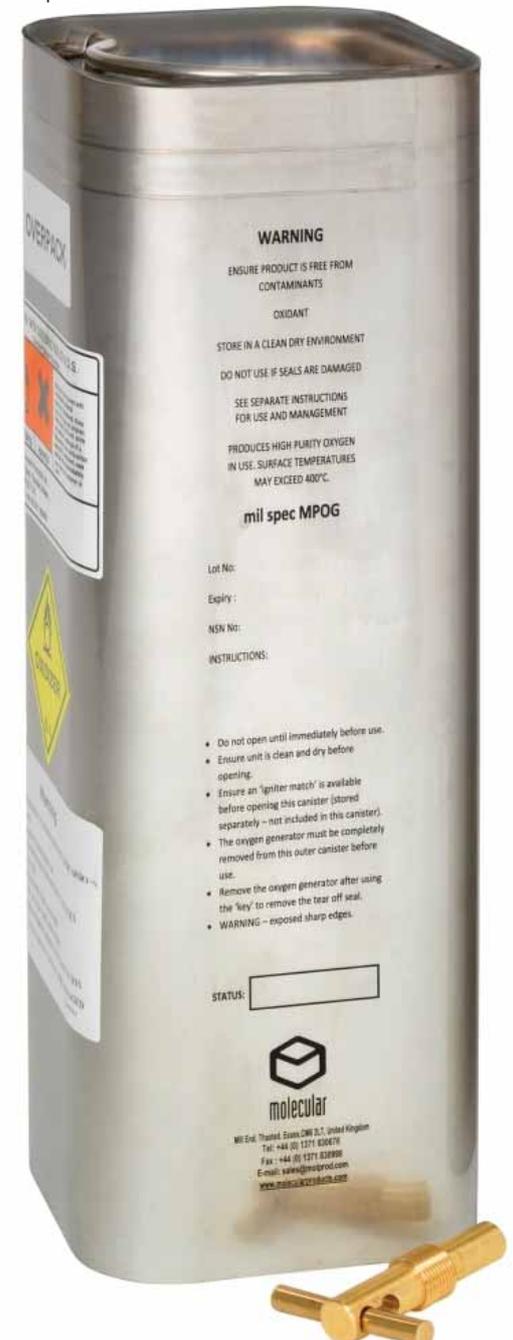
The weight of the unit is designed to be within the handling capability of the target users. The units are built of high grade polypropylene plastics that do not contain additives likely to give rise to highly toxic fumes associated with some inhibited materials. The units are sealed with a clip top and bottom, to ensure long storage life protection from environmental contamination as well as keeping the contents fresh.

CASPA (Carbon Dioxide Self Powered Absorber)

The CASPA (Carbon Dioxide Self Powered Absorber) is a self-contained carbon



dioxide absorption unit intended for the removal of respired CO₂ in a confined space. The unit combines hi-tech battery and fan components with a carefully designed, volumetrically efficient, CO₂ absorption material. The units are supplied with removable seals to ensure storage life in survival chambers. No annual maintenance or service interventions are required.



MPOG - Multi-Purpose Oxygen Generator

SME Consortium proves Dynamic Battlefield Interoperability Solution for UK MoD

BACKGROUND

The Centre for Defence Enterprise (CDE) is the enabler for anyone with a disruptive technology, new process or innovation that has a potential defence application, and funds research from a broad range of science and technology providers to enable development of cost-effective capability advantage for UK Armed Forces.

CDE awarded a contract to a consortium led by 2iC in November 2012 to deliver a proof-of-concept demonstration for a **Cross Domain TacSB®**.

THE PARTNERS

2iC – Interoperability Software for disparate systems in challenging environments.

NEXOR – Secure Information Exchange expertise, following CESG good practice advice.

Dytecna – Innovative, agile engineering solutions.

THE OPERATIONAL REQUIREMENT

- To allow coordination of two independent Systems in two separate domains.
- To provide interoperability between these Systems without the need to know how the other system works.
- To allow rapid updating of interoperability, without compromising security.

HOW WE ACHIEVED IT

The team used 2iC's DOP (Decentralised Operating Procedure) approach to Define procedures, Nominate connections and Run the interconnections between systems.

Using the Lean Services open standard, Dytecna rapidly integrated their in-theatre ECM system with the **Cross Domain TacSB®**.

NEXOR Guardian is used as part of **Cross Domain TacSB®** to control the transfer of data between Trusted and Untrusted networks, ensuring deep inspection and validation of data, and full conformance to CESG design practices.

EXAMPLE APPLICATIONS

On-board Vehicles

Interlink ECM (Secret) to GVA (Restricted).



Fire Threat Warnings

Share data between members' assets
For example – Vehicle-to-vehicle.



Anti Piracy Task Requests

For example – UK Naval vessel issuing instruction to Russian Naval vessel.



THE SOLUTION

The solution was created for lab purposes through CDE, and demonstrated to UK MoD in March 2013. It can run on low powered, small footprint equipment, so can be easily deployed into practically any military environment.

FEATURES & BENEFITS

Key Features

- Coordination of behaviour between systems in separate domains.
- Secure Interoperability where neither system knows the other.
- Rapid, secure updating.

Key Benefits

- Increase Capability:
 - Rapid updating in field.
 - More systems can be deployed at Restricted, saving money.
 - True coalition interoperability for the first time.
- Weight savings:
 - As systems can be shared between assets.
 - Allows additional equipment / personnel / ammunition to be carried.
 - Fuel savings, more manoeuvrable vehicles.
- Cost savings:
 - Fewer deployed systems as they can be shared.
 - Assets can be engineered for lower payload.

Competing Concerns

Cuts to funding are an unavoidable reality which makes it harder for the army to design its capability plan and for procurers to fulfil it. The impact on the defence industry is profound - reduced funding means that there is less business with the obvious consequences of redundancies, closure of facilities and loss of capability. The defence customer should be concerned and act in a way to mitigate the risk to its supply base and ultimately itself. Sadly it is taking the wrong approach.

Procurement of land equipment during the recent years of Urgent Operational Requirement (UOR) programmes has been a relatively simple affair and delivered much needed capability, quickly and with little fuss. At the peak of conflict, the need to supply battle winning equipment and save soldiers' lives focused the collective mind but the factors have changed and a new era awaits. Money is now tight, there is less certainty about the requirement, the MOD is in a period of deep change and, as a result, the competing interests of individuals and specific groups are increasing relative to the common interests of the department.

The impact on procurement is destructive and the army needs to find a way for purpose to trump politics and process or the consequences for the army and industrial base will be dramatic, damaging and enduring. The solution is to cut waste and this requires more effective capability planning, more efficient procurement and a leaner more agile industrial base. It sounds simple but it isn't easily achieved. Planning starts at the top and the army is now responsible for managing its own capability - it must own the business case and in doing so hold the procurers to account. The future status of DE&S might be capturing the headlines but this is actually a second order issue to the effectiveness of its customer.

In the absence of clear direction, DE&S is struggling to act decisively over big decisions: UORs into core; the sale of DSG; disposal of legacy clutter; management of the reverse

supply chain; and the delivery of planned procurements. Whilst stakeholder interests all matter in making these decisions, it is the army that will realise the benefits or risk and it is thus down to the army to set the agenda and direction. Only when this is done can DE&S have a fighting chance of delivering value for money from the industrial base.

Delivery of value for money is in the interest of all parties: the army must maximise its capability output in return for its equipment budget; DE&S should aim to deliver equipment and services to the army at maximum efficiency; and industry certainly wishes to invest in those capabilities that deliver enduring value for defence. If the direction from the top is unclear or flawed then value is impossible to assess and one magnitude of expenditure relative to another has little meaning.

Scrutineers demand evidence and the path of least resistance for the procurers is competition but its unintelligent application wastes the time and money of all concerned. During the UOR years, procurement was characterised by timely decisions, single source contracts with those best placed to deliver and a spirit of partnering. The result has been the re-equipping of the army in 6 years whilst, over the same period, the equipment plan has delivered little. Given this evidence one might rightly conclude that the process (or perhaps more accurately) the interpretation of it is flawed.

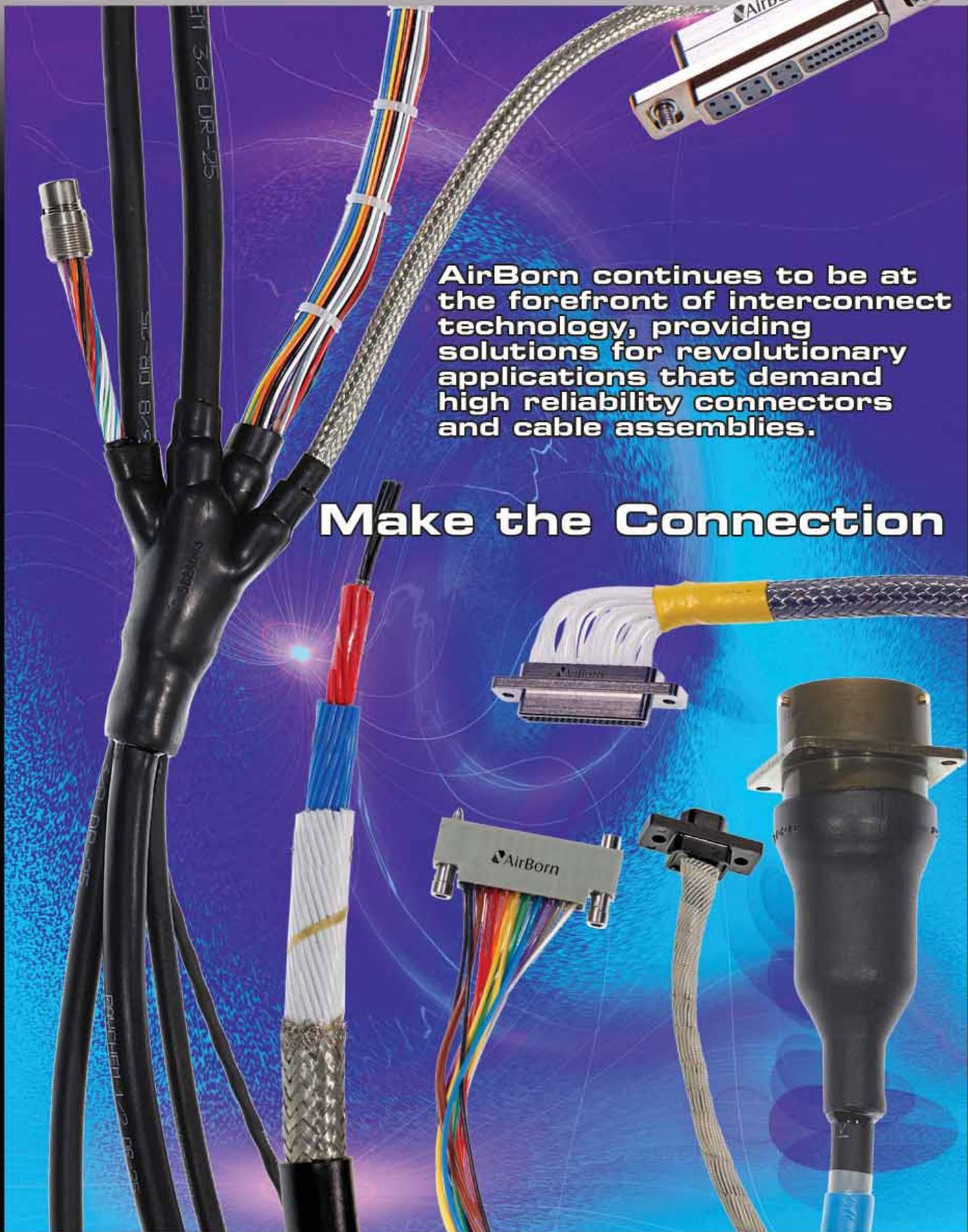
The competitive process takes time - around 6 months for even the most simple of requirements. During this period, the productivity of those involved is nil and the long term benefits of competing to all but the winner are also nil. Whilst the bureaucrat might be satisfied with the outcome, the taxpayer is not - nor for that matter is the businessman or his employees - and nor should be the army. Common sense should supersede competition for contract award, particularly where contract values are limited and/or clear competitive advantage (design authority, niche capability, proven record of

delivery etc) exists. Indeed businesses seek to develop enduring relationships with their suppliers for mutual benefit and the MOD should do the same. Clearly, suppliers should be held to account but formal competition at the earliest opportunity is not the only mechanism for testing the market and the integrity of the invoice.

The process of competition is also flawed. In theory it protects the integrity of those making the judgement but it is these same people who write the rules of the competition and so their prejudices at the time of writing will be manifest in the outcome. If the exam question is incorrectly framed then a successful outcome can be nothing more than fluke. This is not to suggest dishonesty but if there were any, the use of competition would make no difference.

Competition is also clumsy. Time and again, one hears the words - test the market - but what actually happens is that competition tests that ability of a suppliers to answer the questions set. When most of us test the market in everyday life (for a house, car or suit) we enter a dialogue to improve our understanding of our own requirements as well as our understanding the products or services available. This approach is effective because it is iterative and allows us to evaluate and adjust our own assumptions. In an MOD competition on the other hand, the dialogue stops once it is committed to the bulletin and the rules are set, right or wrong (and it is often the latter).

Defence procurement is a tough business that is charged with political, technical and commercial complexity. Clear direction from the ultimate customer is a prerequisite for success and the army must rise to this challenge. Without this, the future status of DE&S is a nugatory debate. Its leadership would do better to focus on encouraging common sense as the principle weapon for its project teams. When combined with the core values of the civil service - loyalty, integrity, objectivity and impartiality - efficiency and value for money are attainable as the UOR years have proved. The recent lurch towards competition as a default setting for almost all contract placement decisions is having the opposite effect. It is acting as a vice-like grip around the throat of common sense and starving industry and the army of the oxygen they need to survive.



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Avon announce the award of two development contracts

Following the acquisition of the business and assets of VR Technology Holdings (“VR”), a market leader in diving rebreather systems and dive computers, in April 2013, Avon is pleased to announce the award of two development contracts:-

- A contract award with Defence Science and Technology Laboratory (DSTL), which develop new technologies for the UK MoD,

for diving rebreather design work.

- A contract award with Oceaneering, a large oil field services and products company, for a new generation of advanced deep-water data loggers.

Commenting, Peter Slabbert, Avon’s Chief Executive said ‘We acquired VR to broaden our reach in the global respiratory protection

market. These contracts together with our own R&D investment in innovative new diving technologies and products will provide increased opportunities for the Group, in particular with navies around the world.’



Technologies for air purification

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Emergency oxygen

CBRN filtration



molecular

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Yanmar provides the power for CTruk's THOR Project

The Special Projects Team at E. P. Barrus Ltd is pleased to be involved with CTruk's THOR (Twin Hulled Offshore Raider) project, a new multi-role force protection craft.

Marine Diesel Inboard Engines

Barrus has supplied twin Yanmar 8LV, 4.46 litre, 370hp (272kW) marine diesel inboard engines to power this impressive and innovative craft. In the Yanmar tradition of high power from low weight, the dry engine weight is just 435kg without the gear box. Additional benefits of this engine include exceptionally low noise levels, reduced

vibration, and ease of installation and servicing. The Special Projects Team has also provided full engineering support including additional 24v alternators to power the control system of the Rolls-Royce Jet Drives and a modified water pump mounting position for improved accessibility.

CTruk's Military and Security Team and their Military Design Advisory Panel (MDAP) are responsible for THOR. The 11m, multi-role vessel has been designed to fulfil a number of roles, including force protection of the amphibious sea lanes, casualty extraction from a beach, carrying and deploying a pre-landing force, riverine patrol, protection of harbours and offshore installations, unmanned surface vessel operations (for protection and mine countermeasures) and disaster relief. THOR is a high-speed vessel

suitable for sustained operations over long distances and time periods.

"Our long, and successful relationship with the UK MOD, was a key factor in our selection by CTruk to work on the THOR project. The Yanmar 8LV also offers the highest power to weight ratio in its class contributing to CTruk's design requirement to reduce the overall vessel weight resulting in greater payload, range and speed, commented Mark Coleman, General Manager Special Products and R&D Divisions, E. P. Barrus Ltd.



Cobham Antenna Systems,
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Antenna Design and Manufacture
Defence and Security

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Microwave Antennas

Air and Ground

Tactical Communication Systems



Applications include:

- Ground to Air, Air to Ground
- Unmanned Air and Ground Vehicles
- Common Data Link, Link16
- Ground Control Centre, COFDM
- Airborne Surveillance
- EW, IED Countermeasures
- DAS, PMR, Tetra

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Cummins announced ISBe 6.7 with new 360 HP (268 kW) rating at DSEi 2013

Cummins Inc. (NYSE: CMI) announced the new ISBe 6.7 diesel engine with an improved rating of 360 hp (268 kW) at DSEi 2013, providing increased power to complex heavier vehicles. Modelled on the latest ISBe 6.7 motor, engineers at the Darlington Pilot Centre, UK, worked on a two year project to re-engineer this advanced engine to provide 360 hp (268 kW), delivering an additional 60 hp (44kW) over the standard design, for non emissionised military use.

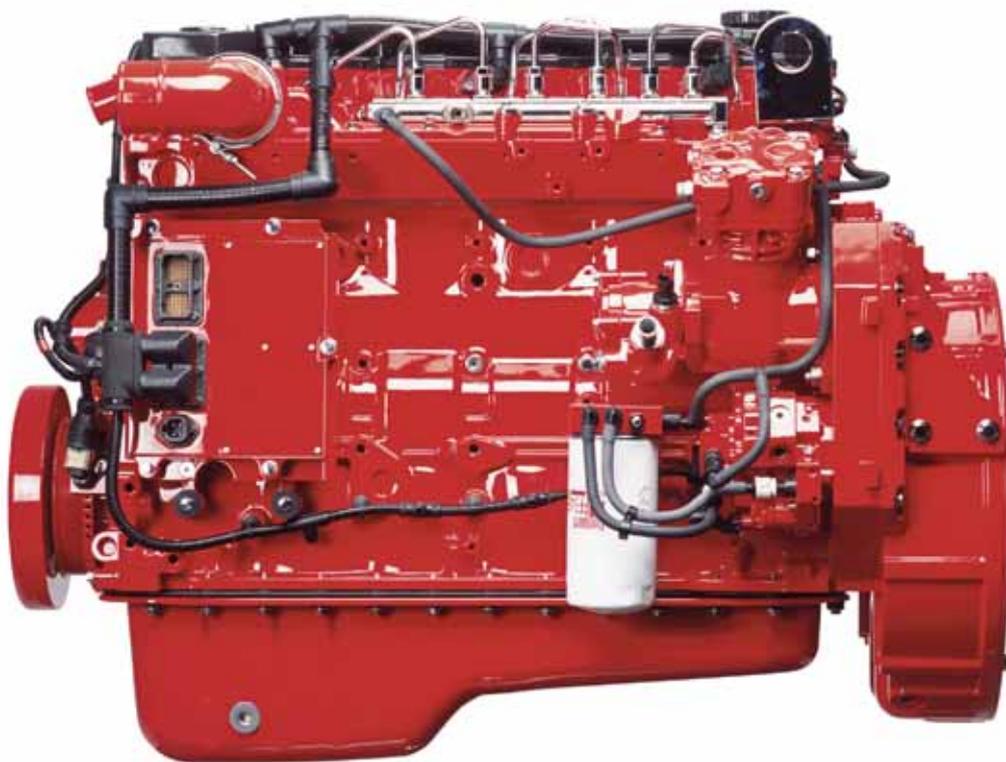
The ISBe 6.7 360 hp enables advanced logistics vehicles which are frequently more and more 'tech' heavy to have the power to perform in theatre, and able to climb steep inclines at high altitude whilst maintaining power. The size of the engine has not increased and neither has the weight, allowing

for an excellent improvement in power-to-weight ratio compared to other engines in its class,' says Dave Hurley, Defence Marketing Manager. With an impressive 811 lb-ft max. torque (1100 Nm) the ISBe 6.7 360 hp provides an ideal solution for any armoured personnel carrier, fast response or amphibious vehicle.

The engine was initially developed with BAE Systems Land Systems South Africa for the RG31 Mk 6, a 4x4 armoured and mine protected vehicle. With a V-shaped hull, the vehicle allows for excellent levels of protection. Capable of speeds of up to 60 mph (96 kph) on open roads, and 25 mph (40 kph) off-road, the RG31 allows for fast response when it is needed most. The ability to climb steep inclines of up to 60% and maintaining speed in rough terrain is of key importance in this application.

The Cummins B series engine family is well known for its reliability, with over 30,000 engines of this class running in defence applications across the world. The ISBe 6.7 360 hp was derived from a durable and experienced platform, which is used for multiple purposes every day.

Maintaining the same size and characteristics the newly rated engine is easy to maintain for those currently running Cummins powered fleets. With the envelope size unchanged there was also the possibility to remove any existing B series engine and re-power vehicles with the higher rated product. The ISBe 6.7 360 hp is available for use anywhere in the world where the military has exemption to emissions regulations or in non emissionised regions.



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“In international transactions involving maintenance of aircrafts and helicopters, back office and preparation are everything”

In a recent transaction, SAI has been confronted with a technical and logistical task : an overseas customer had ordered from SAI two freshly overhauled Mi-24 helicopters. SAI has selected two suitable helicopters in the Far East, purchased them, sent them via air cargo to Eastern Europe for full overhaul (including an upgrade of the avionics). The completed aircraft were delivered via airfreight to the customer and training was arranged for maintenance crew and pilots at final destination. This operation required SAI to deal with several countries for the purchase, shipment, overflight, maintenance and final delivery. Below is information showing how the job has been done.

Choice and Purchase of two suitable Mi-24 helicopters

SAI has a wide range of fully trained and experienced engineers able to conduct full, pre-purchase inspections on many types of aircrafts and helicopters, from both western and Russian origin. After a complete study of all the Mi-24 helicopters available for sale, SAI sent it's team of inspectors to the Far East. A complete pre-purchase inspection was completed in order to assess the readiness of the helicopters for a complete overhaul. This included structural inspection, engine inspections and checks, sub-systems and "aggregates" inspections and tests, and documentation (passports) inspection. After the inspections declared the helicopters suitable for overhaul, a sales contract was drafted between the seller and SAI. Export procedures were fully complied with and both helicopters were purchased by SAI and prepared for the 11 hours flight to the maintenance facility.

Shipment of the two Mi-24s helicopters to Eastern Europe

SAI has selected a reliable cargo airline flying Il-76 from the Far East to Eastern Europe. Both Mi-24s have been dismantled by a crew of SAI engineers and loaded into the Il-76. Shipment was secured, paid for and properly

insured. All over-flight authorizations were sought well in advance and properly granted in due time. The two Mi-24s were delivered to the maintenance company in Eastern Europe and temporarily imported for the duration of the maintenance, repair and overhaul work.

Overhaul of the two Mi-24 helicopters

The maintenance company was carefully chosen via a complex bench-mark procedure:

- Authorizations from the original manufacturer of the helicopters (Mil Bureau in this case)
- Authorizations from the original manufacturers of the engines and various aggregates
- Recent experience on a similar work
- Adequate manpower resources
- Valid ISO certification
- Price of the work.

In order to ensure a proper follow-up of the maintenance work SAI left two engineers at the maintenance company premises for the entire duration of the work. The engineers have filled the liaison role between the maintenance company, SAI and the final end-user. This gave a reactive quality to the whole operation and the final end-user was informed in real time of the progress of the



work during the whole duration of the overhaul. The helicopters have received new or zero time overhauled equipment:

- New blades (on both main and tail rotors)
- Overhauled main gearbox
- Overhauled engines
- New interior
- Upgraded avionics
- Paint as per customer's choice

At the end of the work all systems were fully checked and tested, and necessary test flights performed, with maintenance company test pilots along with SAI flight test engineers. Both helicopters have received final approval and release and were handed over to SAI.

Shipment of both helicopters to final end user location

After the final re-export of the two helicopters was granted by the concerned authorities, the last shipment leg between the maintenance facility and the end-user country was performed. At this time only one Mi-24 was loaded in each Il-76 in order to facilitate the delivery procedures. Upon arrival at final destination, the main rotor blades were fitted, all necessary checks and balance were done and both helicopters were successfully flight tested before being handed over to the final end-user, in budget, and on time.

If you should like to know how SAI can assist you in such complex transaction feel free to contact us.



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ABOVE AND BEYOND



Peli Products presents its wide range of Shipping and Storage Protection Solutions for the military market



For the 8th year the company will be present at Milipol and exhibit its wide range of products

Peli Products, the global leader in design and manufacturing of high-performance case solutions presents its latest high-performance shipping and storage solutions for military environments at Milipol, the international trade show for all security sectors from state security to civil protection.



Peli-Hardigg™ Rackmount Cases

Superior shipping and storage protection for IT equipment and electronics.

The Peli-Hardigg™ Rackmount Cases can take repeated drops, blows and soakings while protecting professional IT equipment and electronics. The range includes four options to fit to every shipping and protection requirement. These consist of the Classic Rack, for ultimate protection, the SuperMAC that offers removable rack option and both MAC Rack and ProRack for a smaller footprint.

All Peli-Hardigg™ Rackmount Cases boast rugged rotomoulded exterior shells that offer optimal protection even in the harshest environment and withstand all kinds of abuse, from repeated drops, blows, to water immersion.

The Peli-Hardigg™ Rackmount Cases form part of the wider Peli-Hardigg™ range of

products, well known by professionals around the globe for their toughness. They offer smart protection solutions for commercial, industrial and military users. Their innovative design process and rigorous testing methods have resulted in superior patented advancements that ensure that vital, sensitive and expensive IT equipment and electronics remain protected, even in the toughest conditions.

Peli ProGear range: 35 years of experience and technology development applied to consumer equipment.

Building on its legendary professional protection technology Peli also provides unbeatable protection for consumer electronic devices with its ProGear range of products, conceived for professionals who work under extreme conditions, including:

- Protection for mobile phones
- Backpacks
- HardBack Protector Cases
- Micro Cases
- Coolers
- Lamps

Models such as the Vault for iPhone 5 or i1065 protect smart phones or tablets against rain, dust or snow when working on the outside. Other models like Hardback, Backpacks or Micro Cases protect electronic devices against knocks or falls while transporting them.

The Milipol show takes place from November 19-22 in Paris Nord Villepinte.

The Peli Products booth is located in Hall 5, stand number S045.



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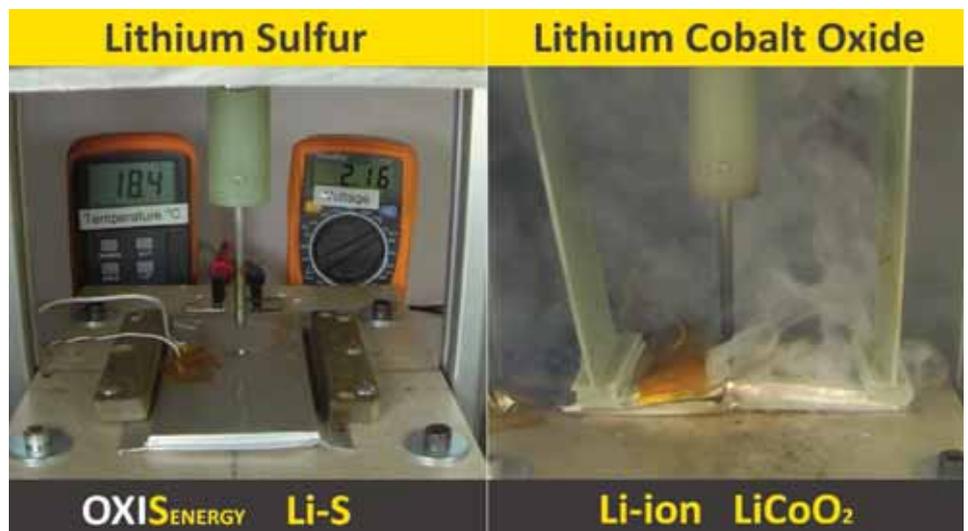
OXiS Energy harnesses an agreement with Steatite that will enhance the Development Of Lithium Sulfur Battery Systems

The agreement combines OXIS's expertise in the development of pioneering cell technology with Steatite's battery pack design and assembly skills. They have agreed to develop lithium sulfur rechargeable battery systems with advanced communications. These systems will be developed for a wide range of applications in the Oceanographic, Defence and Energy industry such as unmanned vehicles, as well as Li-S solar battery storage systems utilising photovoltaic cell technology.

Lithium Sulfur Rechargeable Battery Systems

With interest in the Downhole Oil and Gas industry they will work closely together in identifying suitable partners using OXIS Technology for use in Steatite Battery Systems.

According to OXIS Energy CEO, Huw Hampson-Jones, "We are extremely proud of being at the forefront of developing Lithium Sulfur battery technology but the agreement we have reached with Steatite allows us to combine our strengths in a way that will significantly intensify their further development. Their expertise in Oil & Gas, Transportation and Security will allow us to deploy our Lithium Sulfur cell technology into sectors where safety, lightweight systems and reliable energy performance are key requirements for their customers. We are keen to support the Company in growing its battery systems business in the UK and overseas."



Paul Edwards, Battery Manager at Steatite, commented; "Steatite has established an enviable reputation for building high quality battery packs used in the most demanding applications. Our association with the world's leading lithium cell manufacturers and knowledge of the battery industry will continue to improve with our association with OXIS energy. Lithium Sulfur is a game changing technology offering significant technical and commercial advantages in applications using rechargeable lithium technology. We are delighted to partner OXIS energy at the forefront of this development."

About OXIS Energy Ltd

Since it was founded in 2005, OXIS Energy Ltd has been at the forefront of developing Lithium Sulfur battery technology. It has been involved in the design, development and now the move towards commercial production of Polymer Lithium Sulfur cells for electric vehicles battery systems. It has been granted 50 patents, with 31 pending. OXIS has demonstrable empirical data,

justifying its claim on the inherent safety of its battery technology.

Due to the advanced materials being used, the research being undertaken by OXIS requires significant supplier support. OXIS has set up relationships with world leading companies and universities to ensure that new materials and processes are available during development.

OXIS has signed a licence agreement with GP Batteries, a major world class manufacturer of primary and rechargeable batteries and the largest consumer battery manufacturer in China. Both parties are working together to augment the commercial production of the OXIS technology for use in commercial applications.

Visit the Oxis Lithium-Sulfur Batteries section of the Steatite Batteries website for more information.

STEATITE

A large, dynamic splash of blue water with many bubbles, arching across the top of the page.

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INTERMODAL

Demountable Water Delivery System



WEW is in the final stages of negotiations with the Bundeswehr for the supply of a completely new company-level demountable water delivery system. The modules have recently completed trials at the Bundeswehr's Technical Centre for Automotive and Armoured Vehicles in Trier, Germany.

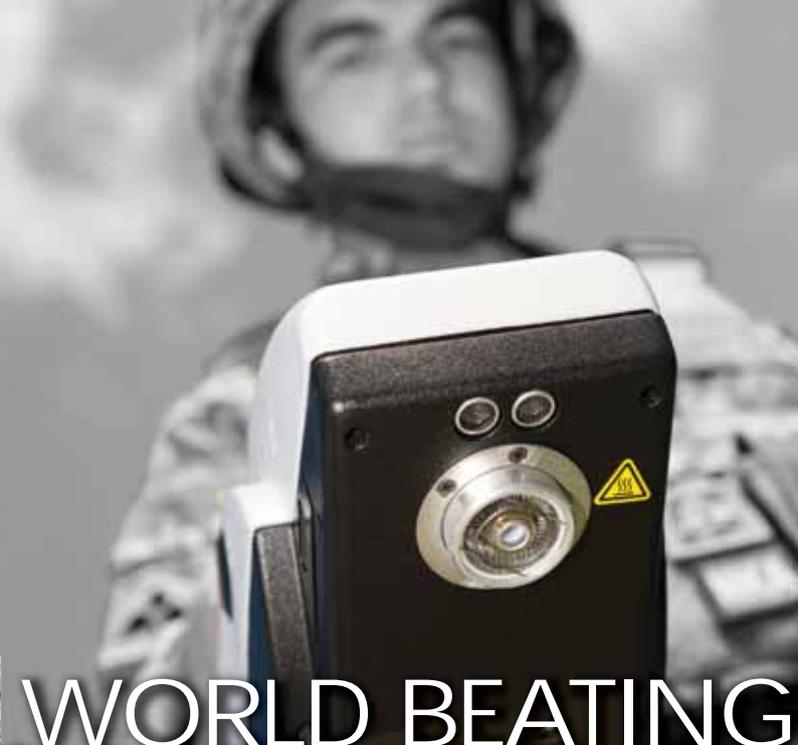
"The new highly mobile, modular systems have been designed to meet the needs of a flexible force needing to deploy its resources rapidly," said Dr. Ulrich Bernhardt, CEO of WEW, adding "These new units have been purpose designed to be flexible, easily transported in both military and civil supply chains and to ensure that the warfighter has potable water wherever he requires it."

The easy to operate water tank modules are a 10' BiCon configuration and suitable for 4X4, 6X6 and protected MRAP Utility vehicles. The stainless steel modules incorporate a full suite of water preservation systems and include a newly designed disinfection system. They can be coupled together to make a TEU (Twenty Foot Equivalent Unit), suitable for civilian and military intermodal supply-chains and can be transported by road, rail or sea.

During the design and development process Schmitz Cargobull, in conjunction with WEW, has produced a purpose-designed trailer, which is able to maintain its stability whilst carrying 2000l / 528 US Gal water modules. As part of the development the modules and

trailer have undergone extensive trials including climatic testing from -32°C to +49°C and have met STANAG 2985, which defines operating environments. The complete units have also been evaluated to determine the stability of the unit at a variety of angles that it might need to travel across during deployment.

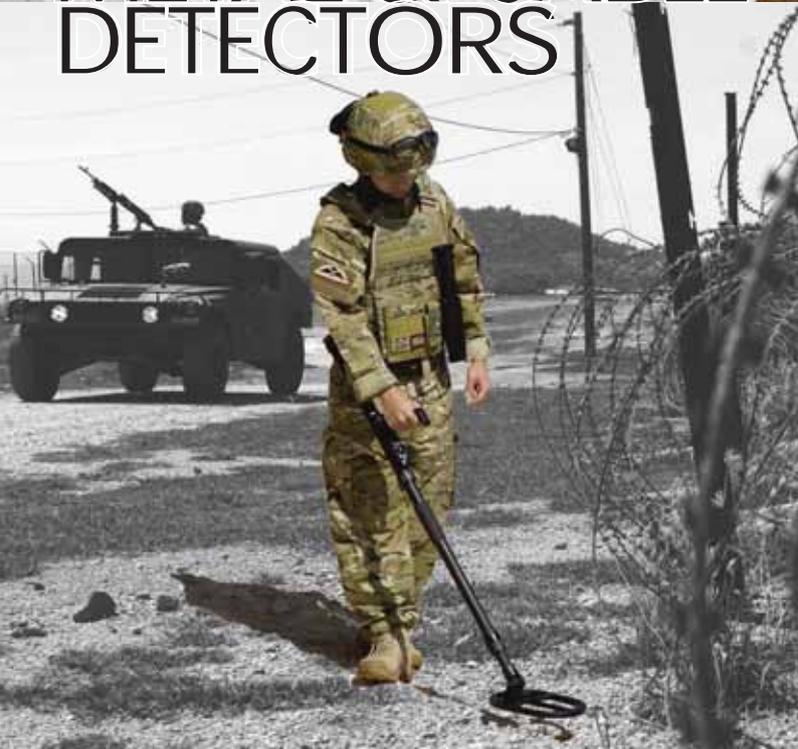




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