



Hydro-Lek Ltd

Press Information

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For immediate release

Hydro-Lek's HyBIS deep ocean sampling and observation system used for gas hydrate sampling in the Arctic.

Wokingham, 15th May 2012 – German marine research centre, Geomar Helmholtz Centre for ocean Research, Kiel, have placed an order for HyBIS, an underwater inspection and sampling vehicle, from UK subsea tooling and manipulator manufacturers, Hydro-Lek Ltd.

HyBIS, a mnemonic for Hydraulic Benthic Interactive Sampler, enables seabed sampling in depths of up to 6000m, together with video instrumentation observation. Highly robust, flexible and inexpensive, HyBIS is designed to operate in conjunction with existing deck handling and cable systems used on extended towed sonar arrays, thereby eliminating the need for additional and costly ROV deck handling equipment. It also enables sonar surveys to be followed up with localised observation and sampling during the same voyage.

The Geomar system will be used later this year in the Svalbard archipelago in the European Arctic to sample gas hydrates and map ecosystems related to this environment. Gas hydrate is a crystalline solid consisting of gas molecules, usually methane, having major implications for environmental change and as a potential future energy resource.

HyBIS measures 1.5m x 1.4m x 1.8m high and comprises two subsea modules: an upper module which houses hydraulic and electric power modules with thrusters, release mechanism, video and lighting, and fibre-optic telemetry for instruments and sensors; and a lower module which houses a detachable sampling grab, automatic closing covers and hydraulic drive cylinders. Hydro-Lek has

used corrosion resistant materials throughout the manufacture of HyBIS and it is designed to withstand the high pressures and harsh environment found at depth. Indeed, the pressure 3 miles deep at the bottom of the Trough is 500 times the normal atmospheric pressure – this is equivalent to the weight of a large family car pushing down on every square inch of the seabed. Electrically-driven thrusters enable the vehicle to be manoeuvred above the seabed under its own power.

HyBIS allows alternative subsea equipment such as manipulators, core samplers, seismic instruments and data logging devices to be fitted efficiently and economically.

In addition to its primary function of sampling and observation, HyBIS has succeeded in recovering a valuable scientific 'lander' where the acoustic release had failed, leaving it marooned deep on the seabed. The potential for HyBIS to recover similar lost equipment in the ocean is far-reaching.

Hydro-Lek is currently developing concepts for tracked subsea crawlers which will enable precise, closer inspection of material in localised deep ocean areas.

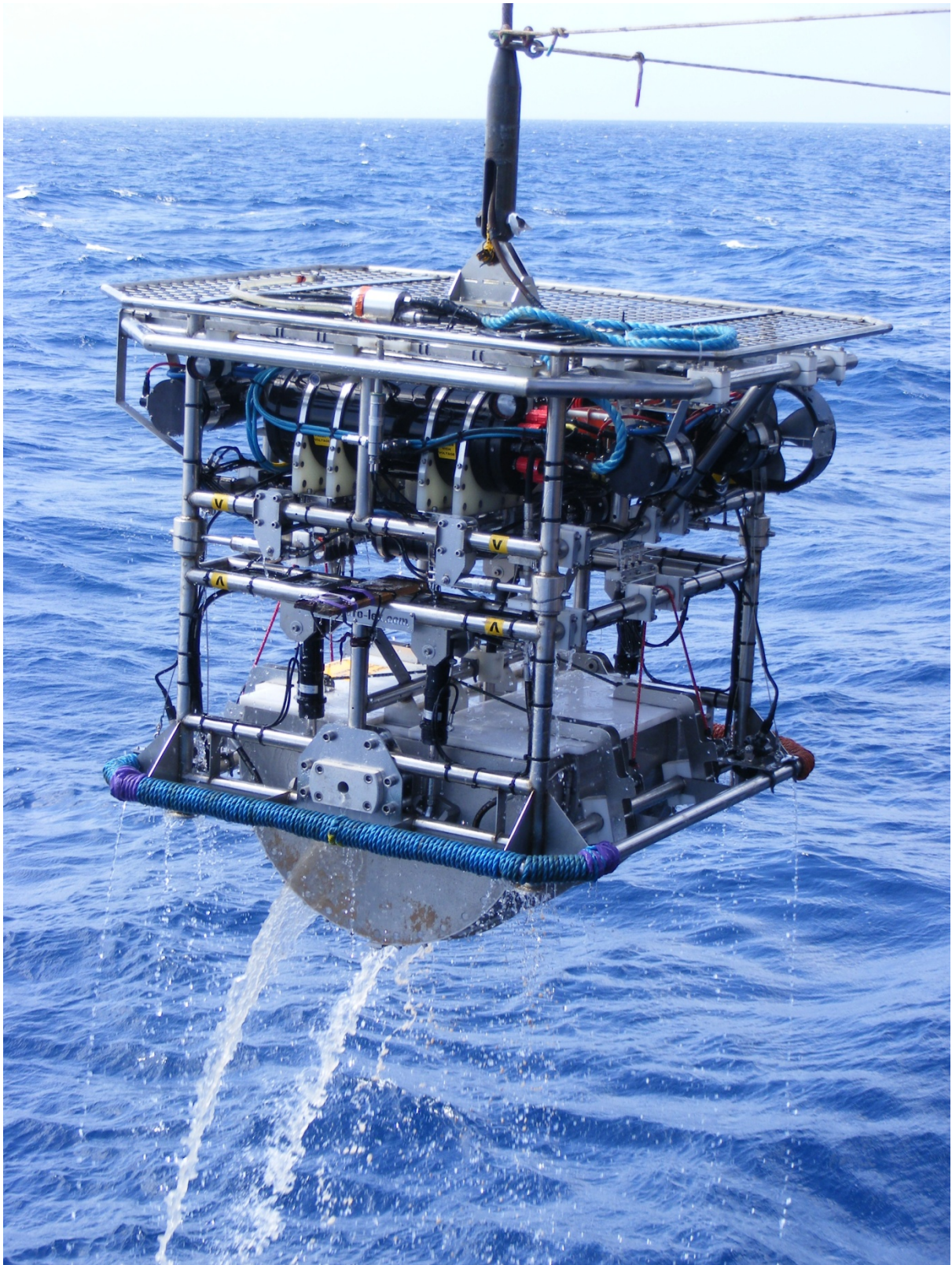
About Hydro-Lek

Hydro-Lek is a leading supplier of remote handling systems for the subsea, nuclear and defence industries. Products range from simple hydraulic components to fully integrated telemetry-controlled remote manipulator systems for integration onto ROV's and remote access platforms. The company employs a team of experienced design engineers to provide a specialist turnkey project engineering and build service from its facilities in Berkshire England. Hydro-Lek's durable lightweight and inexpensive manipulators are currently used worldwide on a wide range of ROVs, AUVs and manned submersibles for different applications.

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HyBIS deep ocean sampling and observation vehicle