

Hydrosweep Onboard Icebreaker Polarstern



Twenty years ago the famous German icebreaker Polarstern was equipped with an Atlas Hydrosweep DS. After a first system upgrade in 1997, Atlas Hydrographic proudly announces a new order for the replacement of the deep-sea multi-beam system by a third generation Atlas Hydrosweep DS.

The *Polarstern* of the Alfred Wegener Institut is the most important tool in Germany's polar research program. Since her commissioning in 1982, the research and supply vessel has completed more than thirty expeditions to the Arctic and Antarctic. Within one year she spends almost 320 days at sea. The double-hulled icebreaker operates under hardest conditions at temperatures as low as -50°C.

It is indispensable that also the research equipment onboard withstands these harsh conditions. The *Polarstern* can break through ice 1.5 metres thick; therefore the transducers are ice-protected. The Atlas Hydrosweep DS has proven its reliability and high quality in any circumstance. As a consequence of this and in order to benefit from the unique features of the third generation Atlas Hydrosweep DS, the Alfred Wegener Institut decided to upgrade the unit.

The scope of supply includes new Atlas Hydrosweep electronics, hardware and software for data acquisition as well as services. Installation and commissioning will be carried out in 2010.

Second half of 2010 the Alfred Wegener Institut can continue upcoming polar expeditions with the newest versions of Atlas Hydrosweep DS and Atlas Parasound parametric sub-bottom profiler. The Atlas Parasound P70 was also handed over for the first time in 1989 and already upgraded to the third generation in 2006.

The third generation Atlas Hydrosweep and parasound share the same electronic components, hardware and software. Hence the customer can reduce the costs for spare parts and maintenance and benefit from synergy effects of the Atlas product family.

Apart from its depth range from 10 to 11,000 metres, the new deep-sea system provides a beam resolution of 2°x2° and improved coverage performance. Modern features of the third generation, as for instance the automatic determination of the mean water sound velocity and water column profiling capability, are now integrated.

All in all the order demonstrates the successful cooperation of the last twenty years and the customer's trust in Atlas technology. Whereas Atlas Hydrographic is proud that the key products Atlas Hydrosweep DS and Atlas Parasound in third generation are represented by one of the most sophisticated polar research vessels in the world.

(Picture in courtesy of Alfred-Wegener-Institut)