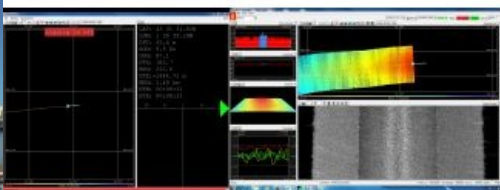


French Bathymetric Survey Vessel Renovated and Refurbished



Located on the western border between Basque Country and Gascony, the harbour of Bayonne belongs to the region Nouvelle-Aquitaine, which is under obligation to provide information to the various harbour operators about the depths in the areas of the harbour. MacArtney France supplied the multibeam solution for the bathymetric survey vessel *Ingénieurs Lesbordes* and is the integrator

of the various steps of modification that were imperative to the successful adaptation of the vessel to the prevailing IHO survey standards.

The bathymetries produced are essential for navigation (permissible draft, obstacles) and dredging operations (decision support, control) and they are also necessary for the hydro-sedimentary knowledge of the river Adour, the various channels of access to the harbour, as well as for the supervision of works and the monitoring of the structures.

Scope of Supply

The Bayonne vessel has been equipped with MacArtney's multibeam solution consisting of a Kongsberg Maritime EM 2040P shallow-water multibeam echo sounder, a [Valeport miniSVS sound velocity sensor](#), an [iXBlue Hydrins](#) inertial navigation system which is a hydrographic survey INS, and a Trimble [SPS 855 GNSS modular receiver](#) combining the radio and GPS receiver in a single housing.

The measures of vessel modification called for overall responsibility on the part of MacArtney France for implementing the following steps:

- cut of the hull, creation of a moonpool and a blister
- creation of a mechanical system for moving up and moving down the multibeam echosounder
- integration of the multibeam echo sounder, the inertial motion unit, the GNSS receiver, and the sound velocity sensor
- modification of the electricity on board and addition of a DC/AC converter
- modification of the interior fittings of the vessel.

The data acquisition conditions in the Nouvelle Aquitaine region are very difficult; the water is very turbid and the variability of the sound velocity, in both space and time is significant. In addition to this, logs are frequently being carried by the Adour river, for which reason the system installed has been manufactured in a heavy-duty design, thus ensuring a sturdy structure. The bathymetric system demonstrates great accuracy of a quality being superior to the requirements made by the IHO.

The vessel now meets the requirements for bathymetric surveying carried out throughout the the harbour of Bayonne as well as on the sediment immersion areas of dredging at the coast or offshore and environmental monitoring areas for dredging.

A very fruitful working relationship was built with the various business partners having been involved in making this project succeed, says David Mazzochi, managing director of MacArtney France. The owners of this modified bathymetric vessel, region Nouvelle Aquitaine, has expressed respect and contentment with the serious and professional workflow presented by our staff during the installation, tests, validation and training.