

CHARTING OF PUERTO PALENQUE

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IHB Note. — Number 19 of the *Kelvin Hughes Marine Review* published a short extract from a report by the Captain of the M/S *Helena* concerning the survey of Puerto Palenque, Dominican Republic. Through the good offices of the Royal Netherlands Steamship Company, the IHB asked the Captain of the *Helena*, or one of its officers, to prepare a short article on this survey, accomplished by methods not generally employed in hydrography.

Puerto Palenque is a small port used solely for the export of raw sugar. It is situated about 22 miles south west of Ciudad Trujillo, Dominican Republic, on the western side of Punta Palenque.

There is no chart plan available for this port, and the information in the Pilot is very limited. After entering the small bay, fringed by reefs on both sides, the ship must drop anchor, swing around and then moor with stern to mooring-buoys. Without local knowledge this can only be done with the assistance of a pilot. Complete reliance on a pilot is not very pleasant, and the Captain therefore decided that soundings should be taken and a sketch of the port made. We then hit on the idea of using our radar for this purpose and we worked out a plan for doing so. The main requirement was an easy but adequate method of communication between ship and boat. This was achieved by using a flag and an anchor-ball.

On the ship the ball meant the following :

hoisted high proceed from the ship;
hoisted halfway keep the same distance;
no ball proceed to the ship.

The flag meant :

hoisted high proceed clockwise;
hoisted halfway proceed anti-clockwise;
no flag take a sounding.

On the boat the ball meant :

hoisted following instructions;
no ball I cannot go any further.

The flag was flown and dipped when a sounding was taken. The boat was followed on the PPI and her movements were directed from the ship. In this manner it was possible to get soundings in a regular pattern. Furthermore the breakers on the reefs were very distinct on the PPI and

by directing the boat along these lines we could verify that the outline of the breakers was also the exact outline of the reefs.

When the boat dipped her flag in answer to our order, the bearing and distance were taken on the radar, which was coupled to the gyro. Afterwards a map was made from the PPI on which the soundings were filled in.

To do this we traced the image of the PPI with the special pencil on the plotting device fitted on the PPI, at the same time inserting a measuring-line on this picture by means of the variable range-ring.

Then this picture was traced on a piece of transparent plastic, from which it was simple to obtain a reproduction on paper. Using a large scale, eventual small distortions are not important for the practical use of such a chart. If desired it is very easy to obtain charts of different scales by using the radar on different ranges.