

ABSTRACT

Method for antenna angular calibration by relative distance measuring

The present invention relates to the angular calibration of passive reception systems such as sonars or active ones such as certain radars whose angular performance is inadequate.

The invention proposes a method making it possible to perform antenna calibration using the detection system associated with this antenna under real operating conditions.

The method according to the invention consists in making an immersed noisemaker deployed along a substantially rectilinear uniform trajectory and a submarine equipped with an antenna to be calibrated along any trajectory whatsoever, but nonrectilinear.

The method according to the invention consists also in implementing a trajectography algorithm making it possible to determine the noisemaker-antenna relative distance at known instants t_i , and to deduce therefrom the trajectory followed by the noisemaker as well as the bearing corresponding to the positions of the noisemaker at the measurement instants. The bearing thus calculated is compared with the bearing measurements carried out directly by the sonar associated with the antenna to be calibrated.

This method applies in particular to the calibration of sonar antennas during their commissioning.

Figure 2



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