

## A STUDY ON THE ERRORS OF REFLECTING INSTRUMENTS

by

P. ALLARD, HYDROGRAPHIC ENGINEER.

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(Review).

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Hydrographic Engineer P. ALLARD published a study on the errors of reflecting instruments; sextants and surveying circles, in which he points out the special importance of adjustments tending to nullify inclination on the plane of the limb, telescope and mirrors normals.

Unlike many writers who have already dealt with this question, he does not calculate the influence of each of these inclinations separately, but takes account of the errors proportional to the products of the two by two parameters measuring them. He also indicates the excentricity corrections as being often greater than the accuracy of observations at sea.

As regards the surveying circle, the measuring error may assume a relatively important value when dealing with great angles. The measuring of these angles is always delicate and inaccurate, it may be erroneous by 4' and more for angles over 90°.

A description and a theoretical study of the optical compass used by the French Hydrographic Office for the verification of reflecting instruments are also given. Some tables show that errors made in measuring with this compass cannot exceed more than few sexagesimal seconds.

As to the error made in excentricity measurements after a very careful adjustment of the reflecting instrument, it may, in the most unfavorable conditions, reach a maximum of 30 sexagesimal seconds.

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