

important harbours, good values for Mean Sea Level are now given herein; which are based upon hourly ordinates of the tide during several years of continuous observation.

The elevation of local bench-marks has usually been assumed as 100.00 feet for convenience, and to avoid negative values. When some general system of levelling for Canada comes to be carried out, the value of these will be much enhanced. Meantime, they are of service locally; and in several instances, they have already been of use in dredging operations, city drainage, bridge works, and for other purposes.

In the information which follows, the tide levels are only given in full for the more important harbours; and the relations between the various datum planes in use, which have been ascertained. At other places, the information is limited, for brevity, to a description of the bench-marks themselves, with references to the Reports of Progress of the Tidal Survey, in which the tide levels will be found more fully given.

*Quebec.*—The low-water datum to which the soundings on the Admiralty chart are reduced, has been recorded by a Bench-mark, which still exists; and the low-water datum itself is thus defined by a note on the chart of Quebec harbour:—"The soundings are reduced to the mean level of Low Water ordinary Spring tides; or 28 feet below a Bench-mark cut in the stonework on the East side of the principal gateway to the Marine and Fisheries department." The tide gauge for Quebec was erected in October, 1893, at the masonry dry dock on the Lévis side; and instrumental levels have been carried over from this Admiralty Bench-mark to the dock by Mr. R. Steckel, of the Department of Public Works. The levels were carried across the river from the Quebec to the Lévis side at Cap Rouge; and a Bench-mark was cut on the dry dock itself on the face of the masonry of the second altar step, on the west side, near the inner end. This Bench-mark is numbered LXXIV. in Mr. Steckel's series. The elevations of the two Bench-marks, referred to his own datum, are as follows:—Admiralty Bench-mark=27.039; Bench-mark No. LXXIV. = 21.616. The elevation of the Bench-mark at the dry dock, above the Admiralty low-water datum, is therefore 22.58 feet; and this affords a direct means at the dry dock itself of reducing the tide levels to the Admiralty datum.

At the dry dock there are two scales of feet cut on the masonry, one outside and the other inside of the dock gate, which are intended