THE HYDROGRAPHERS' TECHNICAL OPEN FORUM

COSTLY SHORTCOMINGS IN NAUTICAL INFORMATION

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IHB Note. — *In placing this article in " The Hydrographers' Technical Open Forum " the IHB wishes to give the author's new and personal ideas on the subject the dissemination they merit — ideas which if applied could lead to considerable progress in the domain of nautical information — as well as possibly to give rise to some fruitful discussions on a problem of primordial interest to navigators, one whose solution necessitates cooperation on an international scale perhaps more than any other. It is to be hoped that many of our readers will give this question their attention and will forward their comments to the IHB for eventual publication in the* Review.

We think, however, that it is necessary to make a clear distinction between nautical information proper — which to be effective must and should be as speedily available as possible — and the up-dating of charts which for many imperative reasons of a technical nature inevitably leads to fairly prolonged delays.

On the other hand, the IHB must emphasize that it does not take responsibility for certain of the author's assertions, particularly the one regarding hydrographic survey parties not reporting until the time of the processing of their survey data any dangers which they may have discovered.

On 29 April 1968, returning from the Persian Gulf to Europe the loaded German tanker *Esso Essen* (in abbreviation, the E.E.) touched a shoal 8 miles West North West of the Cape of Good Hope, and eight of its tanks were holed. The bank it touched was not shown on the ship's charts, but Sailing Directions for this zone indicated that depths are very irregular and thus ships should not steer a course through depths of less than 40 m. As the accompanying sketch shows, the E.E. did not comply with this ins-

truction, and the Hamburg maritime court on this point established that this was the Captain's responsibility.

This responsibility is not the only one involved. The bank that the E.E. knew nothing about had been discovered several weeks earlier. On 13 February 1968 the cargo vessel *Straat Fushima* reported a depth of 46 feet (14 m) in 34°19'15" S — 18°21'45" E, and the South African Hydrographic Office broadcast this information on the same day by the W.U. message No. 248. This message was repeated the next day in the American Hydrolant message No. 308. On 16 February the South African Hydrographic vessel *Haerlem* spent four days carrying out soundings in this area. On 19 February the South African Hydrographic Office received the record of the *Straat Fushima* soundings, and on 21 February it received from the British Hydrographic Department a note from the cargo vessel *Chakla* dated 31 December 1967 reporting less depths than those shown on the chart in this same area.

The block correction of Notice No. 15 in the South African Notice to Mariners, Issue No. 2, dated 29 February 1968, corrected the South African chart No. 4 by showing a new bank whose many summits lie in depths ranging from 44 feet (13.4 m) to 59 feet (18 m).

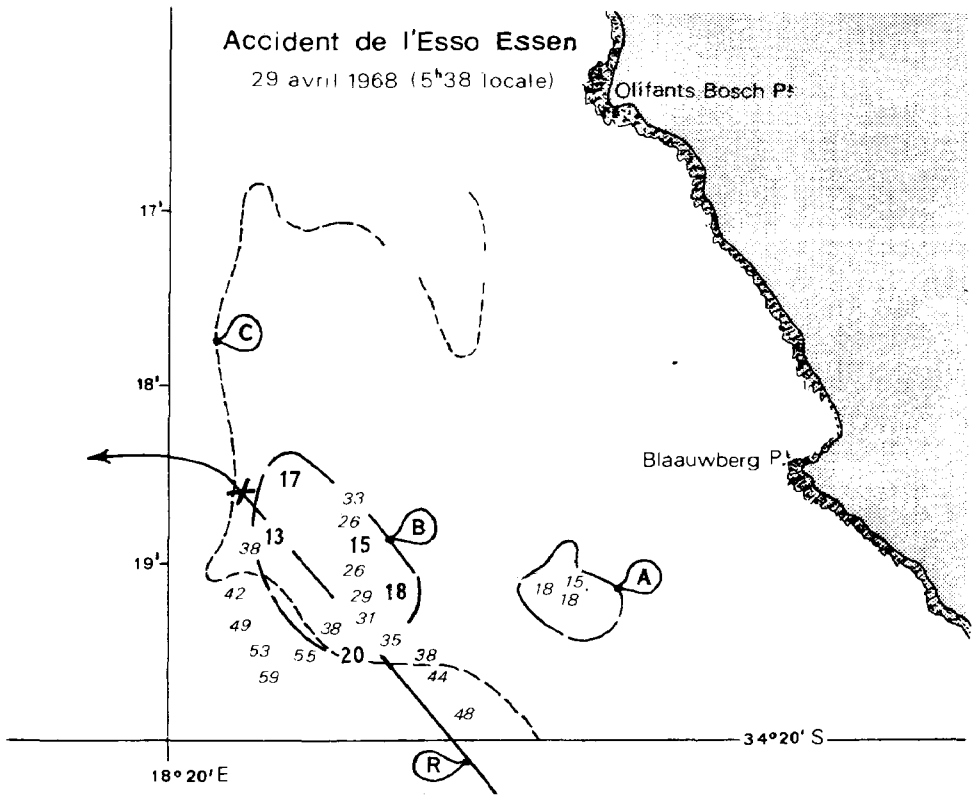

FIG. 1. — *Accident to the Esso Essen.*
29 April 1968 — 0538 local time
Information prior to 1968 : Soundings in light type, Zone A; 40 m contour line, C.
Information provided in February 1968 : Soundings in heavy type, Zone B.
The *Esso Essen*'s track, R; X marks the actual position of the accident.
(Sketch drawn up from the German chart 876 and the German Notice to Mariners 1673 dated 27 April 1968).

The E.E.'s track was straight over this bank. The question is to know why the ship did not receive in good time information which would have shown the danger of this route.

The most startling deficiency is naturally the one concerning information broadcast more than two months before the accident. The Court classed the W.U. messages as " local " and the Hydrolant messages as " global ". It noted that on an earlier voyage the E.E. was in the area that the W.U. messages concerned at the very time when the W.U. Message No. 248 was broadcast, but that no blame could be attached to the ship on this count since the regulations do not specify which stations to keep watch on.

This then is exactly where the most serious shortcoming of nautical information lies. Every maritime nation has its coastal stations that daily broadcast a host of radio navigational warnings, generally speaking of an urgent and temporary character, such as extinguished lights, drifting buoys, ice, etc. The majority of countries and of mariners fancy that it will be enough to receive these broadcasts to ensure navigational safety. The case of the E.E. shows that this is far from so, and that information of a lasting character can fail to have reached those it concerns even several months after the first broadcast.

Ships cannot keep watch on all broadcasts of the countries whose coasts they will pass during the next few months. In order to ensure their navigational safety it is necessary that those of the broadcasts of a lasting nature should be re-broadcast by a network with world coverage. Such stations should be as few in number as possible. The ideal would be to have a single station so that ships should have only one watch to keep.

At the present time there is no network which completely satisfies all these conditions, although there are two, one American the other British, endeavouring to meet them, so that together they deserve the qualification " global ". The former broadcasts Hydrolant messages for the West Atlantic and Hydropac messages for the Pacific. The latter — and the W.U. messages are put out from this network — covers the rest of the world with a whole system of long range stations each of which broadcasts information concerning its own region. The information items of these two networks complement each other. Often, too, there are mutual exchanges of information and of broadcasts.

In structure and in range these networks are satisfactory. What prevents them from giving a complete guarantee is the lack of cooperation shown by many countries who do not notify information that deserves a world-wide radionavigational diffusion. International cooperation, which in matters of printed notices already exists, does not yet exist for radio notices.

Both networks in their present form can, however, render good service. Had the E.E. kept watch on these networks the accident of 29 April 1968 would have been avoided. It is therefore certain that it is in the interests of mariners, of whatever nationality, to listen to the broadcasts of these networks. It would be well to promulgate a recommendation to invite them to do so. It would also be well to increase the efficiency of these networks by obtaining the cooperation of those countries that do not yet provide it. The

two matters would, moreover, be linked for it would be difficult for a country to recommend its mariners to listen to a world network without itself justifying this spirit of cooperation by supplying items of information to this world network.

Even if it systematically keeps watch on the world-wide networks a ship may still be unable to pick up all the necessary broadcasts :

(a) Because the stations are too numerous (there are about a dozen);

(b) Because it does not keep a continuous watch — in particular when at anchor;

(c) Because the broadcasts are not repeated for long (on the 2nd, 5th, 8th and 12th days only).

This is the reason why the texts of world-wide broadcasts are reproduced as printed sheets and airmailed throughout the whole world. Such texts are also reproduced in both the American and the British weekly editions of Notices to Mariners. The E.E. would have had plenty of time to be reached by this means if such had been provided for it. At that time, however, the German Hydrographic Office was not in the habit of assuming this kind of broadcast. It has, however, been doing so since July 1968. This would seem to be the lesson learnt from this accident. In France this diffusion is provided by the Difrap bulletins — a weekly selection of important items of information from both French and foreign sources. (The W.U. 248 was published in a Difrap Bulletin on 20 February 1968). The bulletins are despatched by airmail throughout the world.

It is to be hoped that all countries will take the necessary steps to procure for their mariners within the shortest possible time the printed copies of world-wide broadcasts as well as of providing them with all worthwhile information deserving of a broadcast mention. It is also to be hoped that messages considered worthy of world-wide diffusion will be selected more strictly than they are at present. An excess of diffused matter, although unimportant in theory, is in practice harmful. If it is wished that mariners take an interest in world-wide diffusions, these must in actual fact be interesting — and this is not at present the case since a considerable number of radio messages are esteemed " unimportant " and eliminated from the written diffusion.

Up to now we have seen the reasons why information broadcast over the radio more than two months before the accident had not reached the E.E. What remains to be seen is why the normally diffused written information — the South African Notice No. 15 — was likewise ineffective. In actual fact this notice was not issued until 20 March, and only the American and the British Hydrographic Offices received it by airmail. The German Hydrographic Office received it by ordinary sea mail on 11 April, and made of it a notice which was published in Issue No. 17, dated 27 April. This notice was received on board the E.E. after the accident without, however, any blame being attached to the German Hydrographic Office whose reaction had been particularly speedy. Sixteen days to draft and print a notice based on a block correction — this is surely a record.

By way of comparison we may point out that after receiving W.U. 264, broadcast 29 April, as a result of the E.E.'s accident (in 36 feet — 11 m —

of water in the position 34°18'30" S, 18°20'30" E) the French and British Hydrographic Offices published on 25 May their own notices which were based merely on the W.U.s 248 and 264. They waited until respectively 14 September and 19 October to publish block corrections taken from the South African block correction published on 29 February.

This dilatoriness is inherent in the activity of organizations which have to keep up-to-date a mass of nautical documents, and in particular charts, with scrupulous care and accuracy. it is understandable that this immense and detailed work should take time. But it is less understandable that all items of information should receive the same treatment, independent of their importance.

In fact, the ineffectiveness of nautical information in the case of the E.E. emphasizes the general tendency of Hydrographic Offices to consider diffusion of information to be of secondary importance in relation to keeping their documentation up to date. This tendency is particularly manifest in the periodical issues of Notices to Mariners. Whereas newspapers devote their first page to information as to what is treated in the pages that follow, the periodical issues of Notices to Mariners — whatever the country — have a first page unchanged from one end of the year to the other.

Obviously an end should be put to this anomaly, and on the first page should be given references to the most important items of information which can be Notices as well as reproductions of messages, and can concern radio signals as well as either lights or depths. In this respect the Italian Hydrographic Office sets the example. In the list of contents the titles of important notices are printed in heavy type, and moreover the number is underlined heavily and this underlining is also repeated in the body of the text so that the reader's notice is twice drawn to what should hold his attention.

From the mariners' point of view this is the measure which will lead to the most obvious progress in relation to the present situation. For when the Hydrographic Offices have acquired the habit of emphasizing the importance of items of information it is likely that in their daily work they will give them quite readily a priority in relation to their importance. Thus when a hydrographic survey party discovers a bank, the Hydrographic Office will not first of all apply itself to correcting the chart. It will immediately publish the information " We have discovered a bank ", giving its essential characteristics. The mariner will then receive the information so necessary for his safety within the shortest possible time, and will not suffer as a result of the delay with which detailed information will reach him.

The accident to the E.E. is not the first due to a defect in nautical information. In my article "Towards a progress in nautical information", published in the *International Hydrographic Review* of July 1968, I cited two accidents with the same cause and where the vessels were lost. The accident to the E.E. occurred even before this article appeared — as if to prove that the dangers with which it dealt are far from being illusory. If Hydrographic Offices agree to make improvements in the diffusion of both urgent and normal nautical information they will be providing evidence that the lessons of this new " Torrey Canyon incident " will not have been lost.

The author is grateful to the following :
— The German Authorities, who kindly allowed him to peruse the records of the Hamburg maritime court regarding the accident to the E.E.
— The South African Hydrographic Office, which kindly provided particulars of the development of events falling within the domain of hydrography.
— Captain Le Floch, of the ore carrier *Cetra-Lyra,* who made known the *Esso Essen*'s accident in France.