

## LIFE-SAVING ARRANGEMENTS FOR THE SHIPWRECKED ON THE SOUTH COAST OF ICELAND.

(Paper read before the IVth International Congress for Life-Saving and First Aid held in Copenhagen, June, 1934, by TH. KRABBE, Director of the Icelandic Lighthouse Service, Reykjavik).

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The Director of the Icelandic Lighthouse Service has kindly forwarded to the International Hydrographic Bureau a copy of the memoir presented to the International Congress for Life-Saving held at Copenhagen in June 1934. The following more important passages are extracted therefrom omitting, however, the photographs and the chart which accompany the pamphlet :

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The south-coast of Iceland has, in many respects, peculiar characteristics which present extraordinary dangers to navigation, and in the course of time it has claimed numerous victims. Great stretches, especially in the bay of Medalland, on account of the natural conditions offer no possibility of establishing coast-guards or other life-saving measures of the usual kind. The difficulties do not consist in skerries and rocks, as is the case in many other places; the depth of water is sufficient, but the dangers are partly of the same kind as those characterizing the west-coast of Jutland, only wilder and more violent. These two coasts have many features in common, which is explained by considering the course of their formation. Thousands of years ago, the edge of the enormous ice cap covering Scandinavia during the glacial era, stretched along the west-coast of Jutland. The formations south of the Icelandic glaciers are obviously created by the same powers of nature, but in Iceland they are still at work.

The aspect and the character of these coasts, as far as Iceland is concerned, are distinguished by a very low and flat lowland, varying from a few km in breadth. Long stretches are totally denuded of vegetation and have no habitation or promontories of any kind; they consist of volcanic sand, gravel, lava and ashes. Behind this, the mountains attain considerable heights, covered as they are with the white cupolas of the glaciers, visible in clear weather from a great distance. Consequently, the highlands allure the ships, the lowland being difficult to distinguish, especially when there is a sea on, and before any danger is observed, the ship is in the middle of the surf and gets fixed in the sand, often also under the influence of a strong drift of the current. There is, however, a very pronounced difference, viz. that on the coast of Jutland the ships strike the ridges of sand, whereas off the south-coast of Iceland, ridge-formations exist only in a slight degree. A ship stranding there will always ground on the very coast and quite near the shore. Usually the ship comes to a standstill in the sand, with the bow facing the shore, and in the course of the first day or two she is brought so high up that she stands on dry land at ebb tide, or at least the fore part of the ship does. A stranded ship very seldom breaks to pieces or sinks, at least during the first few days.

Under such circumstances, the crew is naturally disposed to try to get ashore as soon as possible, which is exceedingly dangerous in these parts and has time after time proved disastrous. It has happened repeatedly that, 1, 2 or 3 men from a stranded ship have tried to get ashore by boat or by swimming, but they have practically always perished in the surf or been carried away by the current, whereas those who stayed on board were saved without difficulty in the course of a day or two. It is urgently recommended to stay on board as long as possible and wait for assistance from the nearest inhabited parts, or perhaps — when possible without risk — send a few brave men for instructions, which are now to be found along the shore at short distances.

Sometimes whole crews have succeeded in getting ashore by their own means. But the environment in which such crews find themselves is in many cases so hopeless, that it offers nothing but death by hunger, cold, exhaustion or disappearance in the numerous streams or in the quicksand. Especially the notorious bay of Medalland has very little to offer; behind is the ocean, in front a sandy desert, Skeidarársandur, crossed by innumerable streams and limited on both sides by deep and rapid glacier-torrents and in north by the unsurmountable glacier. At intervals of several — usually 7-10 — years, these stretches are inundated by enormous masses of glacier-water, a so-called "glacier-run", which sweeps everything away in its course, leaving eventually a new

waste, different from the former one, but of exactly the same kind (\*). Such places are, of course, utterly uninhabitable.

A crew, thrown ashore on such a coast is, naturally, in an evil case, with no information at all as to which way to go or what to do. They are most likely to go to the west, towards Reykjavik, not knowing that the rescue is perhaps to be had a few km. to the east.

After a great disaster in these parts in the winter 1903, in which most of the crew of a German trawler perished in the desert, Mr. Ditlev THOMSEN, then German Consul in Reykjavik, went into the matter, in concert with people acquainted with the localities, and the following year he had a shelter erected at Kálfafellsmelar, the only spot on the Skeidarársandur where it was likely to resist a "glacier-run". The shelter was equipped with berths, victuals, medicine, maps and directions, clothing, tools and utensils, so that a crew could keep alive there for a few days and make themselves observed by rockets, fires, etc. In the course of the following winter, another German trawler stranded, not far from the first one and the crew managed to get to the shelter, whence they were fetched within 2 days by the inhabitants.

Owing to the local conditions there was, obviously, very little possibility of erecting more such shelters on the 50 km. long stretch of the coast which is exposed to the "glacier-runs". But in 1911 a movement arose among the trawler-owners of Hull to find more sites suitable for such shelters and, in consequence of an application to the Icelandic Government through the Danish Foreign Office. I was charged with the task of travelling in these regions in the summer 1912 and making some suggestions. The result of my investigations was that it would be possible to erect one more shelter in the bay of Medalland, viz. at Máfabót, at some distance west of Kálfafellsmelar. An international — especially English — offer had been made to provide the necessary means for erecting a shelter and a day-mark, assuming that the Icelandic Government would be willing to take charge of the maintenance.

But another circumstance that caught my attention was that these shelters could only be effective to a very limited extent, viz. exclusively for the ships stranding in their immediate neighbourhood, as they were, as a rule, to be seen only from a fairly short distance. They would be of no use in case of strandings farther away. I therefore proposed to have a row of posts erected all along the dangerous parts of the coast, with indications of the direction in which the shipwrecked should go. They would be particularly useful on either side of all estuaries, where they could be provided with boxes containing (in tight, closed zinc-protectors) maps with indications of the position, and directions in 5 languages as to what to do. This was approved and during the summer 1913, the shelter and the day-mark at Máfabót were erected and all the coast from east of Ingólfshöfði along the bay of Medalland to the estuary of Eldvatn was marked, at the expense of the Icelandic public purse, with indication-posts and boxes containing maps and instructions. Two examples of these instructions are given here, one from an indication-post, the other from a shelter. The distances between the posts vary within 1000 m.

#### EXAMPLES OF INSTRUCTIONS.

##### LIGHTHOUSE-DIRECTION OF ICELAND.

Stay on board the ship while possible, making signs by rockets, fire on the shore or otherwise, until people arrive. Otherwise take the boat, at high water, cross the Skaf-tárós and go along the row of indication-posts to the shelter at Máfabót, about 6 kilometers. The shelter contains clothes, victuals, tools, instruments etc. If the weather-conditions are good, you can also go towards S.W. along the shore, about 2 kilometers to the warehouse and then follow the telephone-wires about 11 kilometers to the farm Seglbúdir.

##### LIGHTHOUSE-DIRECTION OF ICELAND.

Stay in the shelter while possible, making signs by lanterns, rockets, fire or otherwise, until people arrive.

*Water is to be taken in the nearest stream, above the level of the sea.*

(\*) A "run" of this kind occurred in the end of March and the beginning of April 1934 in connection with a great volcanic eruption of the Vatna- and Skeidararjökull. A considerable number of indication-posts were carried away by the water. They will be re-established in the course of this summer, according to the altered conditions on the coast.

At the same time, a smaller shelter was erected at Ingólfshöfði by Consul THOMSEN, which shelter was included in the system. In 1918, the Government took charge of both THOMSEN shelters. The first one at Kálfafellsmelar was rebuilt in 1925 on the same principles as the Máfabót shelter: an iron-covered wooden house, resting on 6 concrete piles, in order to prevent it from being covered with flying sand.

This system immediately proving suitable and essentially satisfactory, the Icelandic Lighthouse Department, which is in charge of these works, has gradually completed and expanded it, and it is to be hoped that within a few years all will be done that may be considered necessary in this respect. In addition to the three shelters, a fourth one has been erected later at Alvidruhamrar. These stations are, with the exception of Ingólfshöfði, where the necessity is less urgent, fully equipped with all that is necessary to a shipwrecked crew.

It will be seen that there is at present a shelter at Ingólfshöfði and a row of indication-posts from there 10 km. to the east. The 45 km. long stretch between Ingólfshöfði and Kálfafellsmelar is protected by indication-posts. At Kálfafellsmelar there is a well equipped shelter and a 12 m. high day-mark. The 15 km. south-west of there to Máfabót are protected with indication-posts, and at Máfabót is the above mentioned shelter and a 17 m. high day-mark. The ground on both sides of Máfabót being relatively passable, a row of posts has been put up to show the way to the nearest farms. On the outside of the deep estuaries limiting Máfabót on either side, boats have been placed so that the shipwrecked can cross the estuaries if necessary. From Máfabót the row of posts continues 18.5 km. towards the southwest, past Eldvatnsós. On this stretch, south of Skaftárós, the National Safety Association of Iceland has recently installed rocket-apparatuses in a warehouse belonging to the co-operative societies. On the following 22.5 km. between Eldvatnsós and Kúðaós, no posts have been put up yet, only 2 day-marks, but the stretch will be marked and a shelter erected as soon as the circumstances allow. East of Kúðaós is a small system of indication-posts, especially in order to prevent people from crossing this very dangerous river and to show the way to the nearest habitation. Just west of Kúðaós, at the lighthouse of Alvidruhamrar, a fully equipped shelter has been erected, with a system of indication-posts from the river. The system does not reach farther west yet, but a protection of all the 30 km. stretch of Myrdalssandur by indication-posts is projected as soon as circumstances allow, with a branch line leading to the farm at Hjörleifshöfði. By these measures, by far the most dangerous part of the south-coast will be covered as well as possible in the conditions, but later on the protection of Breidamerkursandur to the east and Sólheimasandur to the west may come into question, though these stretches are considerably less dangerous.

The superintendence of the shelters and their provisions as well as of the indication-posts is performed by the nearest farmers and proprietors of the shore, by regular visits, setting up posts and altering the given directions according to necessity, the estuaries frequently changing their position and therefore claiming particular attention.

The system has worked in a particularly satisfactory way, having on several occasions provided shipwrecked crews with just the information they needed in order to get on, — as a mate from a stranded ship once expressed to me: Arriving with his crew at the second indication-post and there getting information as to how to act, he felt as if he was getting home!

