

(2.) Harbours Act and Amendments: A consolidating measure with a few minor amendments is being brought down during this session.

(3.) Oil on Navigable Waters Act: This measure is to provide against the indiscriminate casting of oil on navigable waters within the three-miles limit, and is under consideration for this session's programme.

(4.) Inspection of Machinery Act and Amendments: Several amendments of an administrative character are necessary, together with others of importance, and it is hoped to bring down this legislation during the session.

(5.) Fisheries Act and Amendments: A number of matters involving amendments have been investigated, and the necessary legislation is under preparation.

A complete overhaul of the Department is being made as time permits, and improvements are being effected as weaknesses come to light.

The staff generally has exhibited a spirit of willingness and co-operation, and must be congratulated on results achieved. There is, however, still room for further and greater improvement in many directions, and the continued energy of all officers and employees is enjoined to bring the Department to a stage of high efficiency. This goal can and will be reached by a properly directed and concentrated effort.

I now submit a review on the operations for the year of each of the branches of the Department:—

#### MERCANTILE MARINE.

*Inspection and Adjustment of Ship's Compasses.*—The compasses of foreign-going and of home-trade vessels have been adjusted in accordance with the Compass Regulations, and all adjustments that have been performed have been investigated at this office. The adjustments mostly have been performed by licensed adjusters of compasses, and some have been carried out by the masters of vessels in cases where they have been qualified to do so. On the whole, the adjustments have been satisfactorily performed, and the compasses of New Zealand vessels may safely be said to be in the condition which their great importance demands.

It is gratifying to know that in no cases during the year has any vessel been either delayed or restricted in its work owing to its compasses being unsatisfactory.

In some cases the compasses of dredges have required investigation, but this class of vessel, owing to its structure, is necessarily burdened with a mass of superstructure which has its expected effect on the compasses. In such cases artificial compensation is the only existing remedy, but, as these vessels are employed mainly in harbours, the function of their compasses is not important when compared with the function of the compasses of seagoing vessels.

The progress of the gyroscopic compass is closely being watched. Although in use on some European and American vessels, this system of obtaining direction has not yet been installed on any New Zealand vessel. It would appear that for general purposes of navigation it has not yet justified its use in preference to the magnetic compass.

The Department's officers who carry out the duties of Inspectors of Compasses within the Dominion have been alive to the work and have carried out their duties in a very satisfactory manner.

*Nautical Almanac and Tide-tables.*—The "Nautical Almanac and Tide-tables" was published at the usual time. Its restricted number of pages was continued owing to the necessity for economy. The nautical ephemeris, as used for navigational purposes, was given as formerly. Tidal directions for high and low water throughout the year were given for the ports of Auckland, Wellington, Lyttelton, Dunedin, Bluff, and Westport, and the tidal-stream predictions for French Pass and Tory Channel were included. These latter are given as a result of observations taken some years ago, and it will be necessary to repeat the observations during the coming year with a view to greater accuracy in these predictions, as the streams are found to vary somewhat from the predictions.

The latest important information published by the Imperial Board of Trade concerning mariners, and other information affecting the navigation of vessels when relating to this Dominion, has been reproduced.

The publication, the use of which is essential to local navigators and of much use to overseas vessels, continues to be much used.

The information contained, which is kept up to date with information covering the established ports of the Dominion, is also given an added usefulness by the inclusion of as much information as it is possible to obtain of those ports which are in process of development.

For this latter reason particularly, it is much used by overseas vessels, as some of the information contained is unprocureable elsewhere.

*Marine Casualties.*—Marine casualties of magnitude have not occurred during the past year, but the usual number of minor casualties, such as strandings, collisions, fires, &c., continue in evidence.

Regarding the latter, it will be seen that fires in bunker coal appear to be of frequent occurrence, and it would seem that much is to be learnt regarding the best method of preventing this.

On the whole, it would appear that those who have custody of this necessary commodity on board vessels are alive to the necessity for vigilance in the direction of minimizing the risk from fire as much as lies in their power.

Of one case under investigation, of a vessel not registered in New Zealand, it appeared that one of the boundaries of a reserve bunker-coal supply was of wood. This was highly dangerous, and nothing short of a catastrophe could have occurred had this fire taken place in mid-ocean. The wooden boundary seemed to have been unavoidable in this particular vessel under the circumstances.

It would seem that temperatures should frequently be taken with a view to early discovery of abnormal heating. This would involve adequate facilities such as temperature-tubes being fitted to enable this to be done satisfactorily.