

# MODERNIZATION AND CONVERSION OF THE POST-WAR FLEET

BY

CAPTAIN (E) H. C. HOGGER, D.S.C., R.N.

Immediately after the war we were left with a very large fleet of ships of all classes which was, of course, much too big for the envisaged peace time requirements. In addition, many of these ships were in urgent need of repair.

This problem was solved broadly in two ways ; firstly by scrapping all ships for which no further use could be seen ; and secondly by putting a large number of the remainder into reserve. The problem still remained of keeping the ships of the Reserve Fleet in an efficient condition. A long term programme was initiated by which these ships were gradually refitted and then placed in a state of preservation. This programme was a fair way towards completion by the end of 1950.

In the meantime a new situation had arisen. During the immediate postwar period, considerable money and effort had been devoted to research and development. As a result the technical and scientific staffs had evolved new ideas and developed old ones for all branches of naval equipment. Due to the changed international situation it became necessary to ensure that the Fleet was up to date, and to do this it was necessary to put these ideas into a practical form and fit the equipment into the ships.

There was thus a need for a new programme for the modernization of all ships which would be required in a future emergency.

A further point which tended to complicate the issue was that the balance of ships which would be required in a future war was likely to be very different from that in the past. Some of the larger Fleet units were not in such urgent demand and the need was all for more anti-submarine craft and minesweepers. Part of this demand could be met by the programme of new construction which was planned, but part could only be met by the conversion of existing ships from one function to another. In this way a conversion programme was superimposed on the modernization programme, or rather the two had to go forward in parallel.

Now came the big question, how much would this programme cost and how quickly could it be carried out ?

The first step was the drawing up by the naval staff of detailed requirements for each class of ship and the subsequent proposals for meeting these requirements by the design departments concerned, D.N.C., E.-in-C., D.E.E., D.U.W., D.N.O. and D.R.E. The requirements for the modernization and conversion programme were then drawn up by Director of Plans and presented to Director of Dockyards for detailed examination. First of all, it was necessary to find out what this plan entailed. An approximate assessment of the work involved in each case was made, and a figure allocated for the labour cost and time required.

From this it was possible to draw up a table showing the annual requirement in men and money which was needed to carry out the full programme.

Next, it had to be ascertained how much of this work could be carried out with existing resources. To begin with, money was still very scarce and all work had to be carried out in the Royal Dockyards. Moreover it was stipulated that this work must not be done at the expense of repairs to the running Fleet. The only way out, therefore, was to increase as far as possible the amount of dockyard labour which could be devoted to work on ships. All dockyards were strongly urged to reduce overheads to a minimum, while attempts were also made to cut down the amount spent on repairs to Fleet Shore Establishments and other services. Diagrams were then produced which showed the maximum amount of labour which could be devoted to the modernization programme under the most favourable conditions by the Royal Dockyards at home.

This fell far short of the requirements of the naval staff. It was therefore necessary to introduce a system of priorities and recast the whole programme to match the available resources, and also to ensure that the most urgently required ships would be completed first.

It is helpful at this stage to diverge a little and to give a brief outline of the work involved in each class of ship, although, of course, it is not possible to give any details. Aircraft carriers have to be modified to make them capable of operating all the types of aircraft which are planned to come into service. G/E and radio equipment has also to be modernized. Cruisers, destroyers and the various classes of frigate also require modernizing in their gunnery and fire control equipment, radio and A/S weapons. In general, the main machinery of these ships will only get detailed improvements but in most cases additional generating and distilling capacity will be provided.

In addition to the existing frigates there is a great demand for more vessels of the A/S type, and this can only be met by the conversion of some of the older destroyers. This involves a complete reconstruction of all the major features of the ships above the upper deck. For submarines, higher underwater speed is required and a number of vessels are to be converted with this purpose in view ; there are also requirements for modernizing minesweepers, minelayers and the various ships of the Fleet Train.

When it was seen that the total work was too great for the Royal Dockyards it was very difficult to allocate priorities and at the same time produce a balanced programme. The most that could be done was to give preference to certain work (e.g., the A/S frigate conversion) and spread the whole programme over a much longer period. It was essential, of course, that the length of this period should not be too far in excess of the national requirements for defence.

At about this time, early 1951, there occurred a considerable change in the pace of rearmament. More money became available and almost every day the programmes were accelerated. Already everything possible was being done in the Royal Dockyards and it was therefore necessary to allocate part of the work to civilian firms. At first a few jobs were handed out to outside contractors, and then more and more as the pace of rearmament quickened.

There were two limiting factors to be faced. One was the rate at which all the pieces of equipment needed for the modernization or conversion could be made available. Secondly, the programme was being speeded up at a time when a parallel programme of new construction was being developed and accelerated. At the same time the firms all had heavy arrears of commercial work.

Finally, a modernization and conversion programme was evolved which was considered to be the best which could be hoped for if everything went according to plan. It represented a target for the supply of equipment on which departments

could set their sights. It also gave the dockyards and the civilian contractors a definite programme of work for a long time to come, on which they could base their requirements both for men and material.

Even this great programme did not represent the total requirements for modernizing the existing ships and fittings. Certain features of the plan were not considered satisfactory by the naval staff, particularly in connection with A/S weapons. Thus it was necessary to introduce various 'interim' modernization schemes for individual classes of ship, which would give considerable improvement without the complication of the full modernization.

Thus we see that a tremendous amount of thought and hard work is necessary if the whole of the programme is to be satisfactorily carried out. As far as possible it is planned not to interfere with the keeping of the running Fleet in good repair. Its completion, in parallel with the requirements of new construction and the normal maintenance of the Fleet, will represent a triumph of organization and concentrated effort by all concerned.