REFLECTIONS ON SHIP UPKEEP

BY

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INTRODUCTION

Among men, there is a widespread readiness to regard any man as qualified to comment on the most complicated thing in the universe, Man himself; but much more diffidence is displayed over appearing an expert on man made, and therefore relatively simple things, such as engines, electronic computors, or ships. Perhaps, with characteristic human vanity, man demands more from things designed by man. Or is this in truth, not vanity, but humility ?

This article is not concerned with how to get the best out of our ships in respect of the use of their weapons or through their tactical or strategic use, but only with the problem of how best to make them available for these, their proper functions. Even this limited problem is, however, inextricably tangled with the problem of getting the best out of our men. For comment on either field to be authoritative, more experience and study would be needed than I possess, and it is for this reason that the heading ' reflections ' has been used.

The service which a man can give is conditioned by his design, his upbringing, and his upkeep ; the service which a ship, its engine or equipment, can give is conditioned only by its design and upkeep since, unlike the man, it cannot be influenced or persuaded. Only when a ship is serviceable is it 'available ' for its proper function ; and as, decade by decade, we design ships of increasing complexity, so we tend to make them more difficult to keep serviceable and therefore 'available '.

In the reflections which follow, I have tried to probe the questions of whether we design, operate, and look after ships with sufficient regard to getting the maximum use out of them, an end which, together with others, such as fighting them efficiently in action, we are presumably all seeking to serve. It is an end which lies up a long road of endeavour and one which, on the way, is easily and often lost from view.

All the essential principles affecting the upkeep of ships are age-old and, indeed, existed long before ships themselves. But the presentation of a paper on the subject is perhaps justifiable because in the Navy, after a long hibernation, these old principles have been taken out and dusted, and are everywhere being re-applied in ways more suited to modern needs. Some people today call this ' Work Study '.

Although there are some healthy stirrings, it seems a matter for doubt whether, in that part of the problem which is getting the best out of our men, an equal advance is being made. This is also Work Study, but satisfactory progress here seems to come less easily, perhaps because we have given this section less, or too narrow, a study.

SHIPS : THE PROBLEM

Availability

For the purpose of this article, the percentage availability of a ship is taken as being that proportion of her life for which she is available for her proper function. Extended refits, modernizations, or conversions are excluded and

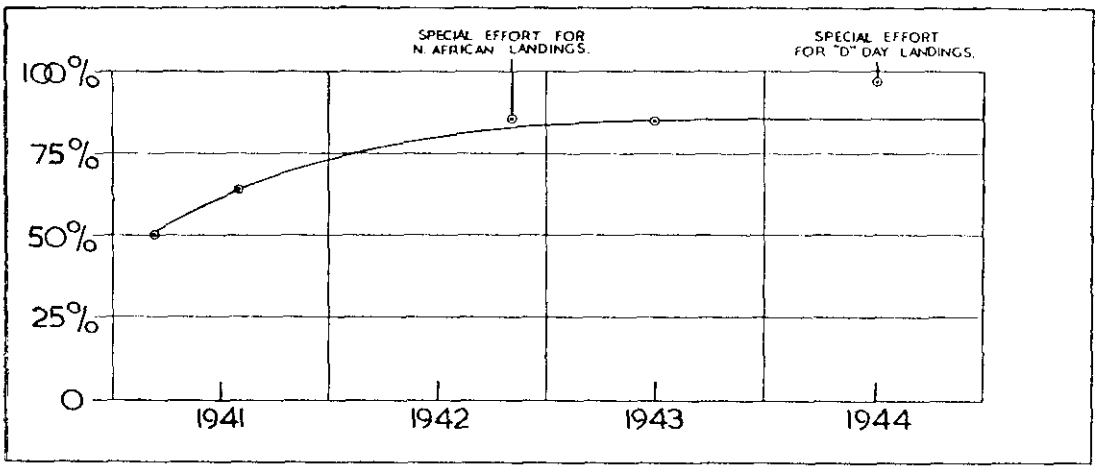

FIG. 1.—PERCENTAGE AVAILABILITY FOR OPERATIONS OF SHIPS ATTACHED TO WESTERN APPROACHES COMMAND. THE NUMBER OF SHIPS ATTACHED WAS ABOUT 180 IN EARLY 1941 AND 280 BY D-DAY

only ordinary refits, self-refits, and self-maintenance periods are counted as non-available time. Periods in reserve are, of course, also excluded.

FIG. 1 shows the performance of the escort vessels attached to Western Approaches in the last war. The vertical scale shows the proportion of the vessels attached which were available for operations. The proportion not available includes those not available from all causes, action or weather damage, or just upkeep. The greatest cause of ships being not available was normal upkeep, and not damage, although it should perhaps be noted that weather damage caused by unnecessary hard driving of ships created a good deal of non-availability, until this malpractice was frowned on. The horizontal scale is a time scale starting at the end of 1940.

I have been unable to find reliable records of the situation during 1940, but I understand from verbal consultation with officers present at the time that about 80 per cent of the ships attached were available for use during the first six months or so of war, but the proportion then declined fairly sharply because of arrears of upkeep, to the point at which this curve starts. By the end of 1942, three years after the war started, a very satisfactory proportion, about 85 per cent of the vessels attached, were always available for operations, but in the intervening years the performance was little short of lamentable. If 85 per cent availability had been achieved eighteen months after the war had started there would have been fifty more escort ships on the seas in mid-1941. It is of melancholy interest to reflect what this would have meant in terms of lives and shipping saved when losses were, at times, as high as half a million tons a month. Fifty escort ships is, in fact, the number we obtained from the U.S.A. in return for bases in the West Indies.

Western Approaches experience illustrates the great advantage of complete serviceability at outbreak of war, which enabled a high availability to be achieved for some months at least. It also indicates that in the pre-war and war years, we were building ships which were capable of achieving 85 per cent availability, once the best methods of organizing their upkeep had been learnt ; *but* this took several years to learn and achieve. Looking now to the future, we may or may not be building ships capable of 85 per cent availability, there are indeed extremely good reasons for doubt, but we can say for certain that it would not take any less years of war to achieve such a high performance, if the lessons once again are not mastered for each new class of ship coming into service in peace.