THE ENGINEERING STAFF OF COMMANDER-IN-CHIEF FLEET

BY

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Introduction

Most members of the Engineering Branch will by now have heard talk of impending changes to the organization and location of the Fleet Engineering Staff. These changes were approved by the Admiralty Board in February 1979 and will be introduced during Summer 1979. This article reviews the history of the Fleet Engineering Staff (FES), describes the present and future organizations, and the reasoning behind the forthcoming changes.

The Fleet Engineering Staff, which includes some 40 officers, 15 FCPOs, 30 CPOs and POs, and 30 junior ratings, is headed by the Chief Staff Officer (Engineering), presently Rear-Admiral D. O'Hara whose primary purpose is to advise and act on behalf of CINCFLEET on engineering matters to maintain and enhance the fighting and seagoing effectiveness of the Fleet.

In order to do this the Staff undertakes a wide variety of tasks ranging from policy matters concerning general engineering standards to detailed tasks concerned with the day-to-day running of ships.

History of the FES and Present Organization

In 1959, the Royal Navy included nine aircraft carriers, a battleship, 16 cruisers, eight depot or repair ships, over 200 ships of frigate size, 62 submarines and over 250 minor war vessels. Their weapons and machinery installations were comparatively simple and both officers and ratings spent much of their Service life at sea dealing with broadly similar equipments. In the case of artificers, a sound craft training was more important than a detailed knowledge of individual equipments. By the early 1960s, the COUNTY Class destroyers and TRIBAL Class frigates were building and a new generation of weapon systems was emerging.

At this time, it became clear that the Engineering Staffs of the local Commanders-in-Chief who administered the ships would not be able to provide the advice and supervision required to support this increasingly complex and diverse equipment. In many cases, the Engineering Administrative Staffs themselves did not have the necessary knowledge and experience of the new equipments to pass on to the ships' staffs. What was needed was a single, specially-selected team of officers and senior ratings, sufficiently large to have a good depth of knowledge of all the new equipments, who could advise and maintain standards throughout the Fleet. Hence in 1963, the Home Fleet Technical Staff was formed by combining the Engineering Staffs of the Port Area Commanders and collocated with the newly formed Ship Maintenance Authority. The new Staff maintained close links with their opposite numbers in the Director General Ships and Director General Weapons Departments which had been set up in 1958.

Some of the key dates around which the Fleet Engineering Staff has evolved are as follows:

1961 CINC Home Fleet Technical Staff moved ashore from H.M.S. *Tyne* to join the Operational Staff already at EASTLANT, Coastal Command HQ at Northwood.

1962 Inspector General Fleet Maintenance (U.K.) set up at Portsmouth.

1963 Home Fleet Technical Staff established at Portsmouth with Deputy CSO(T) and one Commander remaining at Northwood.

1967 CINC Home Fleet became CINC Western Fleet.

1968 Flag Officer Aircraft Carriers became Flag Officer Carriers and Amphibious Ships.

1971 Area Flag Officers and Port Admirals established with Chief Staff Officer (Engineering) and Captains Fleet Maintenance accountable to CINC Western Fleet. CINC Western Fleet became CINC Fleet. Fleet organized into First and Second Flotillas.

1973 Inspector General of Fleet Maintenance post abolished. CINC Fleet assumed responsibility for Fleet Maintenance Groups (FMGs).

1975 Admiralty Board decided Fleet HQ to remain at Northwood.

1979 FOCAS became FOF3. Ship Engineering administration of FOCAS ships transferred to FES. Air engineering remained with FOF3 (Fleet Aviation Authority).

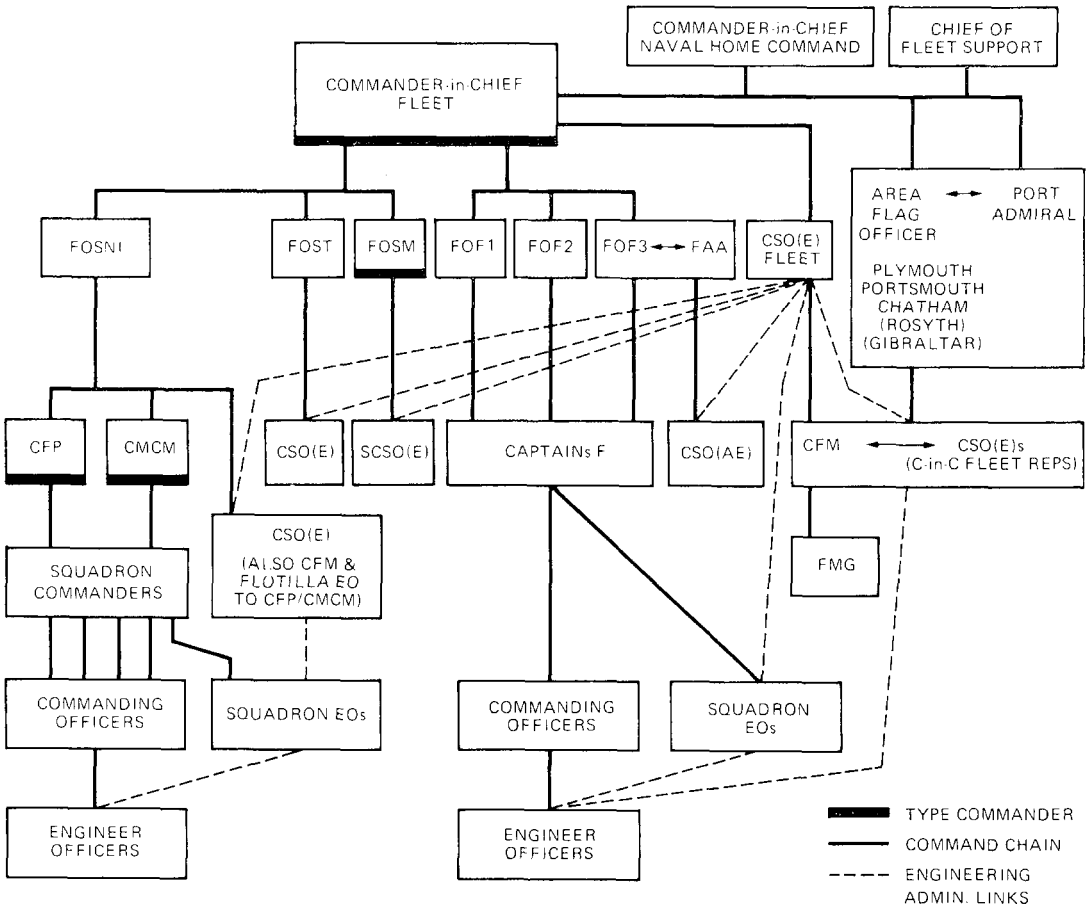

FIG. 1—OVERALL ORGANIZATION FOR ENGINEERING ADMINISTRATION

Note:
Solid line between CFM and CSO (E) Fleet
Captains Fleet Maintenance are at present directly accountable to C.-in-C. Fleet for the work of the Fleet Maintenance Groups. This is being reviewed and it is expected that CFMs will shortly be made accountable to C.-in-C. Fleet through their Area Flag Officers.

Present Organization

The present organization for the engineering administration of the Fleet includes not only the Fleet Staff at Portsmouth, but also the Staff of the CSO(E)s/CFMs in the Naval Bases. In addition to providing engineering advice to the Area Flag Officer, the local staffs act as agents for CINCFLEET, providing

advice and supervision as well as Fleet Maintenance Group assistance to ships using the port. The overall organization both before and after the changes that are about to be made is shown in FIG. 1. The Fleet Engineering Staff at Portsmouth is structured principally on six professional lines under the Fleet Marine Engineer Officer and the Fleet Weapon Engineer Officer. The professional responsibilities at commander level are interlaced by co-ordinating responsibilities for individual ships. This not only gives ships a single point of contact on the Staff but makes the Co-ordinating Commander the engineering focus for all aspects of Type Command for a particular class of ship. An additional commander co-ordinates policy involving both ME and WE matters and acts as Executive Officer for the Staff. At Northwood one Commander located in the Operations Room deals with engineering and maintenance aspects of programming and operations. The resulting matrix structure is shown in FIG. 2.

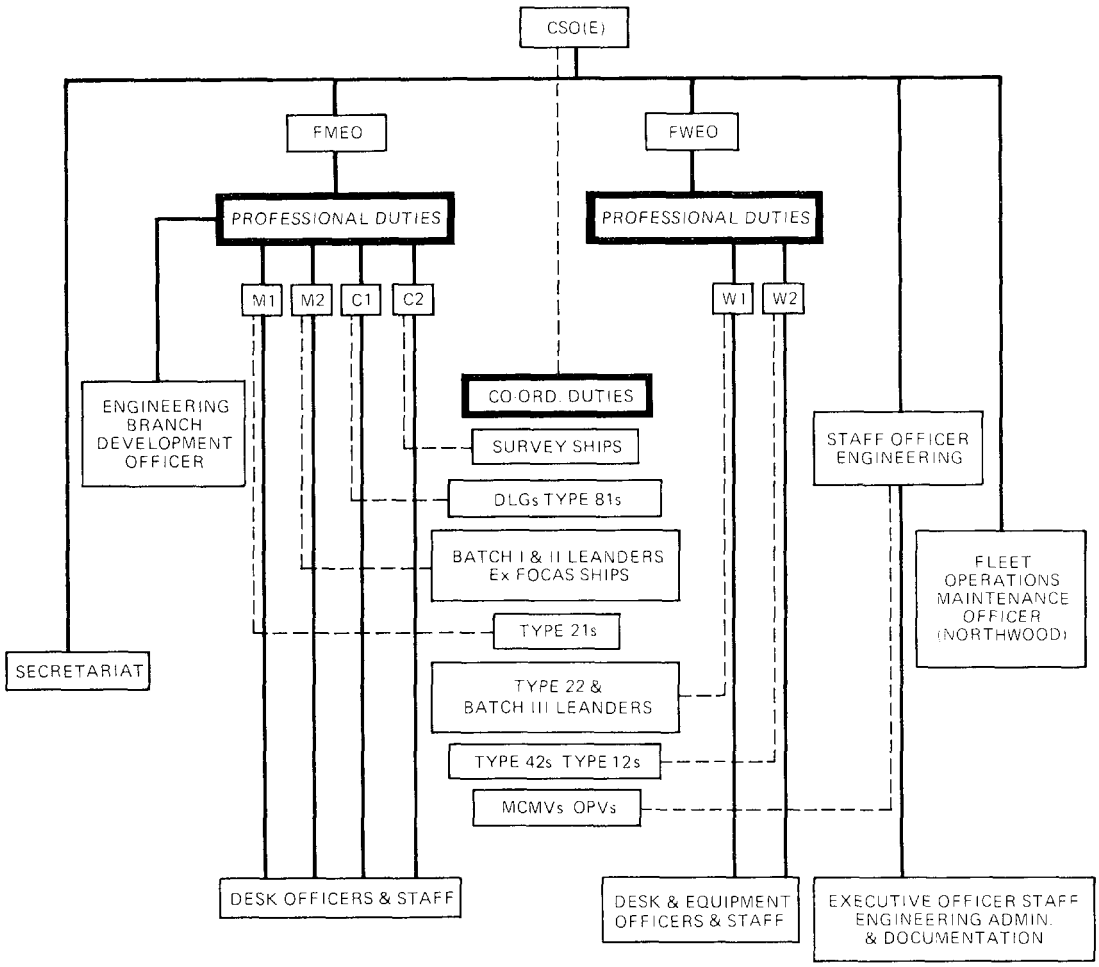

FIG. 2—EXISTING INTERNAL ORGANIZATION OF THE FLEET ENGINEERING STAFF

Ships of the Fleet are allocated to flotillas and squadrons. The Flotilla Flag Officers have no engineering Staffs for they are concerned principally with operational and tactical command. Squadron Commanders are not administrative authorities but the Captain F of each frigate squadron has a Squadron Marine Engineer Officer and Squadron Weapon Engineer Officer but no dedicated supporting staff. With the exception of F2 these officers are also appointed as Engineer Officers of the Leader. Their primary purpose as far as squadron duties are concerned is to ensure that operational and material standards of the ships in their squadron are upheld during Fleet time.

Changes to Staff Structure

The formation of a central Fleet Engineering Staff in 1963 overcame the difficulties of the time and satisfactorily achieved its aims throughout the 60's and early 70's. However, as the Fleet has continued to get smaller but more complex and the resources to maintain and support it have become more scarce, a number of drawbacks to the present organization have become apparent. Overcentralization has tended to attract too much detail and this in turn has not only deflected the staff from important long term policy but reduced the authority and responsibility in ships. The efficiency of the Fleet depends ultimately upon the skills and leadership of the officers and men in the ships; the Fleet Staff can only seek to provide the conditions which allow these skills to prosper.

Not only is the Fleet Staff continuously evolving to cope with the increasingly diverse and complicated equipment in ships, so also is the Dockyard organization. Because of the need for deeper specialization in narrower areas, ships of a Class have tended to concentrate in one Base Port where the necessary expertise and special tools have been built up.

The need for close contact between Fleet and ships' staff and the transfer of experience between them is probably greater now than ever before: small ships with young ships' companies now form a greater proportion of the Navy and the tendency towards shorter careers results in over 60 per cent. of a ship's company being in their first sea appointment. The average artificer now spends less than two jobs at sea as a qualified operator/maintainer.

One of the most convenient times for the necessary contact between administrative and ships' staff to take place is during AMPs when ships are in their Base Ports. At present Fleet Staff personnel travel down to the Ports to visit the ships, often in conjunction with the local CSO(E)'s Staff. Because the staff responsibilities are based on Types of ship or equipment, staff members tend to make several visits to the same Base Ports. It therefore became apparent that duplication of effort would be avoided and travelling time reduced, if the Staff concerned with the day to day support of ships actually resided in the appropriate Base Port. This is one of the key factors in the present restructuring of the Fleet Staff. The requirement to strengthen the local Engineering Staff is also increased by the revised system of 'Dockyard Resource Allocation Control' being introduced towards the end of 1979. Under the revised scheme, ships refitting will still be allocated an initial budget expressed in man-weeks of Dockyard labour, but the budget will be flexible and subject to alteration during the course of the refit. It cannot be greatly exceeded if Completion Date is to be maintained. As new requirements for work arise during the refit, the local Fleet representatives will review the options available and, in conjunction with Dockyard officers, manipulate the available resources to the Fleet's best advantage.

Two other important factors also pointed towards the devolution of Fleet Staff to the Naval Bases. The first of these was the vulnerability of a central Engineering Staff in war and the advisability of dispersing it during a period of tension; the second concerns the changing pattern of maintenance. Over the last two decades, maintenance in ships has been carried out on a time basis. It has been refined over the years and has generally worked well, but shortage of resources, the need to increase ship availability, and the introduction of new techniques is leading us towards a maintenance system based more on condition monitoring. This will increasingly require the exercise of local judgement. If ship availability is to be maintained, the best use must be made of Staff experience; the staff must be available in the Naval Base where the decisions affecting repair and ship availability are made. The first step in this process was taken in November 1978 when local CSO(E)s, on behalf of Area Flag Officers, assumed responsibility for monitoring OPDEFs and arranging any external assistance required for their rectification.

Another serious drawback in the existing Fleet Engineering Staff structure is a direct result of the geographical separation of the Engineering Staff from the rest of the Fleet Staff at Northwood. Not only have propulsion and weapon equipments become a more integral part of ships but also the Engineering Branch has grown to such an extent that it now accounts for some 40 per cent. of the Navy's uniformed manpower. There are thus few 'Fleet' decisions which do not require some engineering input, particularly in the Warfare–WE field.

Thus, there are two principal changes taking place:

(*a*) The 'devolution' to the Naval Bases of Staff requiring frequent direct contact with the ships and their support personnel, mostly dealing with the immediate problems of keeping the ships running to programmed usage cycles. This move will concentrate the experience available ashore for a particular Class of ship at the appropriate Base Port.

(*b*) The move of senior staff to Northwood. These will be Engineering personnel requiring to liaise more closely with other branches of the Fleet Staff. They will deal principally with longer term policy matters and generally set and maintain engineering standards in the Fleet. Their separation from the day-to-day problems of ships will allow them to concentrate on the broad and long-term issues; the 'Class' as opposed to individual ship

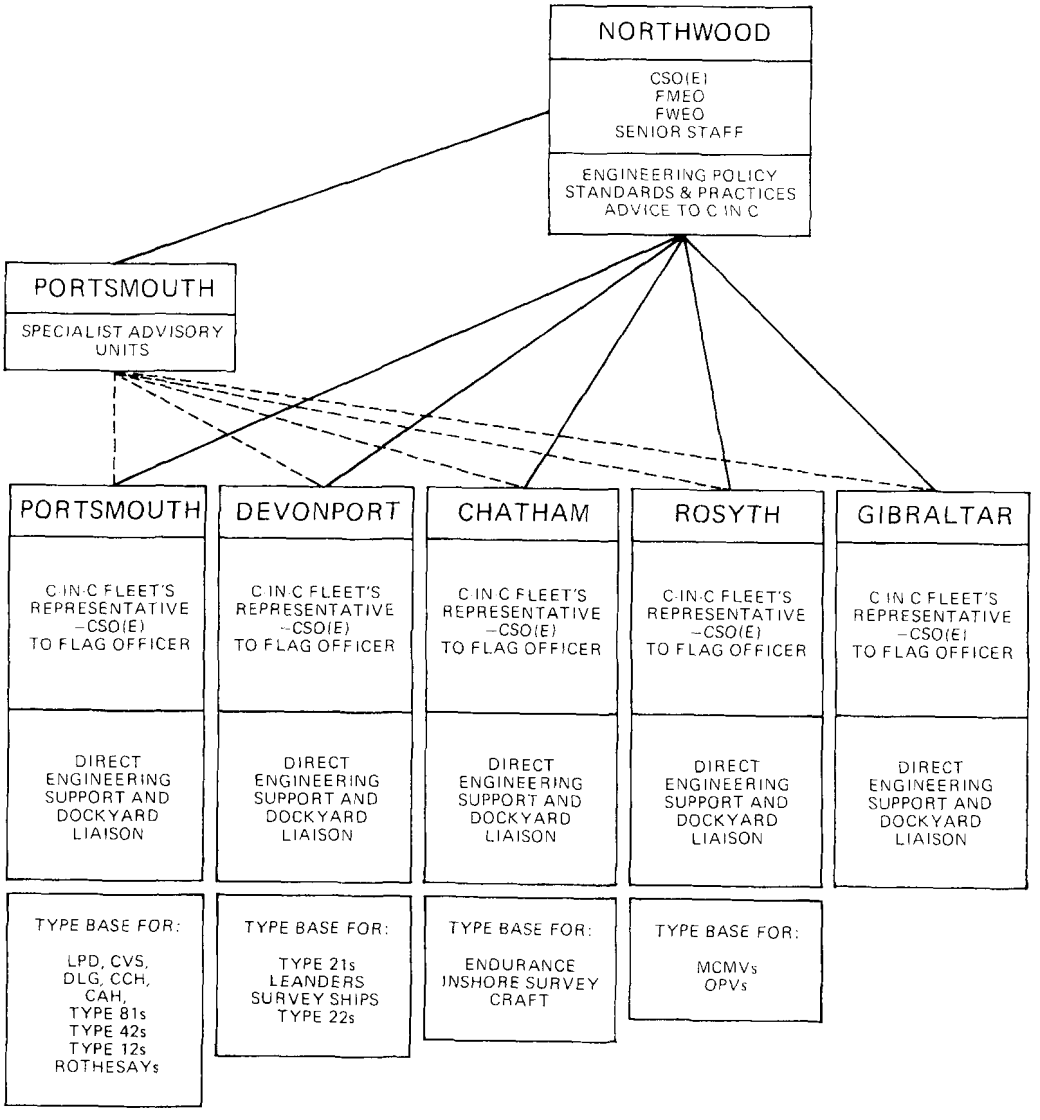

FIG. 3—FINAL STRUCTURE OF ENGINEERING STAFF

problems. Co-ordinating Commanders on the staff at Northwood will retain responsibility for all aspects of Engineering Type Command and these officers will be linked to an overall Type Command organization being set up within the Fleet Staff.

Having devolved approximately twenty staff to the Naval Bases and a further twenty-four to Northwood, there will remain at Portsmouth a few specialist commando-type units, which it would be uneconomical to duplicate at the Base Ports. These will include the following:

(*a*) Central Boiler Investigation Unit.

(*b*) Vibration Analysis Unit.

(*c*) Engineering Administration and Documentation Staff. (To advise and monitor both ME and WE office documentation and procedures).

(*d*) Gas Turbine Propulsion Advisory Unit.

(*e*) Explosives Unit. (To provide advice on explosives and on the implementation of DCI 757/78.)

(*f*) WE 'Improvement' Teams for:
- (*i*) Above-water warfare.
- (*ii*) Underwater warfare.
- (*iii*) Radio.

(*g*) Naval Digital Systems Support Team.

(*h*) Engineering Branch Development—Implementation Unit.

The future structure of the Fleet Engineering Staff is shown in FIG. 3. It is emphasized that the Staff will remain unified, despite the geographical separation and it is intended to establish closer links between the central staff at Northwood and the local Staffs in the Naval Bases than now exist. This will be important to ensure that local staffs are aware of the policies and priorities formulated at Northwood. Other areas still being studied are:

(*a*) the relationship between Squadron Engineer Officers and Fleet Engineering Staff personnel—both local and central;

(*b*) the relationship and accountability of the local CSO(E) to his Area Flag Officer with regard to the functions he performs as CINCFLEET's local agent.

Conclusion

In the course of the study resulting in the changes described in this article and in many previous studies into the structure of the Fleet Engineering Staff, one of the factors considered has been the effects of change itself. Inevitably a new organization requires time to settle down; the study and the implementation of the resultant changes necessarily use up resources themselves. There have been times during the course of the present study when the easy approach would have been to leave it well alone. However, the long term aim was to produce a staff organization which will simplify the engineering administration process, reduce the paperwork in ships and be capable of providing advice to the Fleet where it is needed. Fortunately a more resolute approach to the study prevailed, the decisions have been taken and the Engineering Branch can look ahead with confidence to the new organization supporting the Fleet of the 1980s.