

THE ROYAL NAVAL ENGINEER OFFICERS' CONFERENCE 1984

A LOOK AHEAD—PLATFORMS, WEAPONS, AND ADVANCING TECHNOLOGY

The Engineer Officers' Conference was held at the Royal Naval Engineering College, Manadon, on 4 May 1984. The theme of the Conference was 'A Look Ahead—Platforms, Weapons, and Advancing Technology'. Seven papers were presented and time was allocated for questions after each presentation. The Conference programme was as follows:

Introduction and Welcome	Captain R. V. HOLLEY, Captain of R.N.E.C., Manadon.
Opening Address	Rear-Admiral J. S. GROVE, C.B., O.B.E., Chief Naval Engineer Officer.
The Fleet Today	Staff of C.-in-C. Fleet under the chairmanship of Rear-Admiral A. A. LOCKYER, M.V.O., CSO(E) to C.-in-C. Fleet.
The Fleet of Tomorrow I— T2400 'Upholder' Class Submarine	Staff of Director-General Submarines under the chairmanship of Mr P. WROBEL.
The Fleet of Tomorrow II— Type 23 Frigate	Staff of Director-General Surface Ships under the chairmanship of Rear-Admiral M. A. VALLIS.
The Fleet of Tomorrow III— EH101 Helicopter Sea Harrier Update	Staff of Director-General Aircraft (Naval) under the chairmanship of Captain R. H. BURN, A.F.C.
The Fleet of Tomorrow IV— Future Fleet Support	Staff of Director-General Fleet Support Policy and Services under the chairmanship of Rear-Admiral E. MACLEAN.
Advancing Technology	Staff of Assistant Chief of Staff (Operational Requirements) under the chairmanship of Rear-Admiral G. G. W. MARSH, O.B.E.

The Conference concluded with closing addresses by the Chief Naval Engineer Officer and by the Controller of the Navy, Admiral Sir Lindsay Bryson, K.C.B. Summaries of the addresses are given below and the text of the presentation, 'The Fleet Today', follows immediately after. The other papers presented, necessarily modified in some cases for security reasons, are being published as separate articles in the Journal. Some have had to be held over to the next issue.

INTRODUCTION BY THE CAPTAIN OF MANADON

CAPTAIN R. V. HOLLEY, R.N.

Admiral Bryson, Lady and Gentlemen, welcome to your College for the Conference and Dinner. I hope that everyone here will regard this very much as their own College regardless of form of entry; I think most people will

have been here for a course at one time or another and will agree that both in terms of facilities and in terms of ambience we have a college here which is ideally suited to being the Alma Mater for the profession.

In the two years since the last Conference a great deal has happened at Manadon. In addition to all the normal things we have had Commander-in-Chief's inspections re-instituted and we have also had the five-yearly academic review of the College which was a somewhat more significant event in the sense that it was post-Finniston. The Degree Course has been revised and we have unqualified approval to award the degree of Bachelor of Engineering, and that will make us one of the first Colleges in the country to do so. In addition we have instituted two new courses—the Principal Warfare Officers Technical Course and the post-graduate course in Maritime Defence Technology. Those two courses, I am delighted to say, have brought to the College a much larger number of Seaman Officers; we also have for the first time a Seaman Officer as the Executive Officer. I hope that this is going to be a growing trend in the College. I gather that in the future it is the intention that something like a half of the Seamen Officer corps will be graduates and I personally would hope that a great number of them will, as many do now, study for their degrees here at Manadon, because I am convinced that our degree course is the most relevant not merely for our tasks, but for theirs as well.

Last year, Mr Frodsham, commissioned by Ministers, was studying the education of Engineer Officers in the Services. I am delighted to say that his report gave a very positive picture of Manadon and he has put forward some very helpful proposals. I am particularly glad that he has accepted the arguments we put forward on cost-effectiveness, that being the name of the game, and I can only hope that Ministers will accept his report and agree with his recommendations.

Of course, the great event of 1983 was the visit of Her Majesty the Queen, the first ever by a Sovereign to Manadon and the first time the Sovereign has conferred degrees. That event will be included in the History of the College, official publication date today. We were also very fortunate because Prince Philip gave the College a splendid foreword to the book.

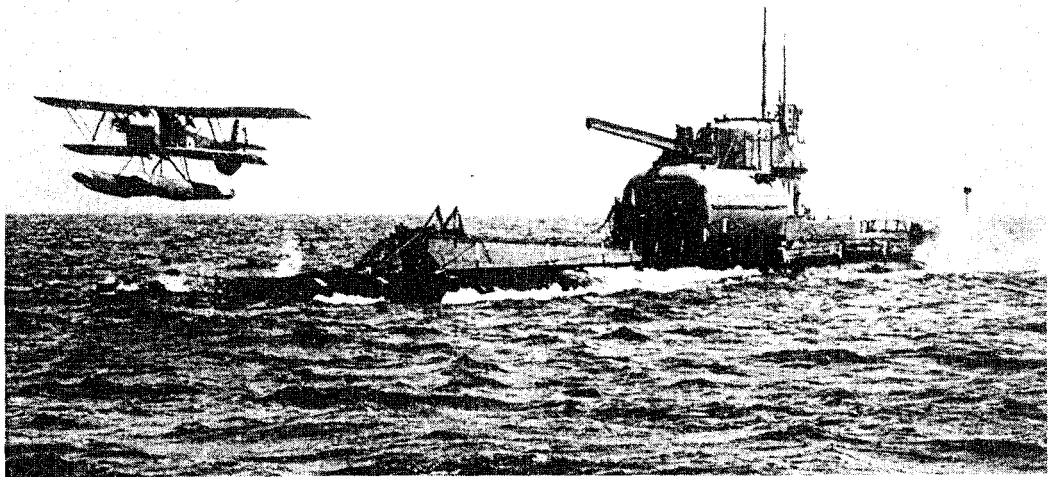


FIG. 1—ADVANCING TECHNOLOGY—50 YEARS AGO. H.M. SUBMARINE M2, SHOWING THE WATERTIGHT HANGAR AND A PARNELL PETO SEAPLANE JUST LAUNCHED.
Photograph by courtesy of the Royal Navy Submarine Museum.

From the past to the future, and what an excellent theme we have for the Conference this year, 'A Look Ahead' to many exciting new Projects. Perhaps it is not always obvious to us being close to it, but I think we operate the widest range of technology of any organization in Western Europe and certainly we shall see some wide-ranging examples of that today. When I opened today's programme I was somewhat surprised, as perhaps many were, to see the splendid picture of Technology 50 years ago (Fig. 1) and then I realized of course that the reason for it was to display the tremendous unity that there is between the Fleet Air Arm and the Submarine service, and that of course enables me to introduce the Chief Naval Engineer Officer, Admiral Grove, who will open the Conference.

OPENING ADDRESS BY THE CHIEF NAVAL ENGINEER OFFICER

REAR-ADMIRAL J. S. GROVE, C.B., O.B.E.

Controller, Lady and Gentlemen, first may I add my welcome to that of Captain Holley to the 1984 Engineer Officers' Conference. On the day of the last Conference, which was in fact 30 April 1982, the Corporate Task Force was just entering the total exclusion zone and taking up its dispositions, and the real conflict had not started. Two days later the *Belgrano* was sunk and two days after that H.M.S. *Sheffield* was hit, set on fire, and abandoned. Now when I was thinking about this year's Conference and what our main theme might be, I had a strong inclination at first, because this was going to be the first occasion when we have a lot of our Engineers together, that perhaps the conflict down South was something that we should look over and take lessons from. But time goes by and that's two years ago, and of course the post-mortems have taken place and analysis is still going on and I know that a lot of you have played a part in various aspects of that. So it seemed really that what we should be doing was looking forward rather than back but against the background of that hard-won experience.

So, that decision taken, we had to think about a starting point and to my mind there was no doubt that 'the Fleet today' was where we had to start from. How were we doing? The good news and the bad news! And that is why the first item on the menu is a presentation from the Fleet as our reference point, or the bottom line, as I think the jargon is these days. Following that we have three presentations on new platforms that are going to be coming into service over the next five to ten years, and then, after that, a glimpse into what Advancing Technology may have in prospect for us.

Now, although it never changes that the man is the single most important factor, today is essentially a material day, of operational requirements, design procurement and support, aimed at and always hopefully achieving the highest availability, reliability and maintainability that we can get, but always having to be balanced against what we can afford.

Now I am particularly pleased that today we have Controller with us and we have the Assistant Chief of Naval Staff (Operational Requirements) and I think the special pleasure that that gives us today is that they do not have to be invited guests because they are in fact naval engineer officers in their own right. Now I believe we have a good menu for you, and I hope that we are going to have some lively and useful discussion through the day. I will now invite Admiral Lockyer and his team from the Fleet to start the show rolling.

CLOSING ADDRESS BY THE CNEO

REAR-ADMIRAL J. S. GROVE, C.B., O.B.E.

Lady and Gentlemen, I said at the beginning of the day that this was essentially a material day. I believe that we had a good menu. I hope you enjoyed the meal. I certainly have, I think it has been largely an information exchange. I think we have had some challenging things put before us, some exciting things, some good things, and some bad things. Now I do not propose to say much more than that, the Controller has kindly consented to give a few thoughts, but before that I would like to, because I set the thing in motion, thank the cooks and stewards who produced the meal for us. In particular I would like to thank the Conference Secretaries; we had two, firstly Commander Piper who kindly started things moving very early in the year and Commander Blackman who took it on later, and I should also personally like to thank the different teams who presented to us today. I thought we had a wide and varied selection and generally I thought of a very high standard. I will now ask Controller to say a few words.

CLOSING ADDRESS BY THE CONTROLLER OF THE NAVY

ADMIRAL SIR LINDSAY BRYSON, K.C.B.

Thank you very much, CNEO. I would like to endorse what CNEO said about the quality of the presentations; I think they really were first class.

CNEO said I would give a few thoughts. Well the first thought I had was that the balance of the presentations was good, because the C.-in-C. Fleet in the 'Fleet Today' reminded us of the problems we have at the present; I think that was timely and we should not forget it either, because what then came afterwards was the future and the optimism. When you are stating a new requirement and when you are designing it, you are pretty convinced that you are designing out all the faults of the things that went before. There tends to be a great deal of optimism about what one is going to do, and I think it is very good for us to be reminded that 10-15 years ago those who put forward the equipments which are in service now, I am sure would have sounded equally optimistic, so do not let us mislead ourselves. I am quite sure that we are going to have problems in the future but we can reduce these problems if we take the lessons of the past, and if we provide the sort of organization which is capable of anticipating the inevitable ones and react quickly in order to correct them. Now, I am optimistic on the hardware side of the house. I think there really is evidence that the hardware coming into service, and hopefully the hardware that we will bring into service in the future, is definitely more reliable and more maintainable than many of its predecessors. Where I am much less optimistic is that we have yet to crack the problem of designing, managing, maintaining, and sustaining the software, and I think that the software area probably is the one which we really do need to give more attention and greater effort.

I hope that you all have been stimulated by what you have heard today. In spite of Cmnd. No. 8288 [the 1981 Defence Review] there are probably as many new major projects for the Navy going through the system now as there have been for a long time—a fact which slightly surprises me when I think of the problems we were facing some 3 years ago, because it was about 3 years ago that John Nott's White Paper was in draft form and beginning to hit all of us. The situation I see today is a far brighter one than one I could possibly have visualized at that time, so I think there is real hope for the future.