ADMIRALTY, S.W.1,  
8th April, 1943.

The following Orders having been approved by My Lords Commissioners of the Admiralty are hereby promulgated for information and guidance and necessary action.

A list of these Orders is enclosed.

By Command of their Lordships,

[Signature]

To all Commanders-in-Chief, Flag Officers, Senior Naval Officers, Captains and Commanding Officers of H.M. Ships and Vessels, Superintendents or Officers in Charge of H.M. Naval Establishments, and Admiralty Overseers concerned.

Note:—The scale of distribution is shown in the Admiralty Fleet Order Volume, 1941, Instructions, paragraph 10.
ADmiralty Fleet Orders

Section 1.—Administration of the Fleet, Ceremonies, Foreign Port Regulations, etc.

1591. Ammunition Supply—Communications—Efficiency of Multiphone Communications for F.C. Hoists and Conveyors—Reports.
1592. Ammunition Supply—Communications—Instructions for Operation in Cold Weather—Heating Requirements.
1593. Ammunition Supply—Communications—Introduction.
1596. Ammunition Supply—Communications—Additional Instructions for Operation in Cold Weather—Heating Requirements.
Section 3.—G., T., N., E., etc., & Stores; Hull, Equipment & Fittings—contd.

General.—(Hull, Armour, General Equipment and Fittings, etc., and Orders affecting two or more Departments.)

1601. Ballasting—As. and As.
1602. Towing Arrangements—As. and As.
1603. Life Lines.
1604. Electrically-heated Hot Cupboards—Modifications to Grids and Door Guides—As. and As.
1606. Telephones, Marks X and X*—Cod Line Harness for Breastplate.
1607. Valve Gearing.
1608. Hose Connections—Standardisation.
1609. Type F.46 Torpedo Aiming Cameras—Standard Procedure for Loading and Operation.
1610. Boom Working Strops, etc.—First Supply of.
1611. Store Rooms—Prevention of Choking of Pump Suctions.
1613. Trolleys and Bomb-loading Stretchers for Naval Aircraft Purposes.
1614. Furniture—Polishing.
1615. A.M.S.Is.
1617. Switch and Lamp Boxes—Introduction of.
1618. Furniture—Polishing.
1619. Switch and Lamp Boxes—Introduction of.
1621. B.R.650—Notes on the 0.303-in. Browning Gun, Type A, Mark II—Issue.
1626. Steel Superintendent—Change of Address.
1627. Mail Lost through Enemy Action.

Section 4.—Other Stores—Naval Stores, Victualling Stores, Medical Stores, Contracts
(*All N.S. Orders not included under Section 3.)

1615. Bread—Addition to List of Local Contracts, 1943-44.

Section 5.—Books, Forms, Returns, Correspondence

1617. Amendments to Books.
1618. A.M.S.Is.
1621. B.R.650—Notes on the 0.303-in. Browning Gun, Type A, Mark II—Issue.
1626. Steel Superintendent—Change of Address.
1627. Mail Lost through Enemy Action.

Section 6.—Shore Establishments

1628. Acceptance of Gifts from Contractors and Others.
1630. Non-industrial Civil Servants—Superannuation.
1631. Admiralty Industrial Employees—Assisted Trips Home.
1632. Transfer of Workpeople from Admiralty Establishments to other Work of National Importance.
1633. Registration of Engineers—Position of Admiralty Employees.
1635. Dover—" Works " Questions.
1636. Survey of Stores—War-time Relaxations in Procedure, etc.
1637. Port War Signal Station, Stanger Head, Address.
1638. Underwater Electric Arc Welding.
A d m i r a l t y,

Whitehall,

30th March, 1943.

The KING has been graciously pleased to give orders for the following Appointments to the Distinguished Service Order and to approve the following Awards:—

For distinguished services:

To be a Companion of the Distinguished Service Order.

Lieutenant Angus Letty, D.S.C., R.N.R.

The Distinguished Service Medal.

Petty Officer Thomas Barker, P/MX.98419.

Petty Officer Thomas Boyle, C/JX.139471.

For great bravery and seamanship in taking Merchantmen on the hazardous passage to North Russia:

To be Companions of the Distinguished Service Order.

Captain James Thompson Hair, C.B.E., Master.

Captain John Mitchell, Master.

The Distinguished Service Cross.

Mr. James Albert Butcher, Chief Engineer Officer.

Mr. John Ferguson, Chief Engineer Officer.

Mr. James Miller Lang, Chief Officer.

Mr. Rowland Price Hear, Second Officer.

Mr. George Ernest Hendrie, Second Engineer Officer.

Mr. Robert Clive Hodgson, Third Engineer Officer.

The Distinguished Service Medal.

Mr. Andrew Wilson, Fireman.

Mr. Frederick William Glendining, Fireman.

Mr. John W. Lownie, Chief Steward.

Mr. John W. Lownie, Chief Steward.

Mr. Robert Hugh Thomason, Able Seaman.

Mr. Terrence Patrick Caraghan, Cabin Boy.

Mr. Arthur James William Sproxton, Cabin Boy.

Mention in Despatches (Posthumous).

Captain Thomas Morley, Master.

Mr. Albert White, Chief Engineer Officer.

Mr. Walter Overton Parkinson, Donkeyman.

Mr. Leslie Newman, Carpenter.

Mr. Leonard Foster, Boatswain.

Mention in Despatches.

Mr. John MacDonald, Second Officer.

Mr. Frank Smith, First Radio Officer.

For bravery during the passage of a Convoy to Malta:

The Distinguished Service Cross.

Mr. Arthur Huntington Black, Second Officer.

Mr. Albert Geoffrey Allison, Apprentice.

For bravery during North African operations:

To be a Companion of the Distinguished Service Order.

Captain George Brotherton Morgan, Master.

The Distinguished Service Cross.

Mr. William Alexander McCurry, Chief Officer.

Mr. Harold Simmonds, Chief Engineer Officer.

Mr. William Slater Muir, Senior Third Officer.

The Distinguished Service Medal.

Mr. George Henry Gee, Donkeyman.

Mr. Ash Ingham, Wiper.

The following amendments (where underlined) are made to previous orders of Honours and Awards under the headings shown:

A.F.O. 1158/43.

The following Award is cancelled:

Mention in Despatches.

Acting Able Seaman Stanley Arthur Cross, C/JX.334360.

(The Award of a Mention in Despatches to Able Seaman Cross for the services shown was published in A.F.O. 893/43.)

The Distinguished Service Medal.

A.F.O. 1286/43. Sergeant Stanley George Hills, Ch.X.880, Royal Marines.

Mention in Despatches.

A.F.O. 6102/42. Signalman Raymond Eric Carratt, C/JX.171130.

A.F.O. 1158/43. Acting Able Seaman Sidney Sheppey, C/JX.266164.

1532.—Officers—Time of Joining Ships and Courses

(C.W. 7411/43.—8.4.1943.)

Officers are reminded that they are expected to join by 0900 on the day of their appointment whenever possible.

2. Officers appointed to courses, other than the Damage Control Course, should normally join p.m. on the day before, unless otherwise ordered.

1533.—Gunnery Course for Officers Appointed for Gunnery Duties in Frigates, Corvettes and Fleet Minesweepers

(C.W. 45565/42.—8.4.1943.)

In order that the instructional situation in H.M.S. "Excellent" may be eased, arrangements have been made for the gunnery course referred to in A.F.O. 11/43 to be carried out at Devonport Gunnery School commencing with the April, 1943, Course.

2. Applications for officers to undergo this course should therefore be addressed to Captain (G) Devonport in future.

(A.F.O. 11/43.)
Provided that they are duly recommended the Midshipmen named in the following groups are due for promotion to Acting Sub-Lieutenant on the 1st May, 1943, and to undergo shore courses for the rank of Lieutenant. They will be required to join for courses p.m. on the 2nd May, 1943.

2. Midshipmen are to be discharged in sufficient time to take a short period of leave before commencing their studies.

3. Attention is particularly invited to K.R. & A.I., Article 263, as amended by A.F.O.s. 2968/42 and 12/43.

4. On being discharged from their ships, the private addresses of all officers are to be reported to the Admiralty (C.W. Branch). Officers discharged from ships on foreign stations are also to report their addresses to H.M.S. "Excellent" and the date of their arrival.

5. Individual appointments will not be promulgated in C.W. Lists of Appointments nor will personal appointments be sent to officers except where deviation from the programme becomes necessary. Officers will be borne on the books of "Excellent" throughout the courses. They will be accommodated at the establishments named against their respective courses.

6. Commanding Officers are to take steps to ensure that officers concerned who are serving in ships or establishments under their command at the date of receipt of this Order are made acquainted with its details.

7. Officers appointed to group "H" initially commencing their courses in H.M.S. "Dryad," Southwick, Hants, should communicate with the Captain of that Establishment for details of the transport available for the day of joining.

8. A number of Acting Sub-Lieutenants (ex Lower Deck) now undergoing instruction will also be appointed to these courses.

<table>
<thead>
<tr>
<th>Name</th>
<th>Ship</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. Hanning-Lee</td>
<td>&quot;Blankney&quot;</td>
<td>Gunnery—Begin 3.5.43, End 12.6.43</td>
</tr>
<tr>
<td>E. B. C. Thornton</td>
<td>&quot;Tanatside&quot;</td>
<td>Aggressive—H.M.S. &quot;Excellent&quot;</td>
</tr>
<tr>
<td>D. A. Loram</td>
<td>&quot;Sheffield&quot;</td>
<td>Torpedo—</td>
</tr>
<tr>
<td>T. H. E. Baird</td>
<td>&quot;Orwell&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>A. G. Watson</td>
<td>&quot;Duke of York&quot;</td>
<td>Begins 14.6.43, Ends 3.7.43</td>
</tr>
<tr>
<td>D. M. Scott</td>
<td>&quot;Eskimo&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>M. J. O'Connor</td>
<td>&quot;Hambledon&quot;</td>
<td>H.M.S. &quot;Vernon,&quot; Roedean</td>
</tr>
<tr>
<td>K. G. Collins, R.I.N.</td>
<td>&quot;Bulldog&quot;</td>
<td>Anti-Submarine—</td>
</tr>
<tr>
<td>R. A. B. Creery, R.C.N.</td>
<td>&quot;Howe&quot;</td>
<td>Begins 5.7.43, Ends 7.7.43 H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
<tr>
<td>R. R. H. Usher</td>
<td>&quot;Norfolk&quot;</td>
<td>Signals—Begin 9.7.43, Ends 31.7.43 H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Ship</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. A. Long</td>
<td>&quot;Pembroke IV&quot;</td>
<td>Torpedo—Begin 3.5.43, Ends 22.5.43</td>
</tr>
<tr>
<td>R. F. N. Davis</td>
<td>&quot;Opportune&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>G. H. Mann</td>
<td>&quot;Wesminster&quot;</td>
<td>H.M.S. &quot;Vernon,&quot; Roedean</td>
</tr>
<tr>
<td>J. R. Pardoe</td>
<td>&quot;Eclipse&quot;</td>
<td>Navigation—Begin 24.5.43, Ends 12.6.43</td>
</tr>
<tr>
<td>G. J. Hooper</td>
<td>&quot;Goathland&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>A. H. Smith</td>
<td>&quot;Brisseenden&quot;</td>
<td>H.M.S. &quot;Dryad&quot;</td>
</tr>
<tr>
<td>J. D. Honywill</td>
<td>&quot;Sheffield&quot;</td>
<td>Anti-Submarine—Begin 14.6.43, Ends 19.6.43</td>
</tr>
<tr>
<td>M. Brindley</td>
<td>&quot;Worcester&quot;</td>
<td>Gunnery—Begin 21.6.43, Ends 31.7.43 H.M.S. &quot;Excellent&quot;</td>
</tr>
<tr>
<td>R. C. Mayne</td>
<td>&quot;Tartar&quot;</td>
<td>Signals—Begin 28.5.43, Ends 21.8.43 H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Ship</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. A. Wells</td>
<td>&quot;Chiddingfold&quot;</td>
<td>Navigation—Begin 3.5.43, Ends 22.5.43 H.M.S. &quot;Dryad&quot;</td>
</tr>
<tr>
<td>H. M. Clover</td>
<td>&quot;Breecon&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>G. J. R. Elgar</td>
<td>&quot;Obedient&quot;</td>
<td>H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
<tr>
<td>P. W. Dolphin</td>
<td>&quot;Impulsive&quot;</td>
<td>Anti-Submarine—Begin 24.5.43, Ends 26.5.43 H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
<tr>
<td>R. G. Shaw</td>
<td>&quot;Southdown&quot;</td>
<td>Signals—Begin 28.5.43, Ends 19.6.43 H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
<tr>
<td>J. E. O'Leary</td>
<td>&quot;Eglington&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>J. W. N. Watkins</td>
<td>&quot;Calpe&quot;</td>
<td>H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
<tr>
<td>D. S. Boyle, R.C.N.</td>
<td>&quot;Iroquois&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>A. M. Blenkinsop</td>
<td>&quot;Pembroke IV&quot;</td>
<td>H.M.S. &quot;Vernon,&quot; Roedean</td>
</tr>
<tr>
<td>G. B. Wilby</td>
<td>&quot;Panther&quot;</td>
<td>As above</td>
</tr>
</tbody>
</table>

---

**Group "F"**

<table>
<thead>
<tr>
<th>Name</th>
<th>Ship</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. W. Bazalgette</td>
<td>&quot;Intrepid&quot;</td>
<td>Gunnery—Begin 28.8.43</td>
</tr>
<tr>
<td>P. R. Cowan</td>
<td>&quot;Mackay&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>D. M. Ellis</td>
<td>&quot;Norfolk&quot;</td>
<td>Ends 12.6.43</td>
</tr>
<tr>
<td>K. P. Hardy</td>
<td>&quot;Revenge&quot;</td>
<td>H.M.S. &quot;Excellent&quot;</td>
</tr>
<tr>
<td>J. O. Robert</td>
<td>&quot;Tartar&quot;</td>
<td>Torpedo—</td>
</tr>
<tr>
<td>W. R. D. Gerard-Pearse</td>
<td>&quot;Sheffield&quot;</td>
<td>Begins 14.6.43</td>
</tr>
<tr>
<td>M. D. Millar</td>
<td>&quot;Wasp&quot;</td>
<td>Ends 3.7.43</td>
</tr>
<tr>
<td>R. St. G. Summons</td>
<td>&quot;Howe&quot;</td>
<td>H.M.S. &quot;Vernon,&quot; Roedean</td>
</tr>
</tbody>
</table>

---

**Group "E"**

<table>
<thead>
<tr>
<th>Name</th>
<th>Ship</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. G. M. Knott</td>
<td>&quot;Matchless&quot;</td>
<td>Anti-Gas—Begin 5.7.43, Ends 7.7.43 H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
<tr>
<td>B. J. Devlin, R.C.N.</td>
<td>&quot;Duke of York&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>N. Singh, R.I.N.</td>
<td>&quot;Nelson&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>D. M. Ells</td>
<td>&quot;Blankney&quot;</td>
<td>H.M.S. &quot;Vernon,&quot; Portsmouth</td>
</tr>
<tr>
<td>A. G. Watson</td>
<td>&quot;Wesminster&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>J. W. N. Watkins</td>
<td>&quot;Iroquois&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>R. G. Shaw</td>
<td>&quot;Southdown&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>J. F. S. Youle</td>
<td>&quot;Mantis&quot;</td>
<td>As above</td>
</tr>
<tr>
<td>R. C. Mayne</td>
<td>&quot;Tartar&quot;</td>
<td>As above</td>
</tr>
</tbody>
</table>
With reference to A.F.O. 5862/42, paragraph 2B, the rate of pay for a Sub-Lieutenant (E), (University Entry), is applicable to permanent R.N. Officers only.

2. As there are now no officers of the rank of Sub-Lieutenant (E), (University Entry), in the Royal Navy, all those so entered having been promoted to the rank of Lieutenant (E), and as the entry of such officers has been suspended for the duration of the war, the line "Sub-Lieutenant (University Entry)........15s. Od." in A.F.O. 5862/42 is to be cancelled.

(A.F.O. 5862/42.)

1536.—Engineering Cadetships—Continued Eligibility of Serving Ratings
(C.W. 39514/42.—8.4.1943.)

When the National Scheme of Engineering Cadetships is again opened in the near future, serving ratings and ratings accepted for Service but not yet actually called up (except for Seaman, Marine and Air Gunner entrants under the "Y" Scheme) will not be eligible to apply. No further applications should, therefore, be forwarded.

1537.—Duties of Cinema Maintenance Officers
(C.W. /T.S.D. 2011/43.—8.4.1943.)

With reference to A.F.O. 5862/42, paragraph 2B, the rate of pay for a Sub-Lieutenant (E), (University Entry), is applicable to permanent R.N. Officers only.

2. As there are now no officers of the rank of Sub-Lieutenant (E), (University Entry), in the Royal Navy, all those so entered having been promoted to the rank of Lieutenant (E), and as the entry of such officers has been suspended for the duration of the war, the line "Sub-Lieutenant (University Entry)........15s. Od." in A.F.O. 5862/42 is to be cancelled.

(A.F.O. 5862/42.)

1536.—Engineering Cadetships—Continued Eligibility of Serving Ratings
(C.W. 39514/42.—8.4.1943.)

When the National Scheme of Engineering Cadetships is again opened in the near future, serving ratings and ratings accepted for Service but not yet actually called up (except for Seaman, Marine and Air Gunner entrants under the "Y" Scheme) will not be eligible to apply. No further applications should, therefore, be forwarded.

1537.—Duties of Cinema Maintenance Officers
(C.W. /T.S.D. 2011/43.—8.4.1943.)
visit stations until such time as it is possible for these officers to undertake the work themselves. The Commanding Officer concerned will be informed of the Gaumont British Engineer's visit.

4. Emergency servicing should wherever possible be done by Cinema Maintenance Officers and Commanding Officers should, in the first place, contact their appropriate Cinema Maintenance Officer in a case where repairs, spare parts or maintenance of their projectors is required which is outside the scope of the duties laid down for Cinema Projectionists, i.e. running repairs and general cleaning.

The Cinema Maintenance Officers will visit Shore Establishments as frequently as possible to inspect the cinema equipment, and all facilities should be afforded to them for this purpose.

5. Suggestions will be made by the Cinema Maintenance Officer, where necessary, for the improvement of instructional cinemas. Action should be taken upon these suggestions by Commanding Officers in consultation with D.T.S.D., Admiralty, where necessary, in accordance with A.F.O. 3363/42, paragraphs 5 (i) and (ii).

6. Commanding Officers of ships and establishments are to arrange for the Cinema Maintenance Officers to make complete reports on all installations. Copies of these reports should be forwarded to D.T.S.D., Admiralty, by the Cinema Maintenance Officer and one left with the ship or establishment concerned. These reports should include any recommendation for improving the efficiency of the cinema installation which is beyond the scope of the Cinema Maintenance Officers.

7. Cinema Maintenance Officers should demand spares as follows:

- 35-mm. projectors from S.N.S.O., Portsmouth.
- 16-mm. GaBeScope projectors from S.N.S.O., R.N. Store Depot, Park Royal, N.W.10.
- 16-mm. Ampro projectors from S.N.S.O., R.N. Store Depot, Stanley Mills, Stroud.

8. The two most frequent causes of breakdown in cinema projectors have been found to be over-lubrication and condensation of moisture in the projector.

(1) Condensation.—The chief cause of this has been found to be lack of heating accommodation in the projection box; this fault has been prevalent in ships. The projection box should be maintained as nearly as possible at an equable temperature of approximately 60°. Glass windows should be fitted in the operating box apertures in order to retain as much warmth as possible and to exclude the damp, as water condensed on the objective soundhead optical system and also on the picture projection lens will cause serious projection difficulties.

(2) Lubrication.—Excessive lubrication of 35-mm. or 16-mm. projectors leads to leakage of oil into the head amplifier, amplifier and electrical circuits, thus destroying the insulation, and causing electrical fires. As these projectors have “ Oilite” bearings the chance of seizure from lack of oil is very small and danger lies in over, rather than under, lubrication, and in no projector should the oil applied to oiling points exceed one drop at each application.

Thirty five millimetre projectors should be oiled once on every running day at the routine oiling points as detailed in the handbook supplied with the projector. Oil should be applied before films are shown and the projector should be run for about twenty minutes without film, after which any excess of oil should be wiped off with a clean cloth. Cross box oil should be changed after every eighty hours running time.

Sixteen millimetre GeBeScope projectors should be lubricated at the six oiling points set out in the instruction book. Experience has shown that the lubrication of GeBeScope projectors should be carried out once in every ten running hours (not every five hours as detailed in the handbook).

Sixteen millimetre Ampro projectors should be lubricated at the central oil well as instructed in the handbook.

(A.F.O. 3364/42)
3. Ratings who fail on completion of the Conversion Course will not be allowed to take a second course, but will remain eligible for transfer, subject to recommendation and to passing a Trade Test and Examination conducted by the Trade Test Board. Recommendations for re-examination are not to be made until six months have elapsed since the completion of the Conversion Course, and ratings cease to be eligible for transfer three years after the completion of the Course.

(A.F.O. 4482/41 is cancelled.)

(This Order has been reprinted for posting on Notice Boards.)

1542.—Wiremen (J)

(N./A.M.R. 886/42.—8.4.1943.)

Arrangements have been made to introduce into the Royal Navy for hostilities only a new branch of Wiremen to be designated Wiremen (J). Wiremen (J) will undertake duties at Naval Air Establishments overseas only, as set out in paragraph 2. They will belong to the F.A.A. Division.

2. Wiremen (J) will undertake cable jointing, particularly on paper insulated lead covered cable; and carry out other associated duties as may be expedient. They will not normally be trained in anything other than the mechanical processes of cable jointing and the associated duties, and should therefore not be expected to possess any other knowledge of electrical work. In individual cases, however, Wiremen (J) by virtue of pre-service experience and training may have certain additional electrical knowledge.

3. The introduction of Wiremen (J) is intended to supplement, and not to replace, arrangements which have been or may be made for the installation and maintenance of underground cable systems and associated equipment at Naval Air Stations overseas.

4. Wiremen (J) will act under the instructions of the station Air Electrical Officer who will contact the appropriate local authority responsible for station construction and/or maintenance and arrange for the Wiremen (J) to be utilised as far as may be practicable for installation and/or maintenance duties to the best advantage of the Service. The appropriate authority responsible for station installation and/or maintenance may be the local Admiralty Dockyard, Air Ministry, Army or Public Works, authority and it will be the duty of the station Air Electrical Officer to maintain adequate liaison with the Electrical Officers attached to the authority concerned.

5. The exigencies of the service have made it necessary to restrict to a minimum the period of training of Wiremen (J). In order to achieve and maintain a reasonable standard of efficiency therefore it is essential that Wiremen (J) should be given every opportunity of obtaining experience in their work on appointment to a Naval Air Establishment. They should also be given the opportunity of increasing their general electrical knowledge by instruction and association with electrical work but this should not be allowed to interfere with their primary duty, i.e. jointing of underground cables.

6. The uniform of Wiremen (J) will be similar to that of Wiremen (MS) but with the letter (J) in place of (MS). Pay will also be as for Wiremen (MS).

7. The technical capabilities of the various Wiremen (J) will be as follows:

(a) Wiremen (J).—To assist Leading and Petty Officer Wiremen (J). They should not be considered as capable of carrying out full cable jointing duties, but the extent of their capabilities will be indicated by the competency test required (see paragraph 11).

(b) Leading Wiremen (J).—To perform cable jointing and associated duties.

(c) Petty Officer Wiremen (J).—To perform cable jointing and associated duties and to supervise the work of Leading Wiremen (J) if required.

8. Training of approximately 60 Wiremen (J) will take place at R.N. Air Station, Eastleigh, Southampton. All men will be entered as Wiremen (J). Certain entries with previous jointing experience who prove to be satisfactory with little or no training, and who are recommended, will be antedated to Leading Wireman (J) the day after joining the Navy and to Petty Officer Wireman (J) the following day. Others will be advanced to Leading Wireman (J) if recommended on satisfactory completion of a 3 months course of training. Otherwise promotion will be as detailed in paragraph 9 of this A.F.O.

9. Subject to requirements existing for additional Wiremen (J) and except as under special circumstances detailed in paragraph 8 of this A.F.O., advancement will be as follows:

(a) Wireman (J) to Leading Wireman (J).—On satisfactory completion of a competency test and after not less than 6 months as Wireman (J).

The competence test will consist of the satisfactory completion (whilst observing strict compliance with all due precautions necessary etc.) of:

(i) Straight through joint of plumbad lead sleeve type on 3 K.V. paper insulated lead covered cable.

(ii) Termination of 3 K.V. paper insulated lead covered cable in switch or transformer terminal box.

(iii) Straight through joint of plumbad lead sleeve type on dry paper insulated lead covered telephone cable of 50 pair 20 lb. conductor or switch or transformer terminal box.

(b) Leading Wireman (J) to Petty Officer Wireman (J).—On being found competent to carry out the full duties of their grade without supervision and to be capable of supervising the work of Leading Wiremen (J).

10. Each Leading and Petty Officer Wireman (J) should have allocated to him a Naval Airman or if available a Wireman (J) to act as mate. The allocations should be made as permanent as possible and mates should not be changed at short intervals.

11. The rating of Wireman (J) will generally be confined to trainees entered in accordance with paragraph 8. Subject to requirements existing for additional Wiremen (J), however, Naval Airmen who have gained experience as mate and show promise of becoming competent Leading Wiremen (J) may transfer to Wiremen (J) on satisfactory completion of a competency test, with a view to their subsequently qualifying for Leading Wiremen (J) and above when vacancies arise. The competency test will be as follows:

(i) Show a satisfactory knowledge of the precautions to be taken in the handling of paper insulated lead covered cable; with special reference to precautions for exclusion of, and test for, moisture.

(ii) Cut a P.I.L.C. cable and seal the end of the cable by means of a blow lamp, wiping cloth and plumber's metal.

(iii) Make a "solid end" on a P.I.L.C. power cable as a precaution against displacement of cores, or stretching and fracture of the lead sheath, when hauling on the cable. The "solid end" consists of making solid at one end of the cable all the cores and lead sheath by means of plumbing metal.

(iv) Tin and prepare for jointing a brass gland from a transformer or switch terminal box.

(v) Prepare for jointing a straight through joint lead sleeve.

(vi) Solder a .1 sq. in. cable socket on to a .1 sq. in. cable.

12. Initial drafting of Wiremen (J) will be made by Admiralty having regard to particular deficiencies in numbers of cable jointers at Naval Air Establishments overseas. Subsequent movements of Wiremen (J) are not to be made without reporting the movements to Admiralty.

13. Officers superintending work being carried out by Wiremen (J) should take adequate steps to prevent danger, having regard to the limited knowledge and short period of training of Wiremen (J), especially when work is being carried out on high voltage equipment.

14. Each Leading Wireman (J) and Petty Officer Wireman (J) will be provided with a personal kit of tools and equipment, details of which will be promulgated in due course.
**1544.—Gunnery Non-substantive Ratings in the Combined Operations Organisation**

(N. /P.D. (Q). 4485/42.—8.4.1943.)

It has been found desirable to extend the gunnery organisation of the Combined Operations organisation and this order lays down the various gunnery non-substantive ratings that may be granted and what personnel are eligible for them. The appended table shows the details.

2. **A.F.G.Os.—** A number of Auxiliary Vessels Gunnery Officers have been appointed to Combined Operations bases and flotillas and more will be trained as opportunity arises. Officers for these appointments will be taken from Combined Operations personnel.

3. **Act. Q.R.l (S.V.)—** The non-substantive rating of Act. Q.R.l (S.V.) may be granted to general service ratings (after qualifying in the approved course of instruction) whilst performing the duty of Combined Operations Gunnery Instructor. The badge to be worn is that of a Q.R.l. These ratings will be employed at Combined Operations bases.

4. The non-substantive rating of Act. Q.R.l (S.V.) may be granted to Combined Operations ratings (after qualifying in the approved course of instruction) whilst performing the duty of Combined Operations Gunnery Instructor. The badge to be worn is that of a Q.R.l. These ratings will be employed at Combined Operations bases.

5. General service and Combined Operations ratings who are Able Seamen or Marines may, in order to give them the necessary authority over their classes, be granted the temporary acting rating of Leading Seaman, or the temporary acting rank of Corporal R.M. whilst employed as Act. Q.R.l (S.V.).

6. **A.A.3 (CX).—** Ranks or ratings from Combined Operations personnel. The badge to be worn is that of an A.A.3.

7. The duties for which A.A.3 (CX) are allowed are:—
   - Layer and trainer of 0.5-in. gun.
   - Layer of Oerlikon gun.

8. **Q.O. (CX).—** Ratings from general service and Combined Operations personnel. The badge to be worn is that of a Q.R.3. Q.Os. (CX) from general service will be employed at training establishments and bases. Q.Os. (CX) from Combined Operations personnel will be employed afloat.

9. **Ordinary Seamen—Grant of acting non-substantive rating only.**—Ordinary Seamen may only be granted the acting non-substantive rating of A.A.3 (CX) and paid as from the date on which they commence the duties in a vacancy in complement, continuance of payment being subject to fulfilment of the conditions laid down in K.R. & A.I., Article 430, Clause 1, as amended by King’s Regulations Amendments 4/40.

10. Confirmation in the non-substantive rating may be granted upon advancement to Able Seaman when the man has qualified in the approved course of instruction.

11. **Wren Q.O.—** These Wrens will be employed in lieu of Q.Os. (CX) at bases and training establishments.
of 1,000, i.e. the total number of ratings allowed are—3, 5, 8, 10 and 13 respectively abroad. Reduce one Wren Writer or Typist (or R.N. Writer) for each 1,000 or part thereof.

Paragraph 4. (A) The following amendment is to be made to A.F.O. 574/43:

1. The vision standard set out in A.F.O. 269/41, paragraph 7, is to be amended as follows—

- Vision corrected by spectacles:

2. Staff for ration card duties is included above, and at R.N. air stations, for each 1,000 or part thereof only, instead of 4, 6, 10, 12 and 16 as shewn.

The following amendments are to be made to the list showing Analysis of Trades at the end of A.F.O. 574/43:

- Owing to the small number of men involved, South Africans who have been entered direct into the Imperial Forces under Defence Regulations, and who are now in South Africa, will be treated as if they were entered from 1st August, 1942, as required for the purposes of the Defence Regulations.

With reference to A.F.O. 359/42 and 615/42, it has been decided that officers of the Royal New Zealand Naval Forces, who were entered direct into the Imperial Forces, are to be transferred to the Royal New Zealand Naval Forces, and to have their pay regulated accordingly.

Portuguese to the Director of Navy Accounts, Branch 4A, through their Accountant General, South Africa, and to the Director of Navy Accounts, Branch 4A, through their Accountant General, South Africa.
of Wight on duty. Both draft notes and passes must be stamped with the ship's stamp and signed by a responsible officer. This applies equally to ratings proceeding to the mainland on duty and returning to the island.

3. Leave visits.—Officers and ratings are only to be granted leave to proceed to destinations in the Isle of Wight for the following reasons:
   (a) To visit their parents, wives, husbands or sick or aged near relatives who are resident in the Isle of Wight.
   (b) To attend weddings or funerals of relatives in the island.
   (c) To stay with persons resident in the island, provided that the officer or rating was ordinarily a member of the household of such persons.
   (d) To reside on premises of which, on 14th November, 1941, they were owners or tenants on an agreement of a term of not less than three years.
   (e) To receive treatment or to convalesce at King Edward VII Convalescent Home, Osborne House.

Entry into the Isle of Wight by leave personnel for reasons other than those shown above is prohibited.

The only exception is that fiancées of service personnel who have been allowed to spend their pre-embarkation leave on the island may also be granted permission to enter the island. In addition, a special concession has been made to permit wives and immediate relatives of personnel to reside in the Isle of Wight while their husbands are stationed there.

In all cases Commanding Officers are to satisfy themselves that the reasons given are genuine before granting permission and should provide a certificate to be shown by the wife at the place of embarkation.

4. Officers granted leave to destinations in the Isle of Wight are to be in possession of a certificate signed by their Commanding Officers stating the reason for the journey, and, in the case of ratings, the reason is to be endorsed on the leave pass.

5. Naval personnel on leave who belong to local naval establishments and have not been provided with the necessary certificates or endorsements will be directed by the control to proceed to their own establishments to obtain them if entitled.

6. Any naval personnel who may wish to go on leave to the island for any exceptional reason, not covered by the regulations, must apply for permission in writing to the Chief Constable of the Isle of Wight, stating full reasons for the visit.

1551.—W.R.N.S.—Reports on Officers
(C.W. 10944/43.—8.4.1943.)

When rendering reports on W.R.N.S. Officers, Sections III and IV of Forms S.206 should be amended to read as follows:

Section III.—Remarks of W.R.N.S. Officer-in-Charge (with particular reference to relations with (a) W.R.N.S. officers and (b) W.R.N.S. ratings).

Section IV. General opinion of officer.
(A.F.O. 2111/40.)

1552.—W.R.N.S. Ratings—Advancement
(N. 7000/43.—8.4.1943.)

When supplementary returns of recommendations for advancement of W.R.N.S. ratings are rendered (A.F.O. 4864/42, paragraph 3), they are to contain the names and essential details of all ratings:

(a) Who, since the rendering of the last Form S. 507 (W) or supplementary return, have become fully qualified and are recommended for advancement;

(b) who were fully qualified but not recommended on the previous Form S. 507 (W) or supplementary return and are now recommended;

(c) who were recommended on the previous Form S. 507 (W) or supplementary return and who are not now recommended. Other ratings qualified but not recommended are not to be included in supplementary returns.

Recommendations for accelerated advancement are not to be made on supplementary returns.

2. It has also been decided that, when Form B. 13 (W) authorising the advancement of a W.R.N.S. rating is received, the Commanding Officer, if doubtful of the suitability for advancement of the rating concerned, may retain his form for a period not exceeding four weeks. If he should then decide that the rating is fit for advancement, the postponement of the decision is not to affect the date of advancement, which is invariably to be the date authorised on the form.

If, on receipt of Form B. 13 (W), the Commanding Officer should decide against the rating's advancement, or, at the expiration of four weeks, still be uncertain of the rating's suitability, the Form B. 13 (W) is to be returned to the command. The name of the rating will then be removed from the advancement roster and will not be replaced thereon until he is again recommended on Form S. 507 (W) or supplementary return if this is authorised.

3. Occasionally Form B. 13 (W) has been returned by Commanding Officers with a covering letter stating that the rating concerned had not been advanced because she had withdrawn her declaration of willingness to become mobile on advancement. When an advancement is not made for that reason, this is to be stated on Form B. 13 (W) in the space provided for that purpose on the back of the form.

Form B. 13 (W) is being amended accordingly.
(A.F.O. 4864/42.)

1553.—Flying Accidents—Claims from Third Parties in Respect of Damage to Property and Personal Injuries
(N.L. 4070/43.—8.4.1943.)

Consequent upon the changes promulgated in C.A.F.O. 248/43, the following amendments are to be made in A.F.O. 4847/42, paragraph 4:

Sub-Paragraph (1)—Amend to read:

The Admiralty is responsible for settlement of claims for ordinary damage and in order to expedite settlement Their Lordships have decided that claims not exceeding £100 may be settled locally subject to the approval of the Senior Flag Officer, Naval Air Stations or the Rear-Admiral, Northern Air Stations, as applicable, as a charge to Vote 11G.

Sub-Paragraph (2)—Amend last sentence to read:

When his investigations are complete he will forward a report with his recommendations to the Commanding Officer of the Air Station concerned for submission to the Senior Flag Officer, Naval Air Stations, or the Rear-Admiral, Northern Air Stations, for approval. Claims not exceeding £100 may be settled locally subject to the approval of the Senior Flag Officer, Naval Air Stations or the Rear-Admiral, Northern Air Stations, as applicable, as a charge to Vote 11G.
3. The entry in the pilot’s log book is to show:—(a) the type of incident and
(b) the degree of responsibility as follows:—

Classification of incident

(A) Day or night
(B) Land or sea
(C) Taxying
Taking off
Landing
Faulty cockpit drill
Air collision
Forced landing (lost, fuel exhausted, etc.)
Low aerobatics
Unauthorised low flying.

Degree of responsibility

Inexperience
Error of judgment
Negligence
Gross negligence
Disobedience.

4. Entries in the flying logs should be as brief as possible. The classification
of the incidents set out in paragraph 3 above should be used whenever they are
applicable, but if a case does not readily fall under any of these headings, the
commanding officer may, at his discretion, use a different classification to describe
the occurrence. The degree of responsibility, however, is always to be expressed
by reference to one of the above classifications.

5. The fact that an entry has been made in the pilot’s log book should not be
reported to the Admiralty unless, where the pilot is an officer, the commanding
officer considers the matter sufficiently serious to warrant a permanent report
against the officer when the report of the logging should be submitted to the
Commander-in-Chief, to decide whether it should be communicated to the Admiralty.
This paragraph does not alter the necessity for reporting flying accidents in
accordance with A.F.O. 2476/42 and of completing paragraph 17 (ii) and (iii) of
Form A.23 when rendering such reports.

6. Whenever a pilot is convicted by Court Martial or punished summarily in
consequence of an accident to service aircraft or of a breach of flying discipline,
a notation of the occurrence and of the punishment awarded is to be entered in the
pilot’s log book. It will be appreciated that if the question of the trial of the pilot
either by Court Martial or summarily is under consideration an entry in the log
should not be made until a decision is reached and the result of such trial, if any,
is known. When on such trial a pilot is acquitted no entry with regard to the
occurrences should be made in the log book.

7. It should be impressed on all pilots that the present number of avoidable
accidents is a serious and needless waste of national resources. Endorsements in
flying log books will, it is hoped, bring about a reduction in the number of accidents
for which the pilot is to blame without causing loss of initiative and enterprise,
and will provide a commanding officer with a record from which some estimate
can be formed of a new pilot’s characteristics and progress. It should also afford
that in his own positive war service, that no fault of his has detracted from the
war effort of the nation as a whole.

8. In cases of damage to aircraft caused by flying accidents occasioned by
negligence on the part of the pilot or other Naval personnel, abatements from pay
under K.R. & A.I. Article 1528, by way of restitution for damage done to Govern-
ment property, should not be made in future.

(K.R. and A.I., Article 1528.)

(A.F.O. 2476/42.)

(A.F.O. 2599/42 is cancelled.)
Home Fleet

E.A., 1st Class, Arthur S. Lilliecrap, Official Number D/M.38492, has been elected Lower Deck Representative for the Home Fleet at the Headquarters of the Navy, Army and Air Force Institutes for eight months commencing 1st January, 1943, in succession to Chief Petty Officer Frederick A. French, official number D/J.94777.

(A.F.O. 2239/42.)
(A.F.O. 356/43 is cancelled.)

Section 3.—G., T., N., E., etc., & STORES ; HULL
EQUIPMENT & FITTINGS

1561.—Gunnery Instruction for Destroyers and Small Ships before Commissioning or after Changes in Personnel
(G.D. 01495/42/42.—8.4.1943.)

A.F.O. 596/43 is to be amended as follows :

After paragraph 2 add new sub-paragraph—

"The normal one week's pre-commissioning course is insufficient to train gun's crews of ships fitted with the Bofors, Mark IV mounting, and in this case it is recommended that two complete gun's crews for ships with one mounting (to enable two watch crews to be trained), and one gun's crew for each gun in ships with more than one mounting, should be sent to H.M.S. 'Excellent' for a fortnight's course prior to the ship commissioning. (Chatham and Devonport crews will eventually be trained at their respective schools when Bofors, Mark IV mountings are supplied.)"

After paragraph 3 add new sub-paragraph:

"In ships fitted with Bofors, Mark IV mountings :
(a) An officer should be sent to 'Excellent' for a four days course as convenient during the period the gun's crews are being trained.
(b) An O.A. should be sent to 'Excellent' for a four days course immediately on being drafted and before joining the ship.
(c) An E.A. should be sent to Messrs. Vickers Armstrong, Crayford, Kent, for a four or five days course before he joins his ship. (As far as possible E.As. should be sent in groups of two or three rather than singly.)"

Paragraph 7, line 8. After "drafted" insert—

"In the case of ships fitted with Bofors, Mark IV, application should be made to Captain, H.M.S. 'Excellent'"

(A.F.O. 596/43.)

1562.—Guns, Machine, Browning, 0-303-in.—Omission of Barrel Extension Stud
(C.I.N.O/G.1179/43.—8.4.1943.)

0-303-in. Browning guns of recent manufacture may be found to have the barrel extension stud omitted. This modification has been carried out to assist manufacture and does not impair gun functioning.

2. The stud was fitted merely to assist assembly.

(B.R. 650.)

1563.—Guns, Machine, Hefah (V), 0-303-in., Mark I—Reamer Gas Port
(A.S./G. 706/43.—8.4.1943.)

Reamers Gas Port will not be issued for use with Hefah guns.

2. Reaming of the gas port, if found necessary, is to be done with a standard ½-in. diameter drill.

3. The Naval Proportion Book will be amended.

(G. 8761/43.—8.4.1943.)

Ejector spring covers of 0-303-in. Vickers G.O. guns are being broken by rough usage when being stripped. It has been found that a screw-driver is being used to lever up the lugs of the cover which is then being knocked to the rear with a hammer. The correct method of stripping this part is as laid down in A.P. 1641B, Vol. II, Part 3, Section I, Chapter 1, Paras. 36 and 37, and in B.R. 776.

2. If the cover is tight in its slides it should be eased until it is removable without the use of undue force.

3. To avoid the possibility of the cover coming loose during firing, or being blown off, care must be taken to ensure that there is sufficient set on the spring to hold the rear end firmly in the housing. The set should be approximately 4½ degrees inwards on the front end.

(A.P. 1641B and B.R. 776.)

1565.—Guns and Breech Mechanisms—Q.F.—Formation of Ice Behind Extractors—Weather Precautions, etc.
(G. 1528/43.—8.4.1943.)

During a recent action in northern waters, it was found that, in several destroyers, the formation of ice behind the extractors prevented the guns from being loaded, although the breeches worked correctly with no cartridge in the chamber.

2. To prevent this, at least for the opening salvos, Q.F. guns should, in cold weather, be kept loaded with a well-greased tube testing cylinder or fired cartridge case, and the extractors and extractor pockets lightly coated with Cooper's Grease or Grease D.T.D.143 C.

3. The tube testing cylinders or fired cartridge cases should be removed at frequent intervals and regreased as necessary.

1566.—Cancelled.

1567.—Gun Mountings—2-pdr., Marks II*, V, VI, VII and VIII, 0-5-in., Marks I, II, III and IV—Instructions for Operation in Cold Weather—Heating Requirements
(G. 04181/43.—8.4.1943.)

The instructions given in Part II of C.A.F.O. 1333/41 are cancelled and replaced by A.F.O. 1025/43 and the reference at the end of A.F.O. 5652/42 to the cancellation of C.A.F.O. 1333/41 should be amended to read "C.A.F.O. 1333/41 Part II".

2. The instructions in Part I of C.A.F.O. 1333/41 and in A.F.O. 5652/42 are to be considered as still in force and the necessary action called for in paragraph 27 of A.F.O. 6305/42 in regard to the above mountings should be taken accordingly.

(A.F.Os. 6305/42, 5652/42, 1025/43.)

(C.A.F.O. 1333/41—not in annual volume.)

1568.—Gun Mountings—4-7-in. Twin Mark XX—Improvement of Lubrication to the Training Roller Axle Pins—As. and As.—REPORTS
(L and M Class Destroyers Dockyards and Repair Establishments
(G.015411/42.—8.4.1943.)

During the recent refit of a destroyer carrying these mountings it was found that considerable corrosion of the training rollers existed inside the axle pin hole. The existing lubricating arrangement does not allow oil to reach the bearing surfaces of the axle pins until the lower section of the central recess of the roller is filled with oil; this is in practice seldom occurs.
2. A.F.O. Diagram 103/43 (G.R.6252) shows a modified oil hole arrangement which will give a positive supply of lubricant to these bearing surfaces. The modifications necessary are shown in red.

3. Commanding Officers of ships concerned should insert an item Classification “A” in their next list of As. and As. to cover these modifications. Ships’ staff should modify the axle pins to agree with A.F.O. Diagram 103/43 (G.R.6252) as the opportunity presents itself. The pins can be removed by using the access holes provided. The cover plate item 2/28840 GB should be removed on the next occasion of lifting when any remaining unmodified pins can be made to agree with the A.F.O. Diagram No. 103/43.

4. Until this modification is carried out or until the cover plate item 2/28840 GB is removed as the case may be, particular care should be taken in the lubrication of these items. At frequent intervals the syphon wool should be removed from the lubricators provided and about one-third of a pint of oil poured in. The wool finally being replaced.

5. C.O.’s are also to amend their lubrication diagrams as indicated in the A.F.O. Diagram No. 103/43.

6. The register number of mountings should be reported to the Admiralty when these modifications are completed.

(This order should be retained until complied with.)

1569.—Ammunition—Fuzes Nos. 207 and 211 with Plastic Caps—Damage by Rough Usage

(Pt. G. 02432/42.—8.4.1943.)

With references to A.F.O. 1766/42 instances have been reported in which misusage during handling has caused the plastic caps of Fuzes No. 207 to fracture. Attention is therefore drawn to the necessity for care to be exercised when handling such rounds.

2. Trials have shown that if the plastic cap is fractured the accuracy of time to burst will be impaired but such fracture is not liable to cause a premature

3. Manufacture of plastic caps for Fuzes No. 207 and 211 will be discontinued but a large number of fuzes with these caps will remain in supply.

(A.F.O. 1766/42.)

1570.—Ammunition Supply—Ready-use Shell and Cordite Lockers in Lieu of Racks—As. and As.

Twin Screw Minesweepers—2nd and 4th Minesweeping Flotillas

(G. 613/43.—8.4.1943.)

The instructions contained in A.F.O. 6402/42 are to apply also to the above ships.

2. With regard to the additional topweight resulting from these alterations, special attention is directed to paragraph 6 of the above Order and to A.F.O. 852/43.

(A.F.O.s. 6402/42 and 852/43.)

(T.is Order is to be retained until complied with.)

1571.—Ammunition Supply—Communications—Efficiency of Multiphone Communications for E.C. Hoists and Conveyors—REPORTS

Ships concerned

(G. 04390/43.—8.4.1943.)

It has been reported that the multiphones fitted for communication from top to bottom of E.C. hoists and end to end of ammunition conveyors are inaudible when machinery is running or when there are any other extraneous noises.

2. Commanding Officers of ships concerned should forward a report on this matter as soon as possible.
1573.—Ammunition (Boxes, etc.)—Pieces Packing, Wood, for Box C.222—Liability to Break on Opening Box

(A.S. 17444/42.—8.4.1943.)

Investigation at a R.N. Armament Depot has established that, if the lid of the Box, C.222, is lifted at one end, the packing piece at the other end is liable to get broken. If the lid is lifted by both ends at once, no damage occurs to the wooden packing pieces. The incidence of broken packing pieces has been heavy, and every care is to be taken to open the box, C.222, by lifting the lid by both ends at once.

1574.—Anti-Ship Fire Control—A.F.C. Tables, Marks V, VI and VI*—Modified Knob for Change Scale Handle of Range Plot

Ships concerned

(G. 01132/43.—8.4.1943.)

A.F.O. Diagram 96/43 shows details and arrangement of a mushroom shaped knob for fitting to the change scale handle of the range plot on A.F.C. Tables, Marks V, VI and VI*, so that the handle can be operated without fouling the casing of the "error in rate" receiver motor.

2. If desired the two details should be made and fitted by ship's staffs.

(This Order should be retained until complied with.)

1575.—Projectile, Practice, High Angle, B.L., 6-in. Guns, Mark V B.Q.—Limitation of Temperature of Supercharge in B.L., 6-in., Marks XII and XIIIB Guns

(G. 03411/43.—8.4.1943.)

With supercharges at charge temperatures above 95°F., the pressure in B.L., 6-in., Marks XII and XIIIB guns is greater than that for which the H.A. practice projectile, Mark V B.Q., is designed.

2. These projectiles are, therefore, not to be fired with supercharges with a temperature of charge above this figure.

1576.—Projectors, Spigot ("Hedgehog")—Type A, Fire Control, for "Hedgehog" Mountings—Q, Mark II Receivers

Ships, Dockyards and Bases concerned

(G. 04395/43.—8.4.1943.)

The following information regarding the supply of spare gear for ships fitted with Type Q, Mark II, stabilising receivers fitted on "Hedgehog" mountings (Type A control) is promulgated for guidance of ships, depot ships and bases.

2. Ship's spares.—One set of small spares, including two sets of mercury switches is allocated to each component stabilising receivers, Type Q, Mark II. Ships which are not in possession of a set of spares should demand a set from Base Torpedo Officers, London, Liverpool or Greenock.

3. Base spares.—These are allocated to bases as follows:

- Londonderry ... 4 sets
- Greenock ... 3 sets
- Liverpool ... 3 sets
- Belfast ... 1 set
- Milford Haven ... 1 set
- Devonport ... 1 set
- Portsmouth ... 1 set
- Chatham ... 1 set
- Trinidad ... 2 sets
- Rosyth ... 1 set
- Scapa ... 1 set
- Reykjavik ... 2 sets
- St. Johns ... 2 sets
- Argentia ... 2 sets
- Halifax ... 2 sets
- Bermuda ... 1 set
- Jamaica ... 2 sets
- Freetown ... 2 sets
- Gibraltar ... 2 sets

Each set of base spares includes two mercury switches and a complete gimbals system and gyro. Base spares are being distributed as fast as the production situation will permit.

4. Repairs to defective gyros or gimbals systems should not be undertaken by ship's or base staffs, and in the event of a gyro or gimbals system becoming defective they should be removed as a complete assembly and replaced by the base spare unit. The defective unit should be returned to the Resident Assistant Gun Mounting Overseer, care of Messrs. Vickers-Armstrongs, Ltd., Crayford, Kent, for repair. This unit will be returned to the base after repair. Care should be taken to ensure that invoices show the correct address for re-despatch after repair.

5. Defective mercury switches should be returned to the Resident Assistant Gun Mounting Overseer, care of Messrs. Vickers-Armstrongs, Ltd., Crayford, Kent, who will issue a replacement on receipt.

It is desired to emphasise that due to the present supply situation, replace mercury switches will not be issued unless the defective item is returned.

6. Standing contracts for the repair of stabilising receivers and replacement of defective mercury switches have been placed with Messrs. Vickers-Armstrongs, Ltd., Crayford, on Contracts Nos. C.F. 4742/43/8 III G/F.192 (D.N.O.) and C.P. 59224/43/8 III G/F.200 (D.N.O.) respectively.

7. Type Q, Mark II, receivers of early manufacture were despatched with cadmium plated steel screws securing the main cover to the casing. It has been found that these quickly corrode, resulting in loss of watertightness. Later instruments are fitted with brass screws.

Ships' staffs should examine the receivers to determine whether cadmium plated steel screws are fitted, and if this is the case a set of replace H.R.M.B. screws should be demanded from the Admiral Superintendent, Chatham. As these receivers are of a special type, stocks have been provided at the yard for the purpose.

(This Order is to be retained until complied with.)

1577.—Above-water Torpedo Tubes—21-in. T.R. Mark IV**—Position of Tube Order Instrument, etc.—REPORTS—As. and As.

"Dido" and "Fiji" Classes

(T.03333/42.—8.4.1943.)

In view of reports from sea of difficulty in communication between No. 1 of the tubes crew and the communications number due to noise from engine room ventilating fans it has been decided that—

(a) The order and director angle receiver transmitter,
(b) the switch for illumination of (a) and tube training receiver,
(c) the order gong for (a).

should be mounted on the tubes instead of on an adjacent bulkhead, a saddle on the tube being provided for the communication number.

2. The distribution boxes and link box are also to be repositioned.

3. The layout of the gear and modifications required are indicated in A.F.O. Diagram No. 92/43 (1-2).

4. The telephone fitted on the bulkhead at the local control position should be repositioned concurrently with the modification to the tubes, in the tube shelter, the additional hooter, where fitted, being removed.

5. The work is to be carried out at the first convenient opportunity, and an item Classification "B" is to be inserted in the next list of As. and As. for these vessels.

6. Reports should be forwarded when the work is completed.

1578.—Depth Charge Pistols, Marks XIII*, XIV and XVI—Modification

Ships Carrying Mark VIII and XI Aircraft Depth Charges

(T.758/43.—8.4.1943.)

To enable pistols to be secured more easily in Mark VIII and XI depth charges with "break off" tails fitted, the following modification to pistols is to be carried out by ships' staffs. The modification will prevent the pistol rotating in the primer tube when the securing nut is being screwed up.
2. The modification is shown in A.F.O. Diagram No. 97/43 and consists of:—
(a) Drilling a small hole in the adjuster body and sweating a small peg into it.
(b) Cutting two slots, A and B, in the joint washer 180° apart.

3. When an explosive safety clip is fitted, the pistol is inserted in the primer tube with the lug of the safety clip downwards and the joint washer must be placed so that the slot A cut in the lug of the joint washer engages with the small peg.

4. When no explosive safety clip is fitted, the pistol is inserted in the primer tube with the lug of the safety clip upwards, and the joint washer must be placed so that the slot B, 180° from A engages with the small peg.

5. The modification will be embodied in all depth charge pistols of future manufacture, and existing depot stocks of pistols Mark XIII, XIV and XVI will be modified.

6. Washers joint modified in accordance with paragraph 2(b) have been allocated Stamp Number 6662 and are to be painted blue.

7. It is essential that all pistols for use from aircraft must be fitted with high tensile steel washers at the earliest possible date. Such washers have in the past been painted red and any pistols found during overhaul not to be so fitted are to have the washers replaced by washers Stamp No. 6662.

8. Washers joint Stamp No. 6662 with slots already cut are on order and will be distributed as soon as possible to R.N.A. depots and O.C.As. to whom demands should be passed for the quantities required to complete the pistols referred to in paragraph 7.

9. The joint washer is the component most likely to be damaged by the detonation of an adjacent depth charge and if damaged the pistol may come out of the primer tube and cause failure.

1579.—Depth Charge Pistols—Marks IX and IX* Ships carrying Mark VII Heavy Depth Charges

The modification described in A.F.O. 1578/43 may be carried out by ship’s staffs, maintenance bases and depot ships on Mark IX and IX* pistols if desired.

2. It is immaterial which slot is engaged with the small pin when assembling the depth adjuster.

3. The use of the retaining tool St. No. 6220 to hold the body of the pistol while tightening the securing nut will no longer be necessary with the modified pistol.

4. The modification will be embodied in all depth charge pistols of new manufacture.

5. It is most desirable that all pistols should be fitted with high tensile steel joint washers and similar action is to be taken as in paragraph 8 of A.F.O. 1578/43.

1581.—Paravane Towing Arrangements (“Fiji” and “Illustrious” types)—Water Pressure Release Holes in Forefoot Casting—As. and As.

New Construction and Ships on Service.

To enable the carrier to be removed from the thrower for cleaning and maintenance, a special bracket to take the place of a davit can be fitted on the top of the stowage rack to which a tackle is shackled and the carrier lifted.

3. The modified stowage rack will be fitted in all future new construction vessels carrying Mark IV throwers.

4. For ships in service fitted with Mark IV throwers the existing stowage racks are to be modified at the first available opportunity and an item is to be included in the next list of As. and As, classification "A," to cover the work involved, which can be carried out in about three days without removing the racks from the ships.
5. When stowage racks have been modified, all davits, guy's, slings and tackle
(with the exception of one tackle for four or less number of throwers) are to be
landed.

1583.—Cartridges, Impulse, Torpedo—Types and Services for which required
(A.S. 3010/43.—8.4.1943.)
A.F.O. 1343/43 is cancelled.

1584.—Naval Smoke Floats—Improved Sealing of Cover Plate
(N.S.35346/42.—8.4.1943.)

With reference to paragraph 7 of A.F.O. 481/42, compressed asbestos fibre
gaskets and mixed powder and liquid for manufacture of C.D. Cement, No. 4,
have been requisitioned for purchase as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Decom.</th>
<th>Chatham</th>
<th>Shoreham</th>
<th>Poolemouth</th>
<th>Devonport</th>
<th>Plymouth</th>
<th>Cowes</th>
<th>Deal</th>
<th>Newport-on-Tyne</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed asbestos fibre gaskets</td>
<td>No. 11000</td>
<td>700</td>
<td>3720</td>
<td>3120</td>
<td>1020</td>
<td>3000</td>
<td>(A)</td>
<td>9300</td>
<td>1500</td>
<td>33900</td>
</tr>
<tr>
<td>Mixed powder consisting of equal weights of magnesia oxide and slate powder, in 7-lb. tins</td>
<td>Lbs. 924</td>
<td>56</td>
<td>322</td>
<td>268</td>
<td>42</td>
<td>368</td>
<td>(B)</td>
<td>388</td>
<td>126</td>
<td>2884</td>
</tr>
<tr>
<td>Liquid consisting of 40 per cent, glue and saturated magnesium chloride solution in equal volumes (in 1 pint bottles)</td>
<td>Pints 462</td>
<td>28</td>
<td>161</td>
<td>133</td>
<td>42</td>
<td>164</td>
<td>(C)</td>
<td>399</td>
<td>63</td>
<td>1442</td>
</tr>
</tbody>
</table>

* Includes the following quantities for shipment from Mersey area:
  - Gibraltar: 150 No. 14 lbs. 7 pints
  - Malta: 250 No. 21 lbs. 10 pints
  - Alexandria: 700 No. 32 pints

† Includes the following quantities for shipment from Seven Area:
  - Simonstown: 1800 No. 184 lbs. 77 pints
  - Durban: 5000 No. 420 lbs. 210 pints
  - Freetown: 800 No. 20 lbs. 35 pints
  - Ceylon: 1000 No. 84 lbs. 42 pints
  - Bermuda: 300 No. 28 lbs. 14 pints
  - Jamaica: 200 No. 21 lbs. 10 pints
  - Trinidad: 150 No. 14 lbs. 7 pints

(A.F.O.4881/42.)

1585.—Igniters Torpedo—U.S.A. Mark VI—Withdrawal
(A.S.4688/43.—8.4.1943.)

The following igniters torpedos, Mark VI, of U.S.A. Manufacture, are to be withdrawn from service:

<table>
<thead>
<tr>
<th>Lot. No.</th>
<th>Date of Filling</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>7-39</td>
</tr>
<tr>
<td>78</td>
<td>1-40</td>
</tr>
<tr>
<td>94</td>
<td>4-40</td>
</tr>
<tr>
<td>115</td>
<td>8-40</td>
</tr>
<tr>
<td>123</td>
<td>9-38</td>
</tr>
<tr>
<td>135</td>
<td>9-39</td>
</tr>
</tbody>
</table>

2. Igniters of these lot numbers on board H.M. ships are to be landed at the nearest Naval Armament Depot and igniters of other lots drawn in lieu.

3. N.A. Depots—Igniters of these lot numbers in stock and any subsequently landed from H.M. ships are to be emptied and the empty cases retained pending further instructions.

1586.—Cables, Temporary, D.G.—Clips for Securing

H.M. Ships and Establishments
(D.015799/42.—8.4.1943.)

The following details of a method of securing temporary D.G. coils consisting of bunched single-core T.R.S. cables (sausage coils) on an exposed deck, which has proved satisfactory under service conditions, are promulgated for information.

2. The wrapping of the cores comprising the D.G. coil should be reinforced

3. The brackets and securing strips are made up from mild steel strips, Â½-in. by 1½-in. and 3½-in. by 1½-in. respectively, as shown in A.F.O. Diagram No. 91/43.

4. The clips should be spaced at intervals of not more than 20 inches. Where the deck plating is of D quality in excess of 20 lbs., the clips should be riveted to the deck and not welded.

5. This order must not be taken as affecting in any way the instructions laid down in A.F.O. 6065/42, which states that single-core tough rubber sheathed cable must only be used for temporary D.G. coils where armoured multicore cable is not available.


A.F.O. 6065/42.

1587.—Microphone Mine Detector Outfits—Provision of Components
(N.S. 14821/43.—8.4.1943.)

Provision is being arranged, as shown below, of a further 300 microphone mine detector outfits for “Algerine” minesweepers, “Isles” class trawlers, and B.A.M.s.

<table>
<thead>
<tr>
<th>Subhead and Items</th>
<th>Pattern</th>
<th>Description</th>
<th>Quantity</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2A</td>
<td>16578</td>
<td>Block, snatch, Type &quot;A&quot;, complete with rubber lining.</td>
<td>900 No.</td>
<td>Being purchased.</td>
</tr>
<tr>
<td></td>
<td>16579</td>
<td>Rubber lining (spare for Type &quot;A&quot; snatch block).</td>
<td>2,700 No.</td>
<td>Being purchased (900 will be delivered direct to supplier of snatch blocks, pattern 16578).</td>
</tr>
<tr>
<td></td>
<td>16580</td>
<td>Rubber hose, 3-ft. lengths, 3/4-in. i.d. by 1½-in. o.d.</td>
<td>3,600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16581</td>
<td>Box, transport</td>
<td>300 No.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16582</td>
<td>Microphone, port and starboard.</td>
<td>1,300 No.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16584</td>
<td>Amplifier unit, with loudspeaker A/S2, pattern 2076.</td>
<td>300 No.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9086</td>
<td>Valve V.R.27 (in lieu of valve H.P.2, Osram).</td>
<td>600,000 yards</td>
<td>Running contract being placed for 10,000 yards per month.</td>
</tr>
<tr>
<td></td>
<td>8714</td>
<td>Drydax, orange triangle angle, H.2915 (120 volts).</td>
<td>900 No.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8714A</td>
<td>Drydax, orange triangle angle, H.2915 (120 volts).</td>
<td>1,800 pcs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8715</td>
<td>Drydax, orange triangle angle, H.2915 (120 volts).</td>
<td>900 No.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8716</td>
<td>Drydax, orange triangle angle, H.2915 (120 volts).</td>
<td>1,800 pcs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8716A</td>
<td>Drydax, orange triangle angle, H.2915 (120 volts).</td>
<td>900 No.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8716B</td>
<td>Drydax, orange triangle angle, H.2915 (120 volts).</td>
<td>1,800 pcs.</td>
<td></td>
</tr>
</tbody>
</table>

(A.F.O. 6065/42.)
2. The components being purchased will be delivered to Naval Store Depot, Forome House. (See A.F.O. 423/43.)

3. The stores should be assembled into complete outfits in accordance with pages 7 and 8 of Handbook O.U.6387, and distributed without demand to the vessels referred to in paragraph 1 above. (Superintending Naval Store Officer, Portsmouth, will be informed by Admiralty letter of the names of the vessels concerned.)

(C.A.F.O. 112/42.)

1588.—Torpedo Stores—Chests and Cylinders for Pistols, T.342 and T.491 Types

(A.S. 3657/43.—8.4.1943.)

With reference to Admiralty “A” message No. 487 of 22.3.43, the following items are to be added to the contents of “Chests, complete, tools and spare gear, pistols (St. No. T.342 type)” and “Cylinders, complete, I.R. gear, pistols (St. No. T.342 type),” as shown, viz.:

Chests, tools and spare gear—
Nuts, lock, split plug, St. No. 5917 ........................................ 2
Plugs, split, testing circuit, St. No. 5901 .................................. 2
Screws, securing, for carrying inertia switch and terminal screw for leads, St. No. 6611 .......................................................... 6
Tags, terminal, St. No. 8884 .................................................... 12
Cylinders, I.R. gear—
Pads, rubber, clamp extension, St. No. 8896 ............................ 6
Pads, rubber, separating battery and condenser, St. No. 8897 ......... 6
Rings, I.R., aft. intensifier bracket, St. No. 5962 .......................... 6

The nomenclatures of the chests and cylinders is to be amplified accordingly.

2. Demands for the items required should be forwarded to the nearest torpedo depot.

1589.—Torpedo Stores—Bushes St. No. 5346B—Introduction

(A.S. 2939/43.—8.4.1943.)

To facilitate manufacture of Bushes, aft bearing, crank, engine, St. No. 5346, an alternative design bush of the same dimensions but having a lead bronze lining has been introduced.

2. The new pattern bush will be accounted for as follows, viz.:

Section IV :—
Bushes, aft bearing, crank, engine, St. No. 5346B, and will be interchangeable in supply with Bushes, St. No. 5346.

3. Torpedo store accounts and labels of chests are to be amended as necessary.

1590.—Navigational Facilities

L.C.A.

(M/D.N.E. (C.O.): 3718/42.—8.4.1943.)

All existing magnetic L.C.A. (Nos. 53–141 inclusive) are to be fitted with an additional compass Pattern 1151A. The compass should be fitted in accordance with the arrangements shown on A.F.O. Diagram 99/43 (D.N.C. 26/AB/256).

1591.—Connections to Compass Corrector Coils

L.C.T. (1–4)

(C.D. 160/43.—8.4.1943.)

In existing L.C.T. (1–4) the connections to the compass corrector coils at the standard binnacle are made by means of plugs and sockets. Instances have occurred wherein the plugs have been removed and subsequently replaced in the wrong sockets.

2. This difficulty will be eliminated in new construction craft, wherein connections will be made in a conventional type of terminal box through standard glands. There will then be no plug and socket connections which will be liable to become interchanged.

3. In existing L.C.T. (1–4) fitted with plug and socket connections the plugs and sockets should be marked with distinguishing colours as follows:

- Heeling error coil ......................................................... Red
- “B” coils—“X” winding ................................................. Blue
- “B” coils—“Y” winding (if fitted) ................................. Green

It should thus be possible to ensure that if the plugs are removed they are subsequently replaced in the correct sockets.

1592.—Steam and Feed Systems—As. and As.

“Esses”, “Vees”, “Wairs”, and “Shakespeare” and “Scott” Class Leaders.

(D. 025899/42.—8.4.1943.)

The following alterations have been approved to improve subdivision of the main steam and feed systems in these destroyers:

1. To fit a sluice valve in the reserve feed suction line, the valve to be situated in the aft boiler room adjacent to the reserve feed tank and arranged to be worked locally and from the upper deck.

2. To fit an isolating valve in the main steam cross connection pipe in the engine room.

2. The Commanding Officers of destroyers of the above-mentioned classes not so fitted are to include these items in their next lists of As. and As., Classification B.

3. Valves for (1) are to be provided by the refitting authorities.

4. The supply of the valves for (2) is being arranged by the Admiralty for all destroyers of these classes. A further Order will be issued when these valves are available for fitting.

(C-in-C. The Nore, 24.11.42, No. 7019. 95.E.)

(This Order is to be retained until complied with)

1593.—Sulzer Engine Gudgeon Bearings

British and Allied Submarines and other Vessels fitted with Sulzer Engines

(D. 015369/42.—8.4.1943.)

Experience in refitting Sulzer-engined submarines indicates that the most suitable specification for the white metal for this design of gudgeon pin bearing is 84 per cent. tin, 7 per cent. copper and 9 per cent. antimony, instead of the normal Admiralty composition of 87–89 per cent. tin, 3–4 per cent. copper, 8–9 per cent. antimony. The use of this special mixture is approved for this service.

Arrangements for the provision of the necessary stocks of white metal are to be made by Chatham dockyard officers, the ingots being suitably marked to prevent issue for any other service.

2. Careful attention to detail has been found necessary to avoid failure during the initial running-in period of gudgeon pin bearings of this type, and the following notes are issued for guidance:

(a) Finish of gudgeon pins.—If the pin is in bad condition the final finish should be obtained by hand stoning with a fine lap or, if necessary, white oilstone (Pattern 635C—Washita—is suitable), using only fuel oil as a lubricant. The pin should be finished dead smooth, with no scratches or blemishes, and should mark over the entire bearing surface when tried in a ground female gauge (an exact copy of the bearing) with thin marking. Care must be taken to preserve the bearing surface parallel to the abutment surfaces where the pin meets the piston body.

(b) Bedding in the lower half bearing.—The position, size and depth of the oilways is most important. They should, preferably, be machine cut. The bearing surface can be bedded in as follows:

Method (i).—A “size” mandrel is first bedded into the whole of the lower half bearing, taking care to obtain the maximum area of contact. An “oversize” (5,1000 on diameter) mandrel is then bedded in until it just touches the upper edges of the outer portions of the bearing. During this process, metal is scraped away from the horns of the bearing, but the main bearing surface must not be touched.
**1594.** R.D.F. Types 282/4/5 Modified Sets and Type 283—Addition of Fuse, Cartridge, Type “B”, 100 Milliamps, Pattern W.6937

(S.D. 0354/43.—8.4.1943.)

A Fuse, Cartridge, Type “B”, 100 milliamps, Pattern W.6937, is to be included in the negative H.T. circuit of certain Amplifiers M.56, Pattern W.3126, fitted as part of the receiver outfits for Types 282/4/5 modified sets and Type 283.

2. Ships fitted with amplifier M.56, Pattern W.3126, are to demand from S.N.S.O., Haslemere, one “Box of Parts for modifying Pattern W.3126 amplifier M.56”, Pattern W.7330 for each amplifier M.56, Pattern W.3126 fitted.

Amplifiers M.56 with serial number 1207 onwards will include the Fuse, Pattern W.6937.

3. Each box of parts, Pattern W.7330, contains the following stores:

<table>
<thead>
<tr>
<th>Pattern No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>W.2830</td>
<td>Fusetholder, single, for fuse, cartridge, type &quot;B&quot;</td>
<td>1</td>
</tr>
<tr>
<td>W.6937</td>
<td>Fusecartridge, type &quot;B&quot;, 100 milliamps. 3 (includes 2 spares)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screw, countersunk, head 4 B.A. by 1/4 in. long.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Locknut, 4 B.A. by 1/4 in. thick</td>
<td>1</td>
</tr>
</tbody>
</table>

4. The following instructions are to be carried out by ships’ staffs and depot ships’ staffs when fitting the 100-ma. fuse and holder in accordance with A.F.O. Diagram 98/43 (A.S.E. Drawing No. 36273):

(a) Disconnect power supply plug and input and output plugs.
(b) Unscrew and remove the four nuts holding amplifier M.56 to the rack.
(c) Remove amplifier M.56 from the rack and take off the rear cover from the amplifier by detaching the fixing screws.
(d) Drill base plate and fix fuse holder as shown on A.F.O. Diagram 98/43 (A.S.E. Drawing No. 36273).
(e) Remove connection from terminal 11 on transformer T.1 at the junction point on condenser C.1 and resistance R.1.
(f) Connect the end of wire from terminal 11, now free, to one side of the fuse holder. The other side of fuse holder should be connected to the junction of R.1 and C.1.
(g) Place the fuse in position between the clips on the fuse holder.

The modification completed, amplifier M.56 should be reassembled and reconnected for service.
4. It is to be noted that any advance fitting-out drawings, etc., which may have been distributed are superseded by this specification and should be destroyed. (A.F.O. 790/40.)

1598.—Signal and Telegraphist Ratings and Air Gunners—Training when on Passage—REPORTS
(N.S./N. 18405/41.—8.4.1943.)

With reference to paragraph 5 of A.F.O. 2125/42, the Naval authorities at ports of destination abroad where communication ratings are disembarked are to report particulars of the disposal of the stores received to date.

2. Similar reports should be forwarded for any subsequent receipts. (A.F.O. 2125/42.)

1599.—Swordfish Aircraft—Generator Carden Drive and Electrical Generator—Alignment.
(A.M.R. 2921/42—8.4.1943)

To ensure correct alignment when installing an electric generator the following instructions are to be observed, the work being supervised by a Petty Officer Air Fitter or Air Artificer or above, or by an equivalent R.A.F. rank:

(a) Check the distance from the face of the generator drive casing to the upper surface of the mounting bracket. This distance should be 7.440 in. + 0.050in. as shown in A.F.O. Diagram No. 93/43, Fig. 2, any necessary correction being made by the adjustment provided on the mounting bracket.

(b) After assembly of the driven bevel unit to the generator drive casing and on completion of the back-lash and alignment checks, assemble a spindle to the universal shaft end (long) and secure with a 2 B.A. nut as shown in A.F.O. Diagram No. 93/43, Fig. 2. The spindle, pin and clip required for this operation are to be manufactured from local resources as shown in A.F.O. Diagram No. 93/43, Fig. 1. Position a standard dial indicator gauge to touch the top face of the mounting bracket. Turn the engine to ensure that the bracket lies at right angles to the axis of the drive as shown by the dial reading. Any necessary correction is to be effected by the adjustment provided on the mounting bracket.

(c) Smear the splines of the generator shaft coupling with anti-freeze grease, Stores Ref. 314/49, fit the coupling to the shaft and lock in position with the bolt and tabwasher.

(d) Assemble the carden shaft complete with flexible couplings on the engine. Ensure that the plain washers "A", A.F.O. Diagram No. 93/43, Fig. 3, are correctly positioned between the driving members and the flexible couplings as shown. Fit the rubber joint rings into the grooves of the upper bearing housing and generator drive housing.

(e) Smear the carden shaft laminated spring coupling with grease. Place the generator drive housing in position on the mounting bracket and assemble the generator, at the same time entering the laminated spring coupling into the slots provided on the generator shaft coupling. Insert the generator securing bolts but do not tighten securely at this stage.

(f) Secure the clip (A.F.O. Diagram No. 93/43, Fig. 3) under the head of one flexible coupling securing bolt. Adjust the dial indicator so that the spindle touches the side of the generator shaft coupling. Turn the engine, noting dial indicator readings and, if necessary, move generator to correct any errors in alignment. The maximum permissible error is 0.020in. but every effort is to be made to align the generator to within as close a limit as possible.

(g) Tighten the generator securing bolts.

(h) Remove the dial indicator and dismantle the clip and pin. Replace and tighten the flexible coupling securing bolt. Lock all coupling bolts with new split pins.

(i) Finally assemble the hinged generator drive cover.

2. A note drawing attention to this order is to be made against Paragraph 413 in A.P. 1517, Vol. 1. The relevant maintenance schedule will be amended in due course.

(A.F.O. 2064/42 is cancelled.)
1603.—Life Lines
Minor Landing Craft
(M. 0269/43.—8.4.1943.)

With reference to A.F.O. 6060/42 and Diagram 324/42, reports have been received to the effect that great difficulty is being experienced in obtaining the necessary eyebolts and fittings, and that the methods of securing the life lines are not entirely satisfactory.

2. In recent operations it has been found advantageous to fit life lines in the manner stated below for the types of craft mentioned and such method should be adopted in new construction vessels, and in craft being fitted out at bases:

(1) L.C.A. & L.C.S. (M).—A 2½-in. rope or 1-in. wire Jackstay to be fitted taut between forward and after gunwale sling plates on both sides of the craft. The Jackstay to be lashed at each plate leaving sufficient clearance around the hole for slinging arrangements.

Lifeline loops of 2½-in. rope to be fastened to Jackstay over the side 2 feet apart and to within 6 inches of the W.L.

(2) L.C.M. (I) (Early type with hinged protective flaps).—A 2½-in. rope or 1-in. wire Jackstay to be fitted inside the gunwale on each side of the craft. Lifeline loops of 2½-in. rope to be fastened to Jackstay 2 feet apart and hanging over the side to within 1 inch of the rubbing strake.

(3) L.C.M. (I) (Without hinged protective flaps).—A 2½-in. rope to be secured to bulwark stays with lifeline loops hanging over the outboard side, between the stays, on each side of the craft. The loops to be within 1 inch of the rubbing strake.

(4) L.C.M. (III).—A 2½-in. rope or 1-in. wire Jackstay to be fastened to the forward and after bollard on each side of the craft. Lifeline loops of 2½-in. rope to be fastened to Jackstay. Loops to be 3 feet apart and to hang down to within 6 inches of the water line.

(5) L.C.P. (L) & (K).—A 2½-in. rope to be fastened to the supports of the handrail, which runs the length of the well of the craft, loops to be formed between the supports and to hang within 6 inches of the water line.

(6) L.C.P. (S).—Two ½-in. holes to be bored through the gunwale rubber spaced 3 inches apart; each pair of holes to be 2 feet apart. A 2½-in. rope is to be passed through the holes and seized underneath to form a lifeline loop; the loop to hang within 6 inches of the water line.

The loops are to be continuous over the length of the well of the craft, and where this method is employed the rubber should be increased in thickness.

(7) L.C.P. (M).—A 2½-in. rope to be passed round the inwaie and spliced. The loop formed to reach within 6 inches of the water line when thrown outboard and to be seized close to the inwaie to prevent movement. The loops to be spaced 2 feet apart.

(A.F.O. 0000/42 and Diagram 324/42 are cancelled.)

1604.—Electrically-Heated Hot Cupboards—Modifications to Grids and Door Guides—As. and As.
(D.N.C./V.25073/42.—8.4.1943.)

Reports have been received that wastage of food has occurred through dishes sliding from one end of the grids to the other in hot cupboards Patterns 1073 and 1074.

2. A simple method to overcome this tendency is shown on A.F.O. Diagram No. 102/43 (2).

It is considered that this modification is within the capacity of Ships' staffs, and Commanding Officers are requested to arrange for this to be carried out at the earliest convenient opportunity.

Meanwhile it is suggested, that an empty dish placed alongside the full dish would prevent slipping in a heavy seaway.

1605.—Switch and Lamp Boxes—Introduction of
(N.S. 12743/43.—8.4.1943.)

The following telephone switch and lamp boxes have been added to the Rate-Book of Naval Stores under Subhead F, item 1C, part 3 (page 26 of Demand):

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>13263</td>
<td>Boxes, switch and lamp, 6-way (weatherproof)</td>
<td>For sound-powered</td>
</tr>
<tr>
<td>13264</td>
<td>Boxes, switch and lamp, 6-way (non-water tight)</td>
<td>powered telephone</td>
</tr>
</tbody>
</table>

2. Purchase has been arranged with Messrs. Telephone Manufacturing Company Limited, under contract CP.99131/42, dated 26th January, 1943, for delivery as follows:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Chatham</th>
<th>Portsmouth</th>
<th>Devonport</th>
<th>Rosyth</th>
<th>Preston</th>
<th>Stroud</th>
</tr>
</thead>
<tbody>
<tr>
<td>13263</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>13264</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

3. The services for which these articles are being provided will be communicated to Overseers and Dockyards concerned as the requirements arise.

1606.—Telephones, Marks X and X*—Cod Line Harness for Breastplate
(G. 7855/42.—8.4.1943.)

As a result of trials it has been decided to adopt a simple cod line harness of the form shown on A.F.O. Diagram 100 43 in lieu of the existing canvas neckband of telephones, Marks X and X*, in order to overcome the difficulties in adjusting.

2. Arrangements are being made for this to be fitted on future supplies of these telephones.

3. In addition, with a view to enabling the grids to be easily removed for cleaning, the door guides are to be modified as shown on A.F.O. Diagram No. 102/43 (1). This will enable the doors to be readily unshipped and the grids removed.

4. Commanding Officers of H.M. Ships and Establishments should arrange for this modification to be included in the next list of As. and As.

5. Portsmouth Yard should be requested to prepare and circulate drawings of Patterns 1073 and 1074 hot cupboards including the above modifications.

1607.—Valve Gearing
(D. 2839/43.—8.4.1943.)

Trouble has been experienced with valve gearing which passes through water protection compartments and D.Bs. which are flooded from time to time as the teeth of the M.C.I. mitre wheels corrode and render the gearing inoperative.

2. In cases where similar trouble arises the mitre wheels should be replaced by gunmetal wheels.

3. This work should be treated as a defect.

(C.-in.-C., Eastern Fleet, 1.2.43, No. E.P. 338/366/2.)

1608.—Hose Connections—Standardisation
(N.S. 17901/43.—8.4.1943.)

Further to A.F.O. 5417/41, it has been decided to adopt the following connections for general use on the water services for all ships fitted with instantaneous couplings, where scrapping of existing material would not be involved:

<table>
<thead>
<tr>
<th>Service</th>
<th>Type of Coupling</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Fire main hose connections</td>
<td>2½-in. female, instantaneous</td>
<td>Vide A.F.O. 5417/41</td>
</tr>
<tr>
<td>Service</td>
<td>Type of Coupling</td>
<td>Remarks</td>
</tr>
<tr>
<td>---------</td>
<td>------------------</td>
<td>---------</td>
</tr>
<tr>
<td>(2) Dry dock flooding bonnets</td>
<td>2(\frac{1}{4})-in. male, instantaneous</td>
<td>To enable ships' own hoses to be used if necessary.</td>
</tr>
<tr>
<td>(3) Flushing connections to soil pipes</td>
<td>No. 3 Admiralty, male screw</td>
<td>For adaptors, see below.</td>
</tr>
<tr>
<td>(4) All suction connections</td>
<td>Admiralty, male screw, size as required.</td>
<td></td>
</tr>
<tr>
<td>(5) Fresh water filling connections</td>
<td>2(\frac{1}{4})-in. female, instantaneous</td>
<td>For adaptors, see below.</td>
</tr>
<tr>
<td>(6) Fresh water connection on distiller pump discharge</td>
<td>2(\frac{1}{4})-in. female, instantaneous</td>
<td></td>
</tr>
<tr>
<td>(7) Hangar spraying flushing connections</td>
<td>2 in No. 2(\frac{1}{4})-in. female instantaneous couplings</td>
<td>To replace former No. 4 A.S.B.J. coupling.</td>
</tr>
<tr>
<td>(8) Adaptors for</td>
<td>No. 3 female Admiralty screw one end; 2(\frac{1}{4})-in. male instantaneous the other.</td>
<td>Number as required.</td>
</tr>
<tr>
<td>(c) Soil pipe flushing connections</td>
<td>No. 4 female Admiralty screw one end; 2(\frac{1}{4})-in. instantaneous couplings to the other.</td>
<td></td>
</tr>
<tr>
<td>(d) Dry dock filling bonnets</td>
<td>No. 3 A.S.B.J. one end; 2(\frac{1}{4})-in. female instantaneous the other.</td>
<td>To enable dockside hoses to be used if required or to connect ship's hoses to dockside hydrants.</td>
</tr>
<tr>
<td>(e) To enable shore hoses to be connected to the firemain, or hangar spraying system</td>
<td>No. 3 A.S.B.J. one end; 2(\frac{1}{4})-in. male instantaneous the other.</td>
<td>Capital ships A/C carriers, 8 in No. Cruisers, etc., 6 in No. Flotilla leaders and destroyers, 2 in No.</td>
</tr>
<tr>
<td>(f) Fresh water filling</td>
<td>(i) 2(\frac{1}{4})-in. male instantaneous one end; No. 3 A.S.B.J. the other.</td>
<td></td>
</tr>
<tr>
<td>(g) Ship's side connection for washplace drains</td>
<td>One end No. 3 Admiralty male screw; 2(\frac{1}{4})-in. female instantaneous the other.</td>
<td>Number as required.</td>
</tr>
</tbody>
</table>

2. Supply of the connections and adaptors to vessels under construction is to be made by the shipbuilders except where arrangements have already been made for the adaptors to be supplied from Admiralty stocks and where any change now would result in delay in completion. This order supersedes all instructions for the supply of adaptors, etc., which may have been already issued for individual ships or classes of ships under construction.

3. An A.F.O. will be issued in due course regarding the adaptors shown under item 8 of paragraph 1 above giving the following details:

   (a) The pattern numbers allocated.
   (b) A full statement of the allowances to the various classes of ships when fitted with instantaneous couplings.

4. When demanding branch pipes (fixed jet, jet/spray, oilfyr or foam type), foam units, hoses, etc., the type of coupling required should be stated on the demands.

5. Where ships are fitted in accordance with paragraph 1 the following adaptors, etc., except those authorised for engineering purposes (see paragraph 6 below), will no longer be necessary:

   Patterns 1512, 1513, 1515, 1516, 1520, 1521, 1522, 1523, 1524, 1525, 1528, 1529, 1530, 1531.

6. Instructions regarding engineer's connections are being prepared. Pending their issue, suitable adaptors are to be provided for connection of hoses fitted with instantaneous couplings to engineer's fittings in cases where the provisions of paragraph 1 are carried out. A list of such adaptors should be forwarded to the Admiralty for each ship or class of ship concerned.

   (A.F.Os. 5417/41—not in Annual Volume—and 253/41.)

1609.—Type F.46 Torpedo Aiming Cameras—Standard Procedure for Loading and Operation

(A.M. 3877/43.—8.4.1943.)

The following standard procedure is to be carried out when operating type F.46 Torpedo Aiming Cameras:

(A) After the magazine is attached to the camera, the photographer operates the camera once to test it.
(B) The pilot should then operate it a second time before taking off.
(C) The pilot operates the camera once during each attack.
(D) The pilot operates the camera at least twice after the last attack on the way back and prior to landing.

2. Should it be necessary after the procedure at (A) and (B) for the camera to be transferred to another aircraft, a new magazine should be loaded and the whole procedure at (A) and (B) carried out again.

3. The above procedure will ensure that there is no risk of the exposures in the first and last attacks being fogged and give the best results from the camera.

4. The procedure at (B) is carried out before take-off to avoid the possibility of accidental release of the torpedo in the air.
1610.—Boom Working Strops, etc.—First Supply of Boom Working Vessels
(B.D.0238/43.—8.4.1943.)

The following quantities of wire strops, etc., required for boom working have been added to the list of Equipment of Boom Stores (consumable) in the Establishment of Naval Stores for Boom Working Vessels (B.R. 371).

2. The first supply of this material for new construction boom vessels will be provided by the Superintendent of Boom Defences, Rosyth. Replacements are to be made by demands on the Boom Depots to which the vessels are attached.

3. B.R.371 Establishment of Naval Stores for Boom Working Vessels will be amended.

Boom Working Strops, etc.

<table>
<thead>
<tr>
<th>Description</th>
<th>Denomination</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strops, grommet, 3\1\ in. F.S.W.R. × 6 ft</td>
<td>No. 12</td>
<td></td>
</tr>
<tr>
<td>Strops, grommet, 3\1\ in. F.S.W.R. × 5 ft</td>
<td>No. 12</td>
<td></td>
</tr>
<tr>
<td>Strops, grommet, 3 in. F.S.W.R. × 5 ft</td>
<td>No. 18</td>
<td></td>
</tr>
<tr>
<td>Strops, grommet, 2\1\ in. F.S.W.R. × 5 ft</td>
<td>No. 18</td>
<td></td>
</tr>
<tr>
<td>Strops, grommet, 2 in. F.S.W.R. × 5 ft</td>
<td>No. 12</td>
<td></td>
</tr>
<tr>
<td>Strops, D.E., 2 in. F.S.W.R. × 12 ft</td>
<td>No. 12</td>
<td></td>
</tr>
<tr>
<td>Strops, D.E., 3 in. F.S.W.R. × 12 ft</td>
<td>No. 12</td>
<td></td>
</tr>
<tr>
<td>Hangers, for 8 ton weights, 3\1\ in. F.S.W.R. × 16 ft</td>
<td>No. 4</td>
<td></td>
</tr>
<tr>
<td>Hangers, for 8 ton weights, 3\1\ in. F.S.W.R. × 12 ft</td>
<td>No. 4</td>
<td></td>
</tr>
<tr>
<td>Wires, toggle, 2 in. F.S.W.R. × 25 fathoms</td>
<td>No. 6</td>
<td></td>
</tr>
<tr>
<td>Strops, collar, 4 in. × 40 ft</td>
<td>No. 2</td>
<td></td>
</tr>
<tr>
<td>Strops, collar, 31 in. × 40 ft</td>
<td>No. 2</td>
<td></td>
</tr>
<tr>
<td>Wires, winch, 3 in. × 150 fathoms</td>
<td>No. 1</td>
<td></td>
</tr>
<tr>
<td>Wires, winch, 4 in. × 40 fathoms</td>
<td>No. 1</td>
<td></td>
</tr>
<tr>
<td>Wire, F.S., 1\1\ in. × 500 fathoms</td>
<td>Coils 1</td>
<td></td>
</tr>
</tbody>
</table>

1611.—Store Rooms—Prevention of Choking of Pump Suctions
New Construction Ships
(P.5064/43.—8.4.1943.)

To ensure that the wire mesh panels referred to in A.F.O. 1801/42 and A.F.O. 6315/42 are fitted to all small bin racks in store rooms of new construction ships, the panels are to be included in the detail drawings of the store rooms concerned.

2. In general the panels should conform to the style shown in A.F.O. Diagram 94/43, and should not exceed 4 ft. height and 2 ft. width unless intermediate fastenings are introduced.

It is the intention that the wire mesh panels shall be fitted even when there are no fixed pump suction in the compartments concerned, but they are not required in store rooms which are so far above the waterline that they can never require to be pumped out. In store rooms where there is a fixed pump suction the fitting of a large strainer in accordance with A.F.O. 1801/42 does not remove the necessity for the wire mesh panels.

(A.F.Os. 3532/41, 1801/42, 6315/42 and C.A.F.O. 662/42.)

1612.—Trolleys and Bomb-loading Stretchers for Naval Aircraft Purposes
(N.S. Air 2366/42.—8.4.1943.)

To avoid the possibility of duplication of supply, all allowances of the mentioned stores to H.M. ships carrying aircraft are, in future, to be shown only in the Aircraft Stores Establishment (B.R.378) and reference to these items is to be deleted from the main Sea Store Establishment indicated:

<table>
<thead>
<tr>
<th>Pattern No.</th>
<th>Description</th>
<th>Establishment from which to be deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.8</td>
<td>Trolleys, transporting and aircraft loading, for bodies of 18-in. torpedoes</td>
<td>Electrical and Torpedo</td>
</tr>
<tr>
<td>E.12</td>
<td>Trolleys for stowage and transport of boxed aero-engines</td>
<td>Executive (B.R.358)</td>
</tr>
</tbody>
</table>

Stretcher, bomb-loading | Gunnery (B.R.323) |

2. Any trolleys, Pattern 5630, and bomb-loading stretchers, Ref. 4G/1283, held on board aircraft carriers and catapult ships in excess of the allowances shown in B.R.378 should be returned to the nearest dockyard and/or Naval store depot. Trolleys, Pattern 5431, are no longer required in catapult ships, as spare engines are not now supplied. All trolleys, Pattern 5431, on board catapult ships, and any in excess of two held in aircraft carriers, should be returned to store.

3. The Aircraft Stores Establishment (B.R.378) and the Sea Store Establishment will be amended.

(A.F.O. 65/40—not in annual volume.)

1613.—Parachute Rip Cords—Prevention of Rust
(N.S./A.M.R.2177/43.—8.4.1943.)

All spare parachute rip cords held in store are to be treated with Rust Preventive, D.T.D.121C, Ref. 33C/527.

2. The method of application is to immerse the rip cord in the solution, and then leave to dry. Before the rip cord is fitted to the parachute the rip cord wire should be wiped with rags soaked in paraffin.

1614.—Furniture—Polishing
(D.C.N./D. 2427/43.—8.4.1943.)

It has been brought to notice that furniture and fittings for ships under construction and undergoing refits, are still being polished to "full finish" standard.

2. In view of the shortage of the materials used in the manufacture of polish, and of their inflammability, attention is drawn to A.F.O. 3326/40, Item 95, which states that furniture is to be "filled" and given one coat of brush or spray polish only in lieu of "full" finish.

3. Overseers are to ensure that the instructions for wartime finish for polished woodwork are strictly adhered to.

(A.F.O. 3326/40, Item 95)

Section 4.

OTHER STORES—NAVAL STORES, VICTUALLING STORES

1615.—Bread—Addition to List of Local Contracts, 1943–44
(C.P. 5/15973/43.—8.4.1943.)

The following addition should be made to the list of local bread contracts for 1943–44:

GRANGEMOUTH Mr. James Rae, Grangemouth 334 (Business)
Station Road, Grangemouth, Stirlingshire.
Section 5.—BOOKS, FORMS, RETURNS, CORRESPONDENCE

1617.—Amendments to Books

(E.F.O.—8.4.1943.)

The undermentioned amendments to B.R. and O.U. books are available for issue from the R.N. Store Depot, Elveden Road, Park Royal, N.W.10, in accordance with A.F.O. 1268/43, paragraph 3.

Demands from shore establishments in the Portsmouth Command should be sent to the Portsmouth Book Office, 54, Bedford Street, Leamington Spa, Warwickshire, and from other shore establishments at home, to R.N. Store Depot, Park Royal, London, N.W.10.

Amendments required for personal copies of the main books should be obtained from distributing authorities abroad, and from Park Royal, when the officer or rating is serving at home.

A.F.O. *P.307/43.—A.P. (N) I—Amendment No. 4.

P.308/43.—B.R. 245—Handbook of the 2-pdr., Q.F. gun, Mark II* C, on H.A. Mark II* G, mounting, 1940—Amendment No. 7.

P.309/43.—B.R. 317—Guard Cover for Mining Drill Book—Amendment No. 2.

P.310/43.—B.R. 317 (1)—Mining Drill Book—General Instructions, Buoyant Mines—Amendment No. 2.

P.311/43.—B.R. 317 (9) Mining Drill Book—Preparation of the Mark XV and Mark XVII* Sinkers—Amendment No. 4.

P.312/43.—B.R. 317 (10)—Mining Drill Book—Preparation of the Mark XVII** and Mark XVII Sinkers—Amendment No. 3.

P.313/43.—B.R. 317 (14)—Mining Drill Book—Preparation of the Mark XV Mine, Assembly Nos. 33 and 34—Amendment No. 1.

P.314/43.—O.U. 6395—Handbook of Mark XIV, XV and XVII Mines, and Mark XV, XVII and XVII* Sinkers—Amendment No. 10.*

* Exceptionally as regards A.F.O. P.307/43, distribution will be made without demand by the Superintending Naval Store Officer, R.N. Store Depot, 191A, Askew Road, Shepherds Bush, W., who holds the stock of the parent book.

(A.F.O. 1496/43.)

1619.—Air Publications, Amendment Lists and Leaflets Distributed during January, 1943

(N.S. Air 125/43.—8.4.1943.)

A.F.O. 1295/43 is to be amended as shown below:

|----------|------|-------|-------------|-------------|--------------|

(A.F.O. 1295/43)

1620.—B.R.630—Handbook for Echo-sounding Set, Type 754—Issue

(A./S.M. 1404/43.—8.4.1943.)

With reference to A.F.O. 1004/43 giving the distribution for the above book, as it has now been decided not to supply 0-303-in. Browning guns to D.E.M.S., copies of the book will not be required by D.E.M.S. Staff Officers.

The revised distribution for this book is as follows:

<table>
<thead>
<tr>
<th>Copies</th>
<th>Distributing Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flag Officers and Naval Officers-in-Charge, Ports at Home</td>
<td>1 Lowesdoft</td>
</tr>
<tr>
<td>H.M. Ships fitted with this gun</td>
<td>1 Liverpool</td>
</tr>
<tr>
<td>H.M. Dockyards</td>
<td>1 Leith</td>
</tr>
<tr>
<td>Portsmouth</td>
<td>8 London</td>
</tr>
<tr>
<td>Devonport</td>
<td>7 Nore</td>
</tr>
<tr>
<td>Chatham</td>
<td>7 Oban</td>
</tr>
<tr>
<td>Sheerness</td>
<td>8 Orkneys and Shetlands</td>
</tr>
<tr>
<td>Rosyth</td>
<td>4 Milford Haiver</td>
</tr>
<tr>
<td>Gunnyery Schools</td>
<td>1 Greenock</td>
</tr>
<tr>
<td>H.M.S. &quot;Excellent&quot;</td>
<td>20 Portsmouth</td>
</tr>
<tr>
<td>Captain (G) Devonport</td>
<td>12 Swansea</td>
</tr>
<tr>
<td>Captain (G) Chatham</td>
<td>5 Sheerness</td>
</tr>
<tr>
<td>Fitting out Gun Mounting Overviewers</td>
<td>2 Rosyth</td>
</tr>
<tr>
<td>Fitting out Gunnyery Officers</td>
<td>2 Plymouth</td>
</tr>
<tr>
<td>Inspectors of Naval Ordnance</td>
<td>2 Portland</td>
</tr>
<tr>
<td>Naval Armament Establishments 1 or 2</td>
<td>2 Stornoway</td>
</tr>
<tr>
<td>Auxiliary Vessels Gunnyery Officers</td>
<td>2 Tees</td>
</tr>
<tr>
<td>Instructor of Gunnyery</td>
<td>2 Pyes</td>
</tr>
<tr>
<td>R.M. Barracks, Portsmouth</td>
<td>10 Yarmouth</td>
</tr>
</tbody>
</table>

(A.F.O. 1265/43.)

1621.—B.R.650—Notes on the 0-303-in. Browning Gun, Type A, Mark II—Issue

(G.2161/42.—8.4.1943.)

(A.F.O. 1265/43.)

1623.—A.M.S.Is.

(E.F.O.—8.4.1943.)

Admiralty Merchant Shipping Instructions 220–224/43 are being distributed concurrently with this issue of A.F.O.s.
2. The copies being supplied to distributing authorities are for issue to auxiliary vessels fitted with 0·303-in. Browning guns, one copy to each vessel.

3. Further copies as necessary to meet the above requirements should be demanded from the S.N.S.O., R.N. Store Depot, Park Royal, N.W.10.

(A.F.O. 100443 is cancelled.)

1622.— B.R. 773—Handbook for Echo-sounding Set, Type 760—Issue (A./S. M. 140043.—8.4.1943.)

The above-mentioned book is now in the press.

2. Copies will be distributed without demand by the Naval Store Officer, R.N. Store Depot, Elveden Road, N.W.10, when supplies become available.

3. For the purposes of Type 760 only, this book supersedes B.R. 313, copies of which should be destroyed by pulping.

1623.— B.R. 785—Handbook for 2-pdr., Mark VIII Gun on Marks VIA and VA Mountings, 1913—Issue (G. 011842.—8.4.1943.)

The above-mentioned book is now in the press and copies will be issued, without demand, by the Superintending Naval Store Officer, R.N. Store Depot, Elveden Road, Park Royal, N.W.10, when supplies become available, in accordance with the following establishment, viz.:

Copies

<table>
<thead>
<tr>
<th>Dockyards</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Portsmouth</td>
<td>8</td>
</tr>
<tr>
<td>Devonport</td>
<td>7</td>
</tr>
<tr>
<td>Chatham</td>
<td>7</td>
</tr>
<tr>
<td>Sheerness</td>
<td>7</td>
</tr>
<tr>
<td>Rosyth</td>
<td>4</td>
</tr>
<tr>
<td>Malta</td>
<td>4</td>
</tr>
<tr>
<td>Gibraltar</td>
<td>3</td>
</tr>
<tr>
<td>Simonstown</td>
<td>3</td>
</tr>
<tr>
<td>Bermuda</td>
<td>3</td>
</tr>
<tr>
<td>Alexandria</td>
<td>3</td>
</tr>
</tbody>
</table>

Commanding Officer, A.A. Range, Ainsdale (H.M.S. "Queen Charlotte")

Commanding Officer, A.A. Range, Wembury Point, Plymouth

E.O. for Gun Mountings, Alexandria

Gun Mounting Engineer Officer, H.M.S. "Dunluce Castle"

R.N. College, Greenwich

Naval Staff Library, Admiralty

R.A.T.E. Durban, for Gunnery School


E.R.O. Greenwich

Secretary, Navy Board, Melbourne

N.S.H.Q., Ottawa

Official Secretary, H.C. for Canada, Canada House, S.W.1

Armament Depots and Establishments

Inspectors of Naval Ordnance

Gun Mounting Overseer, Barrow

Adjutant General Royal Marines

* Ships fitted with 2-pdr., Mark VIII guns on Marks VIA*, VI*, VA* and V* mountings only.

2. Ships fitted with 2-pdr., Marks VIA*, VI*, VA* and V* mountings should, on receipt of copies of B.R.785, return copies of—

(a) O.U.6357—Handbook for 2-pdr., Mark VIII gun on "M", Mark V mounting for stock,

(b) O.U.6357(1)—Addendum No. 1 (for 2-pdr., Mark V mounting), and

O.U.6357(3)—Addendum No. 3 for pulping,

in accordance with the instructions in O.U.2A—O.U. catalogue.

3. Ships fitted with 2-pdr., Mark VIII guns on Mark VII mountings should retain their copies of O.U.6357 for use with O.U.6357(2)—Addendum No. 2 for the Mark VII mounting. Addendum No. 2 will be superseded by a new handbook now in preparation, describing the Mark VIII gun on Mark VII mounting.

4. Naval Store Officers should forward copies of O.U.6357, returned under paragraph 2 above, to the Superintending Naval Store Officer, R.N. Store Depot, Park Royal, N.W.2

1624.— Form M.55—Report of Cash and Valuables left by a Deceased Patient—Introduction (M.D.G. 502343.—8.4.1943.)

A new Form M.55 has been introduced to report Cash and Valuables left by deceased patients at Naval Hospitals, and is to be used to supersede the form previously produced locally.

An initial supply is being made and future demands should be made on the R.N. Store Depot, Park Royal.

(N.H.I., Article 491.)

1625.— S.113—Galley Distribution List—General Mess Ships (N.L. 1844242.—8.4.1942.)

In ships where the General Messing system is in force care is to be taken that the C.P.O. Cook (S), or his authorised representative, signs both the original and duplicate copies of Form S.113, Galley Distribution List, and returns one copy to the Victualling Office.

1626.— Steel Superintendent—Change of Address (D.N.C.—8.4.1943.)

The Steel Superintendent has been transferred from Newcastle-on-Tyne to Warwick.

Address ................................................. 27, High Street, Warwick.

Telegraphic address "Steeladmir, Warwick."

Telephone Nos. ........................................ Warwick 697/8/9.

2. Correspondence should be addressed accordingly.

3. For administrative purposes the Steel Superintendent and his staff will be regarded as coming under the W.P.S., N.W. Area.

1627.— Mail Lost through Enemy Action (M. 0274243; M. 0274343.—8.4.1943.)

The following non-confidential mail has been lost as the result of enemy action. Duplicates of such correspondence should be forwarded as necessary.

Letter mail posted in the United Kingdom between the 5th and 11th February, 1943.

Addressed to:— Naval Officer in Charge, Curacao.

Naval Parties 404, 405.

H.N.M. Ships "Claasje," "Dirkje," "Queen Wilhelmina" and "Van Kinzenbergen".

Letter mail posted in the United Kingdom between the 5th and 11th February, 1943.

Addressed to:— Naval Officer in Charge, Curacao.

H.N.M. Ships "Pursuant" and "William Scoresby".

Parcel mail posted in the United Kingdom between the 5th and 11th February, 1943.

Addressed to:— Senior Naval Officer, Curacao.
Section 6.—SHORE ESTABLISHMENTS

1628.—Acceptance of Gifts from Contractors and Others

(C.E. 52802/43.—8.4.1943.)

There is evidence that the regulations relating to the acceptance of gifts, etc., by persons employed by the Admiralty are not sufficiently well known.

2. The attention of all those employed under the Admiralty is, therefore, directed to the strict standard of conduct which is expected of them in such matters, as is indicated in the following quotation from Article 31, Home Dockyard Regulations:—

"All persons belonging to, or employed in the Dockyards or other Establishments, are strictly prohibited from demanding or receiving, directly or indirectly, under any name, promise, or pretence whatever, any perquisite, fee, gratuity, or reward from contractors, tradesmen, workpeople, or other persons having business to transact with the Government as Principals or Agents at the Dockyard or elsewhere. Penalty—Any person infringing these regulations will render himself liable to dismissal from H.M. Service."

3. The Criminal Law in this matter is embodied in the Prevention of Corruption Acts of 1906 and 1916. The following is an extract from the earlier Act:—

"If any agent corruptly accepts or obtains, or agrees to accept or attempts to obtain, from any person, for himself or for any other person, any gift or consideration as an inducement or reward for doing or forbearing to do, or for having after the passing of this Act done or forbidden to do, any act in relation to his principal’s affairs or business, or for showing or forbearing to show favour or disfavour to any person in relation to his principal’s affairs or business......he shall be guilty of a misdemeanour," punishable by a maximum of two years’ imprisonment with or without hard labour, or to a maximum fine of £500, or both.

4. The later Act increases the punishment for offences under the 1906 Act relating to Government or public contracts by adding the liability to penal servitude for not more than seven nor less than three years. Furthermore, the 1916 Act lays it down that where any money, gift, or other consideration has been received by a Government servant against whom proceedings are taken under the Prevention of Corruption Act 1906, "the money, gift or consideration shall be deemed to have been paid or given and received corruptly as such inducement or reward as is mentioned in such Act unless the contrary is proved."

5. The placing upon the defendant of the onus to prove innocence in such a case sanctions with the penalties of the law the maxim long recognised in the Public Service that integrity itself is not sufficient unless it is accompanied by every appearance of integrity.

1629.—Admiralty Motor Transport—Use of by Service Personnel for Service Functions and for Recreational Purposes

(N.S./W.G.F. 603/42.—8.4.1943.)

The following amendments are to be made to A.F.O. 1406/43:—

Paragraph 2 (a) (i)—

For "lorries, § ton," read "lorries (3 to 5 tons)",
For "lorries, § ton," read "lorries (1 to 2 tons)",
(A.F.O. 1406/43.)

1630.—Non-Industrial Civil Servants—Superannuation

(C.E. 3805/43.—8.4.1943.)

Several cases have occurred in which local officers have given applicants wrong estimates of their position under the Superannuation Acts.

2. Cashiers and Paying Officers are, therefore, reminded of the necessity of exercising extreme care when giving on their own responsibility particulars of reckonable time or of pensionable emoluments or of superannuation benefits.

1631.—Admiralty Industrial Employees—Assisted Trips Home

(L. 3267/43.—8.4.1943.)

The cheap travel scheme set out in A.F.O. 2577/42 to enable workpeople transferred away from their homes by the Ministry of Labour and National Service for entry at Admiralty establishments, will again come into operation as from 1st April, 1943. Travelling warrants may be issued under this arrangement to enable workers to visit their homes twice within a period—

(i) of twelve months from 1st April, 1943, in the case of workers from Northern Ireland. Evidence must however, be produced that an exit permit has been granted to enable the worker to return to Ireland for the period of the visit.

(ii) 1st April to 30th September, 1943, in the case of other workers.

2. Warrants may not, however, be issued in any case in respect of journeys which involve travelling during the following periods:—

22nd April to 27th April, 1943, inclusive. (Easter.)
11th June to 16th June, 1943, inclusive. (Whitsun.)
30th July to 3rd August, 1943, inclusive. (August.)

The periods shown in respect of Whitsun and August are provisional. Announcements of the dates finally fixed will be made in the press and notified to Employment Exchanges.

3. It is also desirable that workers should not be allowed to go on leave the week before one of these Bank Holiday periods if it involves a journey to return to work during the Bank Holiday weekend.

4. Special attention is directed to paragraph 13 of A.F.O. 2577/42 regarding the necessity for co-operation between the Officers of Admiralty establishments and the Local Employment Exchange, and the strict necessity for entitlement to be established before a travelling warrant is issued to any employee.

5. The position of those Admiralty industrial employees detached or transferred who do not come under the Ministry of Labour and National Service Scheme referred to above, is as defined in paragraph 14 of the above-mentioned A.F.O., but the free travelling warrants issuable under the arrangements detailed therein should not be issued within the Bank Holiday periods referred to in paragraph 2 above.

(A.F.Os. 2577/42, 4822/42 and 100/43.)

1632.—Transfer of Workpeople from Admiralty Establishments to other Work of National Importance

(L. 2109/43.—8.4.1943.)

With reference to A.F.O. 4342/41, paragraph 1(i), it is believed that some reports of the release of hired men to other work of national importance are outstanding and any such reports should be forwarded as soon as possible. In any case establishments should forward at an early date the numbers and dates of Year, etc., letters on which reports have already been made. Future reports should be rendered without delay as soon as a transfer takes place.

(A.F.O. 4342/41.)

*1633.—Registration of Engineers—Position of Admiralty Employees

(C.E. 51453/43.—8.4.1943.)

With reference to A.F.O. 1399/43, paragraph 5, it has now been arranged that members of the Admiralty Dockyard professional and technical grades and their analogues in other naval establishments shall be excluded from the interview procedure to these mentioned.

2. A list of the grades concerned, as furnished to the Ministry of Labour and National Service in this connection, is given in the appendix to this order. Temporary as well as permanent members of these grades are covered by the arrangement made.
3. If any member of the grades specified should nevertheless be summoned to interview by a Service Selection Board, he should hand the notification to the head of his department who should inform the summoning authority of the officer's position as defined in this order.

4. Admiralty employees, both non-industrials and industrials, affected by the Specified Classes of Persons (Registration) Order who are not covered by the list of grades given in the appendix to this order will be liable to interview by the Service Selection Boards, and arrangements should be made for them to be granted such special leave with pay as is required for the purpose of attending the interview.

5. It is not, however, intended that any such persons shall be released from Admiralty service without prior Admiralty approval, and this should be made clear to those concerned.

APPENDIX

Members of Royal Corps of Naval Constructors (e.g., Assistant Constructors, Constructors, Senior Constructors, Chief Constructors, etc.).
Senior Foreman of the Yard.
Foreman of the Yard.
Inspector of Shipwrights.
Inspector of Ship Fitters.
Inspector of Smiths.
Inspector of Joiners.
Inspector of Painters.
Inspector of Plumbers and Copper-smiths.
Foreman of Engineer Branch.
Foreman of Boilermakers.
Inspector of Engine Fitters.
Inspector of Boilermakers.
Inspector of Founders.
Foreman of Electrical Branch.
Foreman of Electrical Supply.
Inspector of Electrical Fitters.
Inspector of Mains.
Inspector of Telephones.
Electrical Station Engineer.
Chief Supervisor of Repairs (Air Frames).
Supervisor of Repairs (Aero Engines).
Inspector of Riggers.
Inspector of Sailmakers.
Welfare Officer.
Senior Experimenter.
Examiner of Naval Ordnance.
Experimental Assistant.
Overseer.
Assistant Overseer.
Chief Fire Officer.
Senior Draughtsman (Constructive, Engineering and Electrical).
First Class Draughtsman (Constructive, Engineering and Electrical).
Second Class Draughtsman (Constructive, Engineering and Electrical).
Temporary Draughtsman.
Electrical Draughtsman.
Engineering Draughtsman.
Ship Draughtsman.
Senior Electrical Engineering Assistant.
Junior Electrical Engineering Assistant.
Design Draughtsman.

Superintending Electrical Engineer.
Senior Electrical Engineer.
Electrical Engineer.
Assistant Electrical Engineer.
Examiner of Dockyard Work.
Examiner of Electrical Engineering Work.
Examiner of Gun Mounting Accounts.
Assistant Examiner of Gun Mounting Accounts.
Assistant Examiner of Gun Mounting Work.
Examiner of Technical Accounts.
Assistant Examiner of Technical Accounts.
Inspecting Officer of Furniture.
Progress Officer.
Assistant Modeller.
Technical Assistant D.N.C.
Manager and Deputy Superintendent.
Assistant Shop Manager.
Chief Ratefixer.
Senior Ratefixer Planners.
Ratefixer Planners.
Torpedo Foreman.
Torpedo Assistant Foreman.
Assistant Foreman of Copper-smiths.
Assistant Foreman of Patternmakers.
Assistant Foreman of Moulders.
Chief Mechanical Engineer.
Assistant Mechanical Engineer.
Foreman of Fitters.
Foreman of Electricians.
Assistant Foreman of Electricians.
Assistant Foreman of Fitters.
Assistant Foreman of Electricians.
Inspector of Plumbers.
Inspector of Fitters.
Foreman of Factory.
Assistant Foreman of Factory.
Motor Transport Technical Officers.
Production Engineers.
Examiner of Naval Ordnance Work.
Assistant Examiner of Naval Ordnance Work.
Electrical Officers.
Assistant Inspector, Naval Ordnance.

A.F.O.1399/43.

1634.—Industrial Canteens—Provision of Buildings—Co-operation with Controller of Canteens
(L. 14051/42.—8.4.1943.)

In all cases where the officer-in-charge of an establishment, in pursuance of A.F.Os. 833/42 (paragraph 1) and 4218/42, decides that proposals for setting up an industrial canteen (or for an extension of existing canteen facilities involving substantial expenditure under Vote 8 or Vote 10 or both) are to be forwarded to the Admiralty for consideration, these proposals are in future to be submitted before any plans of new construction or adaptation of buildings, etc., are made. Details of the amount and character of work involved in the proposals should be stated in general terms only and a statement as to numbers of industrials and non-industrials employed in the establishment should be included. If such proposals are approved in principle, arrangements will be made at the Admiralty for a visit by a representative of the Controller of Canteens (Ministry of Supply) so that plans can be drawn up and agreed locally, in close consultation between the Controller of Canteens, the local Inspector of Factories, and all Admiralty Departments concerned. Such plans, together with estimates of the cost involved, will then be forwarded to the Secretary of the Admiralty for any necessary approval, in the usual way, i.e., showing expenditure under different Admiralty Votes. At the same time a schedule of equipment required should be forwarded as drawn up by the Ministry of Supply and agreed locally. In accordance with paragraph 3 of A.F.O. 833/42, expenditure on such items of equipment is to be shown in the estimates under the appropriate heads of charge.

2. The instructions promulgated in A.F.O. 833/42 (paragraphs 2 and 3) as to the procedure to be followed in preparing plans for new canteen works and the considerations which are to govern their preparation are to be regarded as amended by this Order. Normally, however, the considerations listed in paragraph 2 (c) to (h) of A.F.O. 833/42, will still be taken into account while plans are being prepared. The rule as to the amount of sitting accommodation to be provided (paragraph 2 (a) of A.F.O. 833/42) is now cancelled, and in future no fixed standard will apply, but in each case sufficient accommodation shall be planned for the canteen to cater for the largest number of people who necessarily and regularly use it at the same time, or can be reasonably expected to use it in the future, regard being had to the desirability and practicability of staggering meal times, probabilities of expansion or contraction in the establishments, and the extent to which improvements in the canteen are expected to encourage more people to use it.

3. When only a small quantity of equipment is ordered it is left to officers of technical departments to arrange installation as under existing arrangements. When installation as well as provision of equipment is being undertaken by Ministry of Supply, it has been decided that the Controller of Canteens shall have discretion, in particular cases, to entrust Vote 8 and Vote 10 work involved in the installation of new canteen equipment to private contractors, even when the work falls within a dockyard or other naval establishment. Such contract work, which will not include electrical installation, will normally be limited as follows:

- **Gas and/or steam** ... All pipe-work, fittings, etc., from a point predetermined and agreed by Yard officers and Ministry of Supply.
- **Condense** ... All pipe-work.
- **Cold water** ... All pipe-work fittings, etc., on the "dead" side of storage tank, or stop-cock on main as may be applicable.
- **Hot water** ... All secondary services, including calorifier.
- **Drainage** ... Terminating at traps on fittings, e.g., access traps on sinks, etc.
- **Domestic services** ... Water to lavatory basins, W.C.s., etc., will not be included. Contractors will leave suitable tees if required.
The carrying out of any necessary water pressure tests and the installation of heating and ventilating plants.

In addition, the contractor will be made responsible for providing the Admiralty with all necessary building drawings in connection with the contract work, i.e., trench drawings, etc.

The Ministry of Supply has agreed to be responsible for informing the Admiralty of the total cost of such installation work, for which any necessary Admiralty approval will be obtained. The contractor employed, although given his contract by the Controller of Canteens' Department, will work under the general supervision of the Admiralty Department which would normally be responsible for the installation.

4. (a) When demands for new or replacement articles of equipment for industrial canteens are forwarded to the Controller of Canteens, Officers-in-Charge of Establishments should be prepared to furnish such information in support of these demands as the Controller of Canteens may require, without reference to the Admiralty.

(b) All redundant kitchen or canteen equipment, fixed or loose, which is now Admiralty property, is to be regarded as part of a central pool. The Controller of Canteens is authorised to remove and use such equipment by arrangement with local officers.

(A.F.Os. 833/42 and 4218/42.)

1635.—Dover—"Works” Questions
(C.E.-in-C. 69/51/5/10A.—8.4.1943.)

Dover has ceased to be a separate Works District under an Officer-in-Charge of Works and the responsibility for all “Works” questions concerning the Underground Oil Fuel Storage Depot has been transferred to the:

Superintending Civil Engineer,
Chatham.

2. Correspondence on all such questions is therefore to be addressed to:

The Superintending Civil Engineer,
H.M. Dockyard,
Chatham.

1636.—Survey of Stores—War-time Relaxations in Procedure, etc.
(N.S. 14030/43.—8.4.1943.)

Stores returned from H.M. Ships, etc.—Instances frequently occur where stores are returned from ships and services in an obviously serviceable condition, e.g. when ships store for long refit. Such stores, having already been examined on receipt into the service, should not be subjected to further survey. Survey should, however, continue to be carried out in the case of stores, such as cordages, packings and textiles, which are particularly liable to deterioration or on which the safety of men's lives depends.

2. Stores repaired on conversion at Dockyards.—These are at present returned to store by Professional Officers on Forms D.83 which are forwarded by the Superintending Naval Store Officers to the Surveyors of Stores for certification as to efficiency and acceptance. If, owing to overload on the staff of the Surveyor of Stores, repaired items cannot be examined and taken on charge as quickly as necessity demands, they should be taken on charge direct from the Repair Department after examination and certification by the Professional Officers concerned.

3. Stores manufactured in Dockyards.—The continuation of the existing system of survey by the Surveyor of Stores of stores manufactured in the Dockyards is essential, and no relaxation of the system is therefore to be allowed in respect of such items.

4. Stores received from Contractors.—A rigid adherence to peacetime standards in the acceptance of relatively unimportant articles need not be insisted on by Surveying Officers, particularly where firms' standard patterns are concerned and requirements are urgent, and providing that the stores are suitable for the purpose for which required and that they represent the contract value.

5. Defective stores to be repaired whenever possible.—In some instances yard officers appear to have assumed that the flat rate of 4ths of Rate Book value, which is allowed to conversion shops for repair, is the maximum allowance instead of an average allowance. Stores must be repaired whenever it is economical to do so, and this is especially important under present conditions when there are grave shortages of both labour and materials. Repairs costing up to approximately 75 per cent. of the value of individual items may be taken in hand.

1637.—Port War Signal Station, Stanger Head—Address
(M/N.R. 511/3/43.—8.4.1943.)

The Correct address of the Port War Signal Station, Stanger Head is—
Port War Signal Station,
Stanger Head,
Flotta, Orkney.

2. Stores, personnel, correspondence, etc., should be addressed or routed accordingly. The word “Scapa” should not be used as this is liable to lead to delay.

1638.—Underwater Electric Arc Welding
Dockyards and Repair Bases abroad
(D. 17447/42.—8.4.1943.)

Application.—Experiments carried out at Portsmouth have demonstrated the practicability of performing electric arc welding under water. The progress made so far is not sufficient to effect a full comparison with results obtained in air, but the process is considered suitable for use on mild steel in temporary underwater patching etc., both for repair and salvage work, or for temporary underwater stiffening of damaged ships. The scale of work which can be carried out by this method will depend on future development.

2. Operation and General Requirements.—To weld under water, the operator should hold a rather short arc, run straight beads slowly, fusing the metal well and filling the undercutting. Each bead should be thoroughly cleaned with a wire brush before running another bead along it, the brush being weighted as necessary. The diver must have a steady platform, and arrangements should be made to enable the diver to brace himself well in order to maintain a steady arc, especially in strong currents of water. Experience to date suggests that overhead and, to a lesser extent, vertical welding, is difficult as compared with downhand work, and in planning underwater welding endeavour should be made to minimise the amount of overhead work.

In some cases a jet of water, e.g., a supply from a 1-in. hose has been found of assistance in removal of the clouds of black particles which surround the arc.
Except in clear water or at small depths, lighting of the work is required.

A welding screen of colour density to suit the water conditions should be used and attached to the diver's helmet in such a way that it can be moved into or out of position as required.

Attention is invited to the fact that the gases evolved during the underwater welding process form an explosive mixture with air. When work is carried out in a confined space, care should be taken to arrange adequate ventilation of the compartment.

3. Electricity Supply.—Higher voltage and current are required for welding under water with a given electrode than for welding in air. An open circuit voltage of approximately 75 volts D.C. is required and the current required per operator may be as much as 400 amps.

Satisfactory welding can be effected under water with an arc voltage of 30-35. With a No. 8 gauge electrode, a current of up to 250 amps, will be found to be required, higher currents being necessary with the larger electrodes.

Certain establishments abroad have already available a number of 2 operator welding sets, diesel, petrol or motor driven, each operator having his own generator with suitable drooping characteristics and with which no external regulating resistance is required. By paralleling two of these generators, a current of up to 360-380 amps, can be obtained within the above arc voltage range. Where a suitable welding generator is not available, a 2 wire D.C. supply at a pressure not exceeding 100 volts may be used as an emergency measure, suitable welding resistances being required in this case. The electrode should be connected to the negative pole of the generator.

It should be realised that this procedure of welding direct from D.C. mains necessarily imposes an earth on one side of the system, in this case the positive pole.

4. Electrical Requirements.—To prevent leakage of current, the circuit from the generator to the electrode tip should be completely insulated. A flexible welding lead and an all-insulated electrode holder should be used. A number of suitable electrode holders is being manufactured by Portsmouth to meet demands for training purposes. Coated electrodes should be used and they should be insulated and made impervious to water by dipping in

(i) Melted paraffin wax of a suitable consistency to give a reasonably thick covering.

or (ii) Celluloid dissolved in acetone in the proportion of 2 lbs. to 1 gallon.

Both coatings should be allowed to dry thoroughly before use. A number of electrodes thus insulated, sufficient for immediate use, may be taken under water by the operator. Murex Ironex electrodes have given promising results.

5. Electricity Safety Precautions.—The following safety precautions for the operator are necessary:

(a) Rubber gloves fixed inside the sleeves of the diving suit must be worn.

(b) A rubber cap or other insulating head covering to protect all parts of the head and neck from contact with the metal helmet must be worn.

(c) An all insulated electrode holder must be used.

(d) The metal parts of the diving suit must not be bonded together or to earth.

6. Dockyards and Repair Bases abroad should give consideration to their possible requirements for this type of work and to the necessary plant, equipment and the most suitable method of training operators. Before an operator can attempt underwater welding it is necessary that he should be proficient at both welding and diving, and consideration should be given to the necessary local training of selected men to meet anticipated requirements.

7. Requirements for any plant or equipment not obtainable locally should be reported to Admiralty.

8. Underwater Cutting can also be carried out by the electric arc method using similar electrodes similarly treated. Rather higher currents are required than in underwater welding; e.g., 20 lbs. plating can be cut using a treated gauge 8 electrode and a current up to 400 amps. This method is slower and more difficult than oxy-hydrogen cutting, and it is difficult to make a clean cut. A guide strip tacked adjacent to the required cut is of assistance to the diver. Electric arc cutting may, however, be of use for small jobs or where oxy-hydrogen equipment is not readily available, or where it is necessary to cut through several layers of plating.

It is desirable therefore that operators selected should be able to cut by this method if required.
Attention is invited to the fact that the gases evolution of burning water welding process is an explosive mixture with air. When work is being done in a grout area or in a flooded area, the gases released during the welding process can combine with the air, creating an explosive mixture. Satisfactory working conditions can be achieved by using controlled ventilation or by increasing the gas flow.

Certain establishments abroad have already available a number of generator operators, electric, petrol, or electric-driven, each operator having his own generator with suitable electrical characteristics and, with which, an external regulating resistance is connected. By paralleling two of these generators, a current of up to 200 amperes can be obtained within the above arc voltage range. Where a suitable welding generator is not available, a 3-wire D.C. supply at a pressure not exceeding 100 volts may be used as an emergency measure, suitable welding resistances being required in this case. The electrode should be connected to the negative pole of the generator.

It should be realized that the procedure of welding directly from D.C. mains necessarily creates an earth on one side of the system, in this case the positive pole.

4. Electrical Requirements.—To prevent leakage of current, the circuit from the generator to the electrode tip should be completely insulated. A flexible welding lead and an all-insulated electrode holder should be used. A number of suitable electrode holders is being manufactured by Portsmouth to meet demands for training purposes. Carbon electrodes should be used and they should be insulated and made impervious to water by dipping in...

(i) Melted paraffin wax or a suitable consistency to give a reasonably thick covering.

or (ii) Celluloid dissolved in acetone in the proportion of 5 lb. to 1 gallon.

Both coatings should be allowed to dry thoroughly before use. A number of electrodes thus insulated, sufficient for immediate use, may be kept under water by the operator. Murex-Leona electrodes have given promising results.

5. Electricity Safety Precautions.—The following safety precautions for the operator are necessary:

(a) Rubber gloves should be made for the issuance of the diving suit must be worn.

(b) A rubber cap or other insulating head covering to protect all parts of the head and neck from contact with the metal inside must be worn.

(c) An all-insulated electrode holder must be used.

(d) The metal parts of the diving suit must not be bled together or to earth.

Dockyards and Repair Bases abroad should give consideration to their possible requirements for this type of work and to the necessary plant, equipment and the most suitable method of training operators. Before an