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1st ANZAC CORPS.

(G90/177)

DUTIES OF ANTI-GAS PERSONNEL

and

INSTRUCTIONS FOR PROTECTION
OF DUG-OUTS AGAINST GAS : :

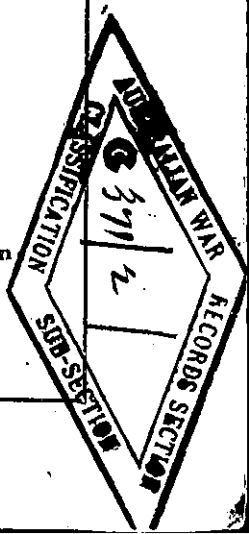
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FIRST ANZAC CORPS

DUTIES OF ANTI-
GAS PERSONNEL.
and
INSTRUCTIONS FOR PRO-
TECTION OF DUG-OUTS
AGAINST GAS.

To be read in conjunction
with S. S. 534.



NOTE :—Every officer is responsible that the men under his command are properly instructed in defensive measures against Gas Attacks, that all appliances are at all times in perfect order and that Standing Orders on the subject are thoroughly understood. During a Gas Attack it is important that all measures taken should be carried out with the utmost calm in order to avoid confusion and waste of energy.

Duties of Anti-Gas Personnel.

DUTIES OF THE CORPS CHEMICAL ADVISER

1. The Corps Chemical Adviser is attached to the general staff at corps headquarters.

2. He is a member of the Gas Directorate and deals with the Chemical Adviser, at army headquarters, on all purely technical matters concerning gas warfare.

3. Under the general staff, his duties are as follow:—

(a) To supervise the training in anti-gas measures of all troops in the corps area.

(b) To control and standardise the work of the divisional gas officers, who will refer to him on all matters previously referred to the Chemical Adviser of the army.

(c) To advise and co-operate with "Q" and Ordnance in issue and supply of all gas protective apparatus and with the collection and transmission to Central Laboratory for examination, of all kinds of enemy gas or flame appliances or projectiles.

(d) To advise the general staff and the artillery on all technical matters concerned with the characteristics of the materials used in gas warfare.

(e) To co-operate with the corps staff in collecting information from prisoners and other sources relating to the methods of gas warfare used by the enemy and to the effects of our gas attacks. Also to investigate and furnish reports, both to the general staff of the corps and the D.G.S., through the Chemical Adviser of the army, on all important cloud gas and gas shell attacks by the enemy.

(f) To advise on the use of smoke grenades and gas grenades.

DUTIES OF DIVISIONAL GAS OFFICERS.

1. Advisory.

Under the general staff, his duties will be:—To advise the divisional general staff on all matters connected with gas or flame, and on anti-gas measures for the protection of the divisional area.

2. Operations.

1. To superintend the taking over of anti-gas trench stores. When divisions are moving into the line the divisional gas officer will be attached to the advanced headquarters of the division.

2. On relief, outgoing and incoming divisional gas officers will render a certificate to the corps chemical adviser that anti-gas trench stores and maps have been handed over to, and received by, the incoming divisional gas officer.

3. To arrange with the divisional general staff to be at once notified of any gas attack or gas shell bombardment. To investigate and render reports and samples to the corps chemical adviser.

4. To examine captured appliances dealing with gas, smoke, flame, etc., and report on same to the corps chemical adviser.

5. To supervise the production of smoke when required.

6. To be present with the O.C. Special Company, R.E. if required, or with brigade headquarters of the sector in which the special brigades are operating.

3.—Routine.

1.—To visit the divisional front and divisional artillery when the division is in the line.

2. To visit all units and inspect anti-gas appliances.

3. To ascertain that all units keep anti-gas equipment up to scale.

4. To arrange for the inspection of the divisional reserve of anti-gas equipment as required.

5. To repair defective apparatus at the divisional school in cases where return to ordnance is not considered necessary.

6. To arrange for the examination of salvaged anti-gas apparatus as required.

4.—Instruction.

1. To hold courses at divisional gas schools for both officers and N.C.O.'s.
2. To lecture to units on gas, smoke, and gas shells.
3. To lecture to officers as frequently as possible.
4. To train gas N.C.O.'s from all units in the division, and from army and corps troops in the corps area as required.
5. To train N.C.O.'s and men from each unit in the tactics of production of smoke as required.
6. To arrange for the anti-gas instruction of all new drafts.
7. To arrange for fitting and testing the anti-gas equipment of army and corps troops as required.

5. Schools.

1. Divisional anti-gas schools should be situated within a reasonable distance of the divisional reinforcement camp; courses will be held whenever circumstances permit.
2. Arrangements will be made by divisions at the divisional anti-gas school for:
 - (a) A lecture room and furniture to accommodate at least 30 students.
 - (b) A store room.
 - (c) A gas testing chamber.
 - (d) Trench and gas-proof dug-out.
 - (e) Accommodation for divisional gas officer and staff.
 - (f) Accommodation for officers and other ranks attending the school.
3. Three copies of training memoranda for divisional gas schools will be forwarded to corps headquarters.
4. A nominal roll and the distribution of divisional gas N.C.O.'s will be kept posted up to date and the corps chemical adviser informed of any changes.

5. Three copies of time table and syllabus of work will be forwarded to the corps chemical adviser when any alterations are made.

6. The course at a divisional gas school should last at least—

2 days for officers.

4 days for N.C.O.'s.

Morning session 3 hours; afternoon session 2½ hours.

7. Any change of location of the divisional gas officer, or of the divisional gas school, will be reported by wire to the corps chemical adviser.

8. When a division is about to move to a new area the divisional gas officer will apply to the corps chemical adviser for instructions as to whether the anti-gas school equipment should be moved to the new area or handed over to the incoming divisional gas officer.

9. When divisions are changing over a divisional gas N.C.O. will be left in charge of the school and equipment until it is taken over by the incoming divisional gas officer or one of his staff. A receipted copy of the equipment handed over will be forwarded at once to the corps chemical adviser.

10. When divisions move out of the line, the divisional gas officer and his staff will, as soon as possible, make a thorough inspection of the anti-gas equipment throughout the division and report fully on its condition to the general staff and corps chemical adviser.

11. When in back areas divisional gas officers will when possible make arrangements to put units through a miniature gas and smoke attack, so that all ranks may become familiar with:—

(a) the sound of the Strombos horn;

(b) the sound of gas escaping from the cylinders;

(c) the appearance of the gas cloud.

6. Supplies.

School stores will be obtained as under:—

1. Gas from chemical adviser.
2. Smoke, lachrymator and grenades, etc., from chemical adviser.
3. Chemicals for Vermorel sprayer solution and glycerine through S.S.O.
4. Indents on ordnance and "Q" as required.

7. Returns—Weekly.

To reach corps chemical adviser on days and dates to be notified.

1. Return of stores for instruction at the divisional gas school. Forms will be supplied.

2. Return of anti-gas stores in the divisional area. This should include all stores actually issued for use in the divisional area. All stores should be accounted for, whether actually in the line or not. Any kept at the gas school should be noted in "remarks" column. Forms will be supplied.

3. Return of Strombos horns. This will show:

- (a) Map location of horn.
- (b) Local name of position.
- (c) Number of cylinders and pressure.
- (d) Complement of tools.
- (e) Protection and condition of horn.
- (f) Sentry, when posted.
- (g) Remarks should include number of empty cylinders returned, damage to horns, etc.

DIVISIONAL GAS OFFICER'S GENERAL REPORT.

This should include:

1. An account of instruction given during the week (including number of reinforcements dealt with and the time spent in training them).

2. Visits paid to brigade fronts and units, and reports on the condition of anti-gas precautions, anti-gas discipline, and efficiency in the use of anti-gas equipment.

3. Inspection of divisional reserve of anti-gas appliances and salvage dumps of enemy material, etc.

4. Distribution of gas testing apparatus.

5. Trench and area map—whether up to date and correct. It should show: [sprayers.

(a) Exact locations of strombos horns and vermores

(b) Number of vacuum bulbs and Ayrton fans per sector. Forms will be supplied.

MONTHLY.

[supplied

1. List of equipment at anti-gas school. Forms will be

2. Number of shortages in anti-gas equipment in the division. It should show the number of officers and other ranks not in possession of a serviceable small box respirator, P.H. helmet, satchel and goggles.

3. Nominal roll of all gas N.C.O.'s on duty with units in the division.

8. Leave.

Divisional Gas Officers when applying for leave will first obtain the approval of the corps chemical adviser. It should be understood that this is a matter of departmental approval only, and that applications for leave will as usual be made to the headquarters of the division to which the officer is attached, after the above approval has been obtained.

The name of the officer to act as divisional gas officer will be stated in the application for approval for leave.

DIVISIONAL GAS NON-COMMISSIONED OFFICERS.

1. Divisional Gas N.C.O.'s will be allotted for duty as follows:—

(a) 1 N.C.O. attached to each infantry brigade headquarters.

(b) 1 N.C.O. for duty with Divisional Artillery.

(c) 2 N.C.O.'s for duty at the gas school, reinforcement camp, or at ordnance stores, as required.

2. It should be clearly understood that *all* these N.C.O.'s are on the strength of the Gas Directorate, and under the command of the Divisional Gas Officer. Those attached to brigade headquarters and with Divisional Artillery should at all times be available for duty at the school if required by the Divisional Gas Officer.

3. It is important that all these N.C.O.'s should be kept in close touch with the work at the school in order that their technical knowledge be kept up to date. Duty at school should alternate with duty at Infantry Brigade or Artillery Headquarters.

DUTIES OF DIVISIONAL GAS N.C.O.'s AT DIVISIONAL ARTILLERY AND INFANTRY BRIGADE HEADQUARTERS.

The duties of these N.C.O.'s will be :

1. To carry out the weekly inspection of anti-gas equipment of personnel attached to brigade headquarters and prepare a list of shortages.

2. To keep a record shewing number and position of all anti-gas trench stores in the brigade area or held by batteries, and prepare weekly reports to be forwarded to the Divisional Gas Officer on the following :

- (1) Anti-gas equipment and inspections—consolidated weekly reports from battalion gas N.C.O.'s.
- (2) Strombos horns—as for Divisional Gas Officer's weekly report.
- (3) Other anti-gas trench stores.
 - (a) Vermorel sprayers—number and map location.
 - (b) Chemicals—amount in stock.
 - (c) Aryton fans—distribution and location.
 - (d) Vacuum bulbs—distribution and location.
 - (e) Gas-proof dug-outs — condition and location.
 - (f) Number of wind vanes, gongs, alarms, and "Wind Dangerous" notices in the brigade area.
- (4) Changes in personnel of battalion and company gas N.C.O.'s.

3. To inspect and test all anti-gas appliances before they are distributed through the brigade area or to batteries.

4. To visit all strombos horns in the brigade area at least once a week and test the pressure of the compressed air in the cylinders.

5. To keep a nominal roll of battery or battalion and company gas N.C.O.'s.

6. To replace useless or damaged containers of small box respirators.

7. To keep in touch with battery or battalion and company gas N.C.O.s. Assist them, when necessary and receive reports from them.

8. To have charge of the supply of chemicals for the Vermorel sprayer solution.

9. To keep a supply of S.K. liquid for testing the fit of masks.

- 10 To assist in training reinforcements.
11. After a cloud gas attack or gas shell bombardment to obtain reports, samples and specimens from battery or battalion and company gas N. C. O.'s to transmit to the Divisional Gas Officer and to supplement enquiries made by them.
12. To collect enemy anti-gas, smoke or flame apparatus and forward to the Divisional Gas Officer.
13. To assist in salvage of anti-gas equipment.
14. To assist in smoke production when required.
15. On relief to visit all Strombos horn positions with relieving gas N.C.O.'s and check all anti-gas trench stores and locations, if possible, one or two days before relief. Give or receive an acknowledgment that all is correct or otherwise.
16. The Divisional Artillery gas N.C.O. should inspect at least two batteries per week and report on the anti-gas discipline and efficiency in use of anti-gas equipment to O.C. Battery and Divisional Gas Officer.

DUTIES OF BATTALION GAS N.C.O.'s.

The duties of the battalion gas N.C.O. will be:

1. To assist officers at the inspection of small box respirators, P.H. helmets, satchels and goggles. Make repairs when possible. Assist the brigade gas N.C.O. to replace damaged containers of small box respirators.
2. To keep records of and prepare weekly reports to be forwarded to brigade headquarters on the following:
 - (a) Nominal roll of company gas N.C.O.'s
 - (b) Number and location of all anti-gas trench stores and appliances in the battalion area.
 - (c) A consolidated statement of the weekly reports of company gas N.C.O.'s
 - (d) Inspection of companies.
3. To inspect all anti-gas trench stores in the area at least twice per week.
4. To see that "Wind Dangerous" notices are placed in prominent positions and correctly used.
5. To see that Strombos horn sentries know their duties.
6. To assist company gas N.C.O.'s with gas-proof doors of dug-outs.
7. To assist company gas N.C.O.'s in training men in the use of anti-gas appliances.
8. To assist in training reinforcements when required,

9. To inspect at least one company per week and report on the anti gas discipline and efficiency in the use of anti-gas equipment.

10. During a cloud gas attack and after a gas shell bombardment to obtain samples and carry out instructions as in S.S. 534, appendix VII.

11. To assist with salvage of anti-gas equipment and trench stores.

12. To assist in smoke operations when required.

13. To assist company gas N.C.O.'s in making wind observations and check their records.

14. On relief, to assist in taking or handing over anti-gas trench stores.

15. He will be attached to battalion H.Q. and be exempt from all other duties when the brigade is in the line.

DUTIES OF COMPANY OR BATTERY GAS N. C. O.'s

The duties of the Company or Battery Gas N. C. O. will be:

1. To assist officers at the inspection of small box-respirators, P.H. helmets, satchels, and goggles.

2. To keep the following records and prepare weekly reports to be forwarded to Battalion Headquarters on the following:—

(a) Number of inspections held during the week.

(b) Number of officers and other ranks in possession of a serviceable small box respirator, P.H. helmet, satchel and goggles.

(c) Number of officers and other ranks not in possession of a serviceable small box respirator, P.H. helmet, satchel and goggles.

(d) Number and location of all anti-gas trench stores and appliances in the company sector.

3. To see that record books of small box respirators are entered up correctly.

4. Under the Company Commander, to have charge of, and inspect daily, all anti-gas trench stores as follow:—

(a) Strombos horns, gongs, triangles, etc., and see that sentries posted on them know their duties.

(b) Gas-proof shelters—assist in the erection of gas proof doors and see that they are kept in a serviceable condition.

- (c) Anti-gas fans—see that they are placed in proper positions and kept in good order.
 - (d) Stores of fuel for clearing out dug-outs—arrange to have a supply on hand
 - (e) Vermorel sprayers—see that they are well protected and kept in working order.
 - (f) Gas sampling apparatus—have charge of vacuum bulbs and gas testing tubes, and take samples during a gas cloud attack. Keep a stock of corked bottles and tins with well fitting lids for collecting samples of earth and water after a gas shell bombardment. Carry out instructions as in S.S. 534, Appendix VII.
5. To train men in the use of anti-gas appliances.
 6. To see that the men detailed to handle gas shells are wearing their small box respirator and know how to use them, and that proper precautions are taken at dumps of gas shells and grenades.
 7. During frosty weather to see that frequent inspections are made of the rubber valves of small box respirators and that precautions are taken to prevent them from being closed by moisture freezing in them.
 8. To make wind observations every three hours, or more frequently if the wind is in or nearing a dangerous quarter, and report any change of wind to the company commander. Reliefs of gas N.C.O.'s for this purpose should be arranged when possible.
 9. To make wind vanes and keep them in order, and see that the "Wind Dangerous" area is correctly marked on them.
 10. To fix "Wind Dangerous" notices in position and see that the notices are altered according to orders in regard to "Wind Dangerous" and "Wind Safe."
 11. To salvage anti-gas equipment in area and hand it over to the battalion gas N.C.O.
 12. To assist in smoke operations if required.
 13. On relief to accompany the advance party and take over anti-gas trench stores (by daylight if possible) and to obtain or give a receipt for them.
 14. The company or battery gas N.C.O. is not available for other duties if they interfere with the anti-gas duties laid down.
 15. The duties of gas N.C.O.'s of other units will be modified to suit their organisation.

PROTECTION OF DUG-OUTS AGAINST GAS.

Arrangements must be made for closing all openings, ventilators, etc., in the event of a gas attack. Special attention must be paid to the entrances of dug-outs. These must be closed in such a manner as to allow passage in and out during a gas attack without allowing gas to enter.

Gas-proof Doors for Dug-outs.

1. Each entrance should be fitted with two doors which should be fixed as far apart as circumstances will permit. They should be not less than three feet apart.

2. The doors should be made of blankets which should be shrunk before being used as they will always be kept wet with solution afterwards.

3. A complete frame of 6in. by 1in. timber (at least 4in. by 1in.) padded with double thickness of blanket so that the gas joint will be blanket to blanket, *not* blanket to wood, should be fitted in the opening.

4. The side frames should have a slope of at least 1 in 6 and the frames of both doors should slope into the porch at the top.

5. Care should be taken to make gas proof joints between the door frame and the top, sides, and the floor of the porch or passage.

6. The blanket used for the door should not be cut to fit the outside of the frame, but the sides should be folded over outwards and roughly stitched to the required size.

7. The blanket should be secured to the frame at the top with a wooden batten to prevent tearing. It should extend at least 3 inches beyond the bottom of the frame so as to form a gas tight check with the ground.

8. An iron or a heavy wooden bar should be attached horizontally to the blanket to keep it in position.

This bar should be at least 3 inches clear of the ground and will rest against the bottom frame or sill when the door is closed.

Its weight should be carefully adjusted so that it will not drag the blanket away from the side frames near the top edge of the bar.

9. A light wooden batten should be fixed horizontally to the blanket door, about halfway up to prevent the edges sagging inwards.

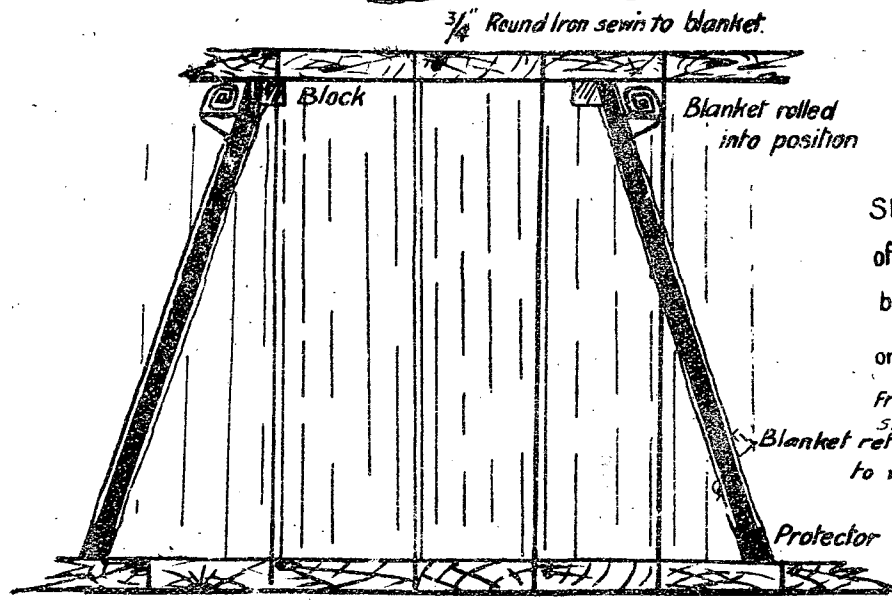
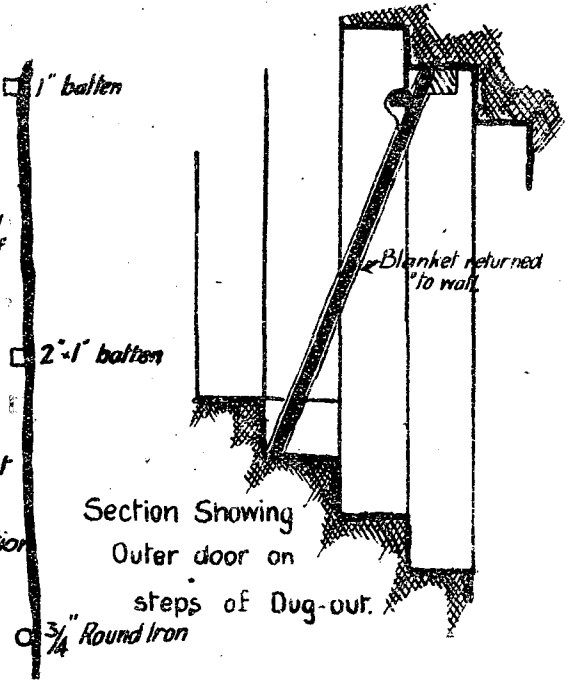
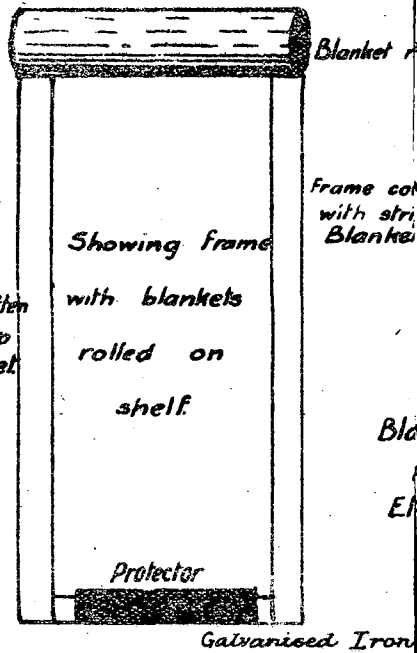
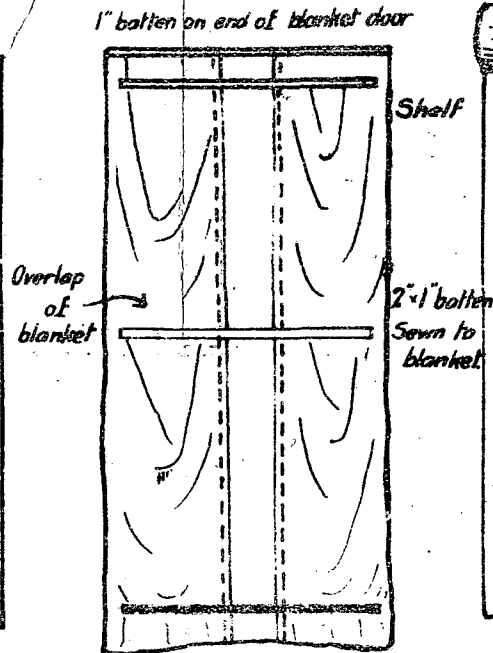
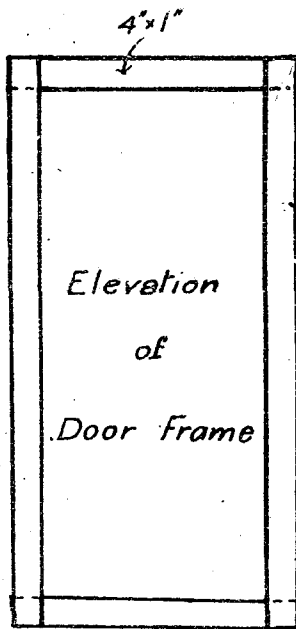
10. A wooden shelf should be fixed to the top frame of the door so that when the blanket door is rolled up it will lie on the shelf without any fixing.

11. The bottom frame or sill should be protected by a box step or a sheath made of tin which can be removed quickly when necessary.

12. The sentry posted at the door of a gas proof dugout during a gas attack will assist men to pass in or out, and will see that only one door is opened at a time.

13. Diagrams showing detail of gas-proof doors for dugouts are attached.

Sketches showing detail of Gas-tight door for Dug-outs



Section showing position of doors in Dugouts without landing

Sketch showing position of outer door with blanket rolled for Hut or Dug-out above ground

Frame covered with strips of Blanket

Blanket returned to wall.

