

A NEW LOOK AT SOME

DAMAGE CONTROL METHODS

BY

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During a fairly recent Damage Control exercise in a Type 12 frigate one of our 'Umpires', a Squadron Officer, complained that he was unable to get round the sections during the early stages due to the confusion which was going on forward and aft. And when he had, finally, been able to carry out his check on the closing down of the ship, he was horrified to think what would have happened to us had the ship been involved in actual action and damaged to the extent where the closing down had been put to the ultimate test. Doors had not been fully clipped, hatches and scuttles not properly closed, while scuppers and ventilation trunking had not been touched at all.

His comments were received with concern, and it was realized that this lack of co-ordination in the initial stages of closing down had existed in the Service for a good many years. Certainly since the author joined in 1949; many memories of such confusion and uncertainty were easily recalled.

In the wash-up which followed this exercise it became apparent that not only the junior ratings were deeply involved but also, to a lesser extent, the senior ratings. Many questions were asked of the key people of the section teams and many of the answers were so unsatisfactory that there was a lot of deep digging to do. There was plenty of food for thought, and it was realized that if the questions, which we knew would arise, could be planned out of the exercise then we were well on the way to finding a solution to at least some of our problems. Could we throw out the confusion and uncertainty during closing down? Could improvements be made to our Damage Control methods? The answers to both questions appeared to lie in the fact that little thought had gone into initial organization of the sections and, apart from the NBCD Watchbill and Section Incident Boards, there was nothing to give guidance to the sections as to how to go about their task. Neither was there any control over how the closing down was to be carried out.

From this fact came several new questions:

- (a) Why spend time mustering and detailing hands?
- (b) Why do openings, valves, etc., have to be closed haphazardly?
- (c) Why wait until everything is closed down before taking on something else?
- (d) Why isn't everyone employed in closing down whatever the department?
- (e) Why couldn't the whole closing down sequence be planned?

The answers to those five questions quickly fell into place and from them a new system was evolved.

THE AUTOMATIC MUSTER AND CLOSING DOWN SYSTEM

Introduction

Where a number of men have to move to a section of a ship with speed, and on arrival undertake a considerable number of tasks, there is bound to be confusion and delay in the completion of such tasks unless a system of control in mustering and closing down is introduced.

A set muster of men is time consuming, and, in a situation where speed is essential, could also be dangerous. In addition there is the danger of men being locked away unless a pattern of closing down can be achieved. In the Automatic Muster System it is possible to identify a 'lost' man immediately, and the locality in which he will be, without anyone having to search the section.

When a group of men have to muster in a section of a ship they will almost certainly have to pass a definite spot. This would be the site of the Muster Board, and the place at which the Section Leader attends in the first instance. The advantage would be that people arriving would be able to see exactly who is in charge at that particular moment, i.e., an LM(E) arriving at the Muster Board could see whether a senior rating had arrived, and if not, he would assume charge until relieved by a senior rating. Similarly, when the senior rating arrived at the Muster Board, he would be able to see exactly who was present in the section and what was going on, which hatches, scuttles, doors, etc., were being closed and what equipment was being prepared. There would be no need to detail hands for these tasks.

In the introduction to this system it is necessary to point out that the system is designed to overcome the initial confusion which normally exists in the closing down to State 1 Condition Zulu. It would be impractical to attempt a definite sequence of events beyond the mustering and closing down period, with the exception of certain secondary tasks which are desirable.

The Immediate Task

The immediate task at Action Stations is to prepare the ship to receive and fight damage. This preparation must be set in the earliest stages of closing down. The majority of any damage received will most likely hit the ship in one piece and, unless the closing down has been systematic and thorough, the side effects of that damage will be the more severe. Alternatively, if, when the section is being properly closed down, secondary desirable tasks are undertaken at the same time, the ship will be even more prepared to accept damage at an earlier time, and also be better able to fight it.

The Secondary Tasks

Important secondary tasks which need to be undertaken in sequence with closing down include such items as:

- Dress fire-fighters
- Prepare breathing apparatus and prove
- Prove fire-fighting gear
- Rig Diesel driven fire pump, test for fuel, coolant, etc.
- Rig 'Snorer' pump and test for power
- Open out damage control lockers and prove tools, etc.
- Supply suction and discharge hoses for emergency pumps
- Test electrical points for power.

The Muster Board and Watchbill

These were home-made with materials supplied by the Shipwright and Engineer's Office. The board consisted of $\frac{5}{8}$ -in. plywood with $\frac{1}{16}$ -in. perspex to face; this thickness of material was chosen so that there was ample depth in which to drill. The overall size was about 18 in. by 24 in. and one for each section was produced.

The watchbill was drawn out on the back of a disused chart and consisted of four columns each divided into 20 sections. The left hand column was made large enough to take a series of numbered tasks tabulated downwards, which accepted all the immediate and secondary tasks for that section. Immediate tasks were coloured red for M(E)s and green for EMs, and the secondary tasks for both departments were coloured blue.

Certain standing tasks, such as 'Communications Number', HQ.1 Messenger, etc., were left in white at the bottom of the column.

The three columns to the right of the board represented the three-watch system and provided a name space, number and colour to correspond with the left-hand column, for each member of the section. Each name position was drilled to accept a standard damage control indicator peg.

The first three sections of each column showed the chain of command, the number one position nearest to the left of the board being the senior rating in overall charge. This was considered necessary to avoid misunderstanding when more than one watch was closed up.

The Route Cards

Each Section of the ship was carefully checked and a series of routes were developed. The routes were tried by a POM(E) and an LM(E) to make sure that each was a feasible proposition, and that no difficulty would be presented to the closing down numbers. The final routes were typed on to cards in sequence of closing—red for doors, hatches, scuttles and scuppers, etc., and

green for ventilation control arrangements, including fan switch positions where appropriate.

The closing down teams were planned so that both M(E)s and EMs would be in company on each route, and the routes themselves planned so that there would be no overlap between teams. Under the system of planned routes it was impossible for one team to lock another team away, and this was achieved by shortening the routes nearest to the Section Base to the extent that there was ample time for these teams to complete their tasks and return to the base while the outward teams were still completing. The outward teams' route cards included such main doors and hatches that were necessary to complete the closing down on their way back to the Section Base.

On return to the Section Base the short route teams were detailed by the Muster Board to assist with a secondary task. The outward teams became backing up parties to those parties that were already formed.

Installation

The installation of the system provided very few problems. A short briefing was given to those taking part followed by a run in very slow time for each section. During the slow-time runs it became obvious that those taking part very much liked the idea of planned closing down. Suggestions were made towards improving the system and the feed back showed that a great deal of interest had been aroused, and the much improved closing down times were very encouraging.

The Muster

On Action Stations being sounded the men proceeded to their section and inserted their pegs in the holes provided alongside their task number according to watch. The closing down numbers collected their route cards and without further orders carried on with their particular tasks. At the same time those detailed for the secondary tasks would be setting up the section for events to follow.

The senior ratings were very quickly able to build up a complete picture of the state of the section and exactly who was present, and what those people were doing. Where more than one watch was closed up the watch nearest to the left of the board was the Leading Watch and the senior rating in charge of that watch assumed overall charge of the whole section.

As the closing down teams returned they were easily able to see from the board what their secondary tasks were and where to attend.

The Advantages of the System

The personnel for each activity, i.e., fire-fighters, patrols, shoring team, backing-up parties, and even coolie labour, can be pre-selected according to their capabilities. A 4 ft 6 in. tall rating in a fearnought suit designed to fit a man of 6 ft is probably more of a danger than a man in no suit at all. Similarly, a man dressed in breathing apparatus who doesn't know fully how it works becomes a definite liability. However, once the ability of each rating has been established the liabilities diminish rapidly, until a closely knit team of efficient personnel is achieved, each one knowing in advance what is going to be required of him, where he has to go, and what special equipment—if any—he has to take with him.

The time consuming roll call no longer exists and the Section Leader is able to see at a glance exactly who is present on the section and what each person is doing.

Charge is automatically assumed by the most senior rating present and the chain of command always moves upwards with no need for a turnover, until the Section Leader arrives to take full charge. At no time in the change of command is there any doubt as to what is going on in the section.

As the closing down teams return to the Muster Board the Section Leader will have a growing picture of the state of his section. He will know that when a team returns that that particular part of his section has been properly dealt with, until finally he can safely report his section closed down.

The secondary tasks are being performed simultaneously with the closing down. Fire-fighters are being dressed or fitted up. Lockers are being opened and the equipments prepared for immediate use, which is as it should be.

Conclusions

By planning a closing down route and allotting closing down numbers to each route the whole section is closed down by the minimum number of hands. The more experienced ratings are able to prepare equipment for whatever action that may occur.

By planning the closing down of the ship in advance much of the initial responsibility of the Section Leader is released for other important tasks—the checking of equipment, supervising the fitting up of his teams, etc.

By having a Leading Watch containing the more experienced men greater efficiency can be achieved. At the same time, the raw material coming into a ship for the first time can be given adequate training in the 'trailing watch' until they are considered ready to play a full part in the main events. By being closed up with their seniors, being brought in as backing-up parties they will be quick to learn provided they are given adequate assistance initially.
