

## FORUM

### Controlling Shipping Along the North European Trade Axis

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By the North European Trade Axis is meant the trade route from Ushant and Land's End, up the English Channel, through the Dover Strait fanning out to serve eastern England, the north coast of continental Europe and leading to the Baltic Basin. Recent events in this area have left a feeling that some form of tightening of control is not only desirable, but is rapidly becoming imperative. There is a basic conflict between the two forms of shipping using the area: the local users who use the area more or less constantly, and the long-distance traders, usually much larger, which arrive in the area for a brief stay after a prolonged period at sea, which has usually been in good weather conditions. Frequently these latter ships have a very poor notion of the hornet's nest into which they are steaming when they arrive. The net result is all too often the same: the local users, with familiarity breeding contempt, wander about as they see fit, with scant regard for routing or the regulations; all too often the big ships arrive from sea with navigating staffs who are too confused, sometimes too ignorant—and sometimes too terrified—to do much more than blunder forward in a straight line hoping for the best. Quite obviously this is not a total picture, and there are large numbers of ships which navigate perfectly competently, but the minority of those which do not seem to be rising rapidly, and show every sign of continuing to increase.

Economics have had a large hand in this. Highly trained crews skilled in operating in these waters are available, but they are expensive. Shipowners have tried, perhaps not unnaturally, to escape this cost by engaging cheaper crews from elsewhere, or, in the case of the local traders where this is not possible, to economize by reducing crew numbers or down-grading their standard. The net result is the same: an ever-growing number of ships in this fiercely busy area is inadequately manned. There seems little prospect of this trend being reversed by ship operators themselves, and as national legislation by any one country will only drive owners to register their ships under another—less strict—flag, the chances of rigorous manning laws effecting a cure are very small.

So that, however undesirable this may be, we have to accept the deplorable fact that manning standards are dropping, and will continue to drop. Highly trained and skilled crews will continue to be available, and to man a number of the more sophisticated ships, but they will become so expensive as to be uneconomic for the simple—but huge—bulk hauliers. For obvious trade reasons, we must bring bulk shipping to northern Europe in large amounts to gain their economies of scale. Social and economic choice is between making the area a preserve of ships of the riparian countries and paying the tremendous extra cost incurred on bulk commodities, or bringing cheaper shipping to the area in large amounts

and paying for a control system that will protect us from its errors and deprivations. On balance there seems little doubt that the latter will be the cheaper.

A control system for the north European trade axis would have two aspects—the local users and the uninformed deep-sea shipping. In terms of tonnage, size and potential havoc, the deep-sea ships form by far the more important group; they are also by far the more difficult with which to come to grips. At the present time there is talk of introducing surveillance in the Dover Strait later this year, which sounds very nice, but begs the question of how control is to be implemented, when the ships coming under it have no common language, no common radio system, no ready means of mutual identification, and all too often differing interpretations of the collision regulations. Further, there will always be a fringe of egomaniac masters who will refuse to use advice, and the odd one too terrified to do anything with advice received, who between them will upset any advisory system. And for as long as pilotage along the axis remains optional, only an advisory system is possible. The logical conclusion from this is that, given that an effective and efficient control system is needed on the axis, the only way of achieving it is by compulsory pilotage. However, the problem of compulsory pilotage in international waters bristles with legal as well as practical difficulties, and even if it might be possible legally, the problem is on us now, and it would take years for all the countries concerned, presumably acting on a legal instrument from Imco, to ratify an agreement to declare the area one of compulsory pilotage.

Yet for control of the area, pilotage is vital, so how else might this be enforced? One possibility could be to turn attention from the shipowners, on whom the duty to obtain pilots usually falls, and to look rather at the charterers who bring cargo, and hence ships to the north European trade axis. These are pre-eminently the oil companies, iron and steel companies, major grain houses, and the liner companies. If they could be persuaded that pilotage on the axis was a necessity for both their own ships and, more importantly, those that they chartered, and further, if it could be made a term of charter parties of ships coming to northern Europe that pilots had to be taken, then a form of compulsory pilotage could be introduced, long in advance of any move by Imco and the riparian countries to make a change in the legal status of the area.

This artifice could bring about the necessary change in pilotage requirements, but coupled with it would have to be a much more sophisticated concept of pilotage and control authority than any that has been tried so far. At present, sea pilotage is variously offered by private companies, statutory authorities, a variety of pilots' associations, and sometimes harbour pilots coming out to sea to look for ships bound for their port. A somewhat fragmented picture to say the least, and one which is insufficient if complete control is to be established. A unified supranational authority is required, in charge of both pilots and control centres with an international staff manning both ships and control centres. This authority could then be charged with the safe operating of the area up to the limit of each port's own local pilot area. Computerized control and frequent reporting would ensure that the position, movement and intention of every ship was known. There would be an important 'spin-off' benefit to this in the organization of search and rescue operations in this stormy and dangerous area. For this aspect of the total concept, the American AMVER system would act as an excellent model. There are problems with this view, but none is insurmountable, and it is hard to see how anything less than a total system will be sufficient to keep pace with

ever-expanding traffic in the future. But it is important that it is seen as a really urgent problem, calling for action now; the first steps are being taken, but we must be thinking far beyond these.

Some of the conventional thinking about pilotage itself would have to change with this total concept. The question of how far the pilot's responsibility extends is an old and hoary one, but it takes on some exotic new colours with the concept of total control, originating in a shore station and being interpreted and carried out by other members of the same corps on board the ship. Basically this is a question for the lawyers, but it will have to be settled, or we may yet see a ship's master disregarding the shore advice, overruling the pilot, and causing unholy chaos in a tightly regimented group of shipping. My purely personal observation is that if masters were to be relieved to some extent of the total responsibility they bear, and if a pilot could be held directly accountable for his actions, most masters would cheerfully relinquish the practical control to that pilot.

With the present growth in size of ships, the current practice of having ships come to the pilot station will have to change, and the situation is arising that a reversion is necessary to the sailing ship practice of having pilots seek their ships off-shore, on their trade routes. Operating from fast off-shore launches and helicopters, pilots would board and leave ships without the latter having to deviate, so that all they would do would be to slow down, make a temporary lee, and then they could be on their way. This would avoid the ghastly *melée* which so often occurs around the present in-shore pilot stations, and we must accept that having big ships come to their pilots is no longer a safe practice. The present concept of having one man as 'the pilot' would also become inadequate when total control is introduced. No matter how highly skilled and trained he may be, there are limits to how many things one man can do simultaneously, and how long he can remain on top level alert. All too often the equipment he is expected to do the job with, although good enough for the open sea, is inadequate for an area such as the north European trade axis. Yet for the degree of safety which is required, continuous high perception pilotage with adequate equipment and reliable communications is essential. The solution to this follows logically, but expensively. A group of pilots would have to board each ship, bringing with them their own charts, corrected to the day of boarding, their own hi-fix Decca set, two powerful hand v.h.f. sets, and a fixed-frequency m.f. radio telephone locked into the working frequency of the control authority. A highly desirable instrument which has yet to be produced is a ship's *racon*, which could be transmitted on request and which could do much to assist ship-to-ship dialogue in fog. It seems probable that the optimum number of pilots for a system such as this would be three, consisting of a senior pilot in charge and two watch-keeping assistants. With such a group, highly skilled manning of all ships' bridges whilst in the area would be possible.

An examination of the chart would suggest that for practical purposes the pilotage area would consist of the English Channel, Dover Strait and southern North Sea. Pilots would operate from the Channel Islands, or alternatively Cherbourg, and proceed out to meet ships between Ushant and Casquets. On the north side, they would operate from Brixham. It is probable that the ports would be the other ends of the pilotage within the North Sea.

This would cover the deep-sea shipping, but this is only one side of the problem, and the local users far outnumber the big ships. How are they to be

controlled? Pilotage is obviously impractical and should be unnecessary. The masters concerned know the area all too well, but they do not know so much about routing or radio control. Nor are they always particularly amenable to instruction or advice when they get it, for the control system would have to be extended to such crafts as fishing boats, whose present habits in congested waters leave much to be desired. It seems probable that some sort of licensing for masters and skippers now serving would have to be introduced, with oral examinations on routing and traffic control. Ultimately this could become an extension of the masters' or skippers' certificate of competency, and it should be made law that if the route arrangements, collision regulations or traffic flow instructions were flouted, the licence could be withdrawn with consequent loss of job. Due to the flagrant disregard for the rules all too often shown by the local users, stringent measures of this nature would be necessary; they have brought it on themselves. Ships operating locally with licensed masters would have to be suitably equipped to operate under routing control, and ultimately, if not so equipped it could be necessary to require that they take pilots.

To sum up: Control of the area is rapidly becoming imperative. Control without pilotage is impracticable and their present system is inadequate. The concept of control and pilotage would have to be one supranational unified body, whose pilots meet ships well off-shore, control them through using shore station control, and deliver them into the hands of harbour pilots at their destinations.

Local users of the area would have to be licensed for that specific area and trained in the new concepts emerging in it.

## A Note on Manning Reductions and Navigation

J. King

IN recent years attempts have been made to reduce the manpower requirements of merchant ships and, largely as a consequence of technological advances, some measure of success has been achieved. Indeed, there is now no technical obstacle which prevents the construction and operation of an unmanned ship. With this knowledge perhaps the time has come to reflect on the wisdom of excessive enthusiasm for technological innovation and to consider objectives.

During the 1960's the nature of the major forms of ship operation was such that it was clear that significant cost savings could be achieved by reducing the size of crews. Crew costs were a major item in the total annual costs of operating ships at that time, and the reduction in manpower made possible by more efficient shipboard organization and investment in a certain amount of automatic and remote control equipment promised potentially substantial savings. Whether this is so today is arguable; in many cases the structure of ship operating costs has changed to such an extent that crew costs are no longer as significant as a decade ago. Figure 1 is based on information given by Fasse<sup>1</sup> and illustrates the relative costs of maintaining a given liner service with three different types of ship. If it is accepted that the ship types are arranged in chronological order in the diagram, it is clear that crew costs are declining both in absolute magnitude and as a proportion of total costs. It would be rash to postulate a general principle from a