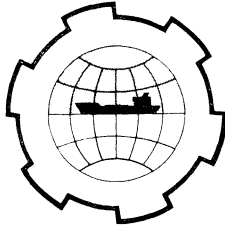


PORT AND OCEAN ENGINEERING UNDER ARCTIC CONDITIONS
TECHNICAL UNIVERSITY OF NORWAY



THE COASTAL EXPRESS ^{x)}

Per Munkerud
Research Engineer

Institute of Transport
Economy

Oslo,
Norway

This lecture is about the Coastal Express - most people used to call it the Coastal Steamer, but as there now are no steamers left, the Coastal Express is a better expression - the Shipping Line which most of you will use this evening on the trip from Tromsø to Kirkenes. However - before I really take up the matter of the Coastal Express, I want to give you a short briefing about the Institute of Transport Economy where I am working.

Institute of Transport Economy (TØI) is one of the institutes within the Royal Norwegian Council for Scientific and Industrial Research. TØI was given the status of a separate institute from January 1st 1964 with the following aims:

- 1 To promote research and education in transport economy in Norway through its own work as well as through coordinating the work in this sphere among scientific institutions, governmental administration, transport users and transport industry, and through the development of nordic and international cooperation.
- 2 To work for the utilization by the Norwegian society of the results of the transport-economical research, information service and consultation assistance to the extent this is of value to the research.

x) The views and opinions expressed in this paper are those of the author and do not express any opinion on the part of Institute of Transport Economy.

The Institute is organized in eight departments:

- Department of Transport Economy
- Department of Traffic Engineering
- Department of Transport Geography
- Department of Operation Research
- Department of Transport Engineering
- Department of Project Planning
- Department of Information
- Department of Administration

Total research staff now levels at 60, most of them professional people.

I am connected with the Department of Transport Engineering. The main purpose of our department is to clarify the techno/economical problems attached to the individual transportation means and their use in the transport system. The research work aims not only to discuss existing techniques and methods, but also to evaluate the use of new transport techniques.

We have now taken up the subject of logistics. But of special interest to this audience I will mention the research work and analyses we have carried out in coastal shipping and in the field of ports. For example we have cooperated in UNCTAD's research work on port problems - carrying out a simulation model by using historical data from the port of Casablanca. In the near future this model will be further tested and refined - among others on the port of Bergen.

One of the main tasks concerning coastal shipping has been the analyzing of the Coastal Express - the final report being handed over to the Government in 1966. In this lecture I will give you a short summary of the results carried out - and a few personal comments on the present situation.

Along the Norwegian coast, especially north of the Arctic Circle, is found one of the richest fishing banks in the world. This is the main reason why people settled in Norway many hundreds of years ago. In the beginning the fishermen carried their products on their own vessels to Bergen which was the main port at the time. Besides fishing they developed a large trade in merchandise necessary for

their existence north of the Polar Circle. Their small, but sturdy vessels, carried mail as well as passengers. The Norwegians depended much on these boats both to keep the country together and to maintain growth and prosperity.

But - the need for larger and more seagoing vessels and regular services became necessary. In the beginning of the 1800's the steamship came into being and made these regular services possible. However, it was not before 1893 that a regular steamship route was seen around the Arctic latitude. This route which departed from Trondheim used Hammerfest/Tromsø as the most northern port, summer and winter respectively. "The Coastal Express" as it was named, steamed from Trondheim to Hammerfest in about three days with nine halts. As a matter of interest, our modern motor-ships will cover the same distance in 2½ days and still visit only a few more ports. As a call for better service became apparent, more and larger ships were put into service and the route had to be extended north and south of the original ports. In 1936 so many ships were acquired that daily service became a reality. The Coastal Express now started in Bergen, had Kirkenes as turning point and called at 33 ports on the way.

During World War II half of this modern fleet was lost to the German war machinery. The other half of the fleet was in such a bad condition, due to lack of maintenance, that the Coastal Express was forced to commence a rebuilding program of their fleet in order to bring it up-to-date. Finally in 1964 this program was completed. Thirteen ships between 2.100 and 2.600 GRT had then been built at a cost of about 160 mill kroner.

The passenger traffic showed an increase up to 1962, when it reached 569.000. Since then the traffic has decreased, dropping in 1969 to 529.000. The traffic shows great seasonal variations both in the number of passengers and to an even stronger degree when transportation work is concerned. The ratio of passengers between the heaviest and lightest traffic months is 3.5:1 (the ratio of income from passengers for the same traffic months is 6.5:1).

A comparison between the passenger capacity offered and the transportation available shows an average utilization of about 20%. The statistics show a utilization of about 10% of the capacity offered in the winter months and 50% in the summer season. Comparing the

journeys between various ports of call, the volume of passengers varies considerably, thus the utilization may be both higher and lower than these figures.

Every year the Coastal Express carries more than 100.000 tons of goods - general cargo northwards while fish and fishing products go southwards. The cargo traffic varies to a much lesser extent than the passenger traffic, and it is satisfactorily balanced between north- and southbound traffic. The cargo traffic is also decreasing, both in tons and ton/miles.

The economic situation has become substantially worse since 1962. The main reason is that the capital-costs increased sharply because three new ships were brought into service. Since 1965 the annual deficit has been about 20 mill kroner. Total costs now level at 80 mill kroner, so that the income amounts to 75% of the costs.

Between the Government and the five operating firms of this express line, an agreement exists which stipulates a fixed payment from the State per ship per day, under certain outlined conditions. This compensation does not cover the deficit, so that the shipping companies have a loss under the depreciation terms they now use. However, by using the ships' real age as the basis for depreciation the companies should receive a minor profit. This is probably the reason why the companies still want to maintain the Coastal Express

Up to the present day, shipping has had no real competition from the rest of the transportation industry. In Norway this is mainly on account of the topography and the tough climatic conditions. As railways, roads and airports have been constructed, the Coastal Express lost its "traffic monopoly". The regularity of the railways, the flexibility of the cars and trucks, and the speed of the aircraft explain "the transfer of traffic" which has occurred. The advantages of these transport means will play an even more prominent part in the future.

The railway in Norway ends around the Polar Circle, and that is why the railway has made a comparatively weak impact on the coastal traffic unlike cars and aircraft. A strong increase in the number of cars and an intense roadbuilding program resulted in more road traffic which is detrimental to the coastal traffic. The Coastal

Express loses passengers on shorter distances while the trucks receive a greater share of the market and trends show this will increase. However, the most serious competition will come from the aircraft.

The fares on parallel air routes and coastal trips are approximately the same. On the other hand, the difference in travelling time is unfavourable to the Coastal Express. On some trips the travel time in hours corresponds to the travelling time in days by the Coastal Express. In our time-stressing age, it is quite natural that sea passenger traffic will decrease in the face of hard competition. Except for the summer season, the Coastal Express will only keep the small share of passengers who are afraid of going by air. This situation may arise in the future, which means that the Coastal Express, roughly speaking, now acts as a local means of conveyance and a "feeder" service to the main air routes. This function is, of course, important too, but when the planned local airports come into existence within the next few years, the market left for coastal traffic will drop to a low level during the winter season.

The fleet of the pure coastal cargo liners have almost been completely exchanged during the 1960's. The introduction of up-to-date pallet carriers, modern cargo equipment and a co-ordinated sailing schedule between most of the shipping companies have more than doubled the fleet capacity. All signs indicate that a change-over of cargo from the Coastal Express to the pure cargo liners must have taken place, but it is difficult to find statistics to prove the validity of this statement.

The future of the Coastal Express looks very gloomy under these conditions. The traffic is decreasing and as a natural consequence the incomes follow. Simultaneously the costs are rising rapidly. But - as the Government says - the important reason for the Government's payment of subsidies is the need for regular services throughout the year to the small communities along the coast, especially on the Finnmark coast.

A few years ago a thorough examination of the Coastal Express was carried out. The investigation terminated by giving concrete proposals to improve the financial situation. With reference to the

general transport policy drawn up, the investigation concluded that the fares should be increased to obtain a better relation with the expenses. It was particularly mentioned that first class prices over longer distances ought to be much higher since the demand for this category in the summer was much higher than the capacity offered. A lot of other proposals were also put forward. For example, different routes with new sailing schedules, but when the proposals were examined by a Committee, the only proposal that was passed was a small increase in passenger fares.

However, it was no surprise that the Committee aimed at a preservative attitude. The interested parties in the matter - the involved shipping companies - obviously wanting a preservation, had a strong influence both through direct representation and by their assistance to the Committee. Extensive opportunities to submit opinions during the work of the Committee were open. The misrepresentation then created was further strengthened through the subjects the Committee looked at - and did not look at. Therefore, there are good reasons to emphasize the need for more objective and up-to-date analyses on the Coastal Express.

