

in the present emergency. It may be noted here that required power to deliver 300,000 barrels of oil per day from Texas to Pittsburgh by barge is more than double that required by pipe line.

2. Lack of trained pilots: Tows must be piloted by trained men in treacherous currents and channels. A large-scale barge program will require the training of many additional pilots.

3. Congestion of waterways: The congestion of waterways naturally becomes greater than increased traffic, but with the movements which are now anticipated it is not believed that this congestion will become a limiting factor.

4. Slow speeds: The slow speed of tows, together with long hauls because of circuitous waterways, detracts from over-all barge efficiency on the long haul. It may be noted here that the inland water distance from Texas to Pittsburgh is more than 2,200 miles, as compared with the pipe-line distance of 1,100 miles.

It should be noted, however, that although a high percentage of the total existing river barge capacity can be used alternatively on the intracoastal waterways, nevertheless much of the power equipment used on the inland rivers is not suitable for use on the coastal waterways.

I would like to mention here that many well-meaning citizens have offered suggestions as to the means of relieving this shortage of barge and towboat equipment. Among others I recently received from the Governor of Florida a list of barges that were supposed to be suitable for the transportation of petroleum and petroleum products on the waterways of that State. We know that list was submitted to our office with a sincere desire to assist in the present transportation crisis. Examination disclosed, however, that not only was the list quite indefinite as to the whereabouts of the barges mentioned, but that the construction of the barges was of the type known as a scow, which could not possibly be converted to a tank barge without complete reconstruction, which would consume more time and labor than would be required to build an entirely new barge.

I would also like to mention here that it is erroneous to assume that wooden tank barges are inexpensive to build and can be built with cheap inexperienced labor. Actually a properly constructed tank barge of 8,000 barrels capacity will cost 60 to 75 percent of the cost of a steel barge of equivalent size. The labor required to build such a barge must be highly skilled in the art of making tight, leak-proof joints, particularly so in order to overcome the handicap of the entire absence of properly seasoned wood.

Returning to our major problem which involves development of the quickest means possible of supplying the eastern seaboard with another 500,000 barrels per day of petroleum overland, we are impressed with facts that show conclusively, we believe, that the inland barge is not the major key to this accomplishment. It is the belief of all expert authorities with whom we have consulted that any solution of this problem quickly will require the use of all available second-hand steel and some new steel. In the use of steel we are controlled in our conclusions by the steel efficiency figures herein given, which indicate that the proposed 24-inch pipe line from Longview, Tex., to the east coast will produce the maximum transportation capacity in relationship to the tonnage of steel involved.