

The CHAIRMAN. Then the tankers will hold from 50,000 to 130,000 barrels?

Mr. ALLEN. Up to 150,000.

The CHAIRMAN. Those are the larger ones?

Mr. ALLEN. The average is still, for all practical purposes, down around 70,000 barrels.

The CHAIRMAN. Do you not believe that any mode of inland transportation of oil, except for local consumption, throughout the country will go back to tankers after peace is restored?

Mr. ALLEN. I would like to comment on that in this way, that tankers became popular because of their superior economies over pipe lines. The pipe lines with which tankers had to compete were 8- and 10-inch lines which would only move limited quantities of oil. Recently we had the same kind of calculations applied to large pipe lines that have applied to large tankers, and they disclosed the fact that when we get into 24- and 30-inch pipe lines we have a basis for continuing competition to the tanker service. That is an interesting possibility which Mr. Parton will discuss further tomorrow.

He will also be able to present and will present the various costs of these forms of transportation in terms of tons of steel per barrel which, in these critical times, is largely on the ground. The difference, primarily, between pipe lines and all other forms of mobile transportation is that the pipe line does not have to go back for another load empty. That is the essential difference.

The CHAIRMAN. As to the 24-inch pipe lines, there are not many of those in use, are there?

Mr. ALLEN. There are two of those now actually in service for oil transportation, one in Oklahoma and the other through from coast line to coast line.

The CHAIRMAN. Does it not require a great deal of power to pump crude oil through those pipes?

Mr. ALLEN. It does.

The CHAIRMAN. About how far apart in reasonably level country would pumping stations be?

Mr. ALLEN. About 40 miles, and sometimes 50.

The CHAIRMAN. If you get into mountainous country, how far apart would they have to be?

Mr. ALLEN. They have to be grouped considerably closer together, as, for example, in crossing the Alleghanies. It depends on the topography as to the spacing of the pipe line stations.

The CHAIRMAN. Does it require more power to pump crude oil than gasoline?

Mr. ALLEN. Yes, sir; and more power for fuel oil than for crude oil.

The CHAIRMAN. If a pipe line is established across Florida, is it your opinion there ought really to be three pipes there, one for fuel oil, one for crude oil, and one for gasoline.

Mr. ALLEN. That would really await an analysis of what the demand is for those products. I would assume, ordinarily, that there would be a very heavy demand for domestic heating oil this winter. That is the kind of fuel oil that our apartment houses use to keep us warm. That fuel oil is light enough to be handled relatively easy, and if the pipe line were devoted to that, of a medium size, it might add materially to our comfort and health next winter. Whether a gasoline line is vital or not depends on such factors as the gasoline output of