

FUEL OIL FOR SHIPPING

Officials of oil companies have learned that the Canadian Customs Department will probably decide to admit fuel oil for shipping use free of duty to Canada. Since July 12, when a tank steamer with a cargo of fuel oil for shipping use reached Vancouver from San Francisco, and a duty of $2\frac{1}{2}$ c. a gallon was demanded, the companies engaged in the fuel oil trade have been awaiting a decision by the Minister of Customs on an appeal taken as a result of this duty. Many of the trans-Pacific steamers of the Canadian Pacific and Grand Trunk railroads use fuel oil, and the imposition of such a duty would mean a doubling in the price of the product of these and other companies operating oil-burning ships.

Within the last seven years, according to oil authorities, practically all the local steamers at Vancouver and on Puget Sound have been converted into oil burners, while to-day a large majority of the larger off-shore liners are burning fuel oil. The saving in space and operating expenses has appealed to owners, and with the improvement in atomizing the fuel, its use has become much more satisfactory. Many manufacturing plants also have discarded coal for oil, and this ever-growing market has brought the importations of oil to Vancouver and vicinity to unexpected proportions.

Hon. Winston Churchill, the First Lord of the British Admiralty, recently announced that an investigation into oil fuel would be made. Oil burning engines are going to play an important part in many of the new crafts that are now being built and those in contemplation in the principal shipyards of the United States and England. According to a well-informed marine builder, there are no less than 242 steamers fitted for burning liquid fuel, the largest being the Toyo Kisen Kaisha liner's Tenyo Maru and Chiyo Maru of 13,454 tons gross and 13,431 tons gross respectively. In this connection it is of interest to note that the new Cunard liner Aquitania of 50,000 tons gross in the course of construction on the Clyde is to be similarly equipped, while the White Star boat of 18,000 tons which is now being built at Belfast for the Cape-Australian routes, and which is to be named the Ceramic is also to use oil. Quite a large number of the oil burners are now employed in the Pacific, two of them the Ventura and Sonoma recently inaugurated a service for the Ocean Steamship Company between San Francisco and Sydney, New South Wales. Another line of steamers burning oil fuel, the Crown Line, will soon be running between Pacific Coast ports and Australia.

The Colonial Transportation Company of Mexico is equipping its barges with oil engines and the use of oil for fuel promises to supersede other fuel upon nearly all the river and coastwise vessels on the east coast of Mexico. There is also an increased demand for crude oil for fuel by manufacturing plants in various parts of Canada and the United States.

Since the British coal strike in the early part of this year many of the large users of coal, including the railways, steamship companies and municipal corporations, have been considering more seriously than ever before the adoption of a substitute fuel. There has been an unprecedented demand for oil engines to replace or supplement steam engines. It is stated that the British towns of Barking, Reigate, Leatherhead, Fareham, Bude, Letchworth, Aldershot, Cosham, Chichester, Aberystwyth, Birmingham, Bath, Swadlincote, St. Albans, Leek, Hindhead, Rothesay, Oxford, Wakefield, Saltburn, Sheerness, Guildford, Bangor, Bridgewater and Liverpool will soon be partially or wholly independent of coal for their electrical supply.

Many municipal water works are also being made independent of coal and steam power. It is claimed by motor

makers that many English firms are, as a result of the late strike, seriously considering the advantages of motor transport. Commercial travellers are using motor-cycles in increasing numbers when calling upon their customers, as they can travel, it is stated, a hundred miles upon a gallon of petrol (gasoline) and carry their samples, unless they are of great bulk, be entirely independent of the railways and be able to call upon a greater number of people than they possibly could if restricted to steam travel.

DISTRICT HEATING BUSINESS.*

By A. D. Spencer.

The district heating business is nearly as old as the electric lighting business. As early as 1890 a number of electric lighting companies were selling exhaust steam for heating purposes. At the present time there are over 300 heating plants in the United States. The National Electric Light Association committee gives answers from 100 companies, one-half considering the business directly profitable, while practically all agree that it is of great advantage in connection with electric supply.

While the value of a combination electric and heating system is being recognized more fully as the companies extend their field to include the large commercial establishments formerly considered out of the reach of the central station, it is impossible to find another business so well established and in which so many companies are engaged where one-half believes that the business is yielding no profit.

It is doubtful if a majority of heating companies have the necessary data to make up a reliable operating balance. Heating plants are outgrowths of the electric business and generally are operated in connection with it; therefore, the expenses frequently are not separated. The heating revenue is credited to the fuel account and often assumed to be practically all profit; a cost analysis is considered unnecessary. Where an analysis is made, it is many times inadequate, the general expenses, fixed charges and depreciation being omitted.

Failure to show profit may be due to inadequate rates. Many managers consider heating revenue practically all net gain and they establish schedules without considering the value of the service to the consumer or of its cost to the company. The popularity of the service shows conclusively its value.

The value to the consumer is easily from 10 to 25 per cent. more than the cost of maintaining his own plant, due to the absence of smoke and dust, to lower insurance rates, to the release of valuable space otherwise occupied by the plant, and to the greater convenience and reliability of the district heating service. The value of the service will generally permit rates based on the cost of supplying live steam, and rates should always be so based, rather than on the not always correct assumption that the steam is a byproduct.

Faulty construction or improper operation may cause a financial loss. The same care should be exercised in designing and constructing a heating system as in the electric-supply system. In general, the distribution system should be designed to secure the maximum density of business with the minimum length of mains. The load on existing mains should be increased and extensions made only where it is certain profitable business can be obtained.

* Presidential address to the National District Heating Association, at Detroit, Mich., July 25.