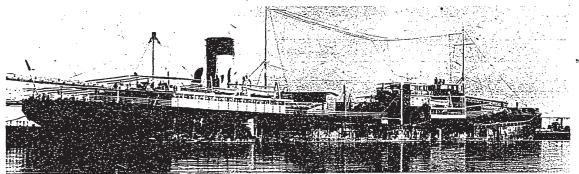


Filling the tank compartments-New tankers carry from 105,000 to 150,000 barrels of oil.







"Oil or the lack of it may well spell victory or defeat in this war, and England gets nearly all her oil by tankers."

By RUSSELL OWEN N English statesman has said that in the last war "the Allies floated to victory on a sea of oil." Oil or the lack of it may well spell victory or defeat in this war, and England gets nearly all her oil by tankers. The Germans have announced that they will now concentrate on sinking these odd-looking, squat ships, riding so low in the water when loaded that waves continually sweep their decks in rough weather. Day by day tankers become more important, even on this side of the Atlantic. We transfer fifty American tankers to the British service and our own flow of oil from producers to consumers is so dislocated that the East is threatened with at least "gasless Sun-Tankers have become important days." auxiliaries of war, and a lot of them have been sunk, even some owned in this country but flying a foreign flag.

Tankers circle the world, carrying their cargoes across the oceans, through danger zones, up peaceful coasts such as those of the United States, for it is cheaper to carry oil by sea than by rail. In June, 1939, there were 1,731 tankers of over 1,000 tons under all flags. They had a gross tonnage nearly one-sixth that of the world's merchant fleet. The United States alone, at the beginning of this year, had 467 tankers of 500 tons or more, totaling 2,948,264 tons and with a cargo capacity of 34,344,108 barrels.

And there are a number now being built in shipyards in this country—large, fast vessels which are vastly improved over the tankers of even a few years ago. The accent is on speed—sixteen knots. or better—so that ships may shuttle rapidly between their supply bases and the ports to which their cargoes are consigned. And they are driven, driven to the limit even in bad weather, so that those aboard have the sensation of riding a submarine.

Nesmith and Richie for Guif Oil from Atlas

The fast merchant cargo ships have quick turnabouts, also, but their periods in port are lengthy compared to those of a tanker. It is not as easy to unload a miscellaneous cargo through the hatches as it is to hook up the pipes and turn on the pumps of a discharging tanker. These "oil cans" of the sea are big ferryboats, shuttling crude oil, lubricating oil or gaso. line and, when riding light, using water as ballast. It is a strenuous life for their crews, as any tired skipper who has been up all night groping his-way close along a foggy coast or getting the feel of his heavy ship through his legs and wondering how much more she will stand will tell . you.

Considering the dangerous nature of their cargoes and the precarious coastal waters in which they often operate the tankers' record for safety is remarkable. One never hears now of a tanker breaking in two as a ship did years ago off the Jersey coast; seldom do tankers go up in flames at sea through accident. They are about as safe as human ingenuity can make them—unless a torpedo is encountered, and the roaring hell which is created then, as men try to abandon a blazing ship in the midst of fiery waters, can only be imagined.

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LHE men who sail these ships never, or seldom, think of the potential dynamite under their feet. They depend on the little tubes which carry fumes from the tanks to be dissipated high up among the masts, and they rely, also, on their own common sense. It is the rule on a tanker that one may smoke in quarters or abaft the funnel, but nowhere else, and no man dreams of violating this rule. Even the casual traveler on a tanker instinctively is careful. The penalty for absentmindedness is too great. But just because of what might happen there are few adventures on these vessels.

It is easy to recognize a tanker. She is one of those big ships with the funnel far aft over the engine room, with the forward superstructure sticking up just forward of amidships. Ahead of that, and aft to the superstructure in the stern, there are no bulwarks, only a flush deck with a light railing. Men can work on that deck in fair weather, but when it is rough they take to the flying bridge, which runs high above the deck, fore and aft, and sometimes even that is not safe. Then the ship must heave to for a while when the watch is changed.

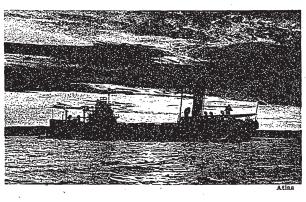
You can't go forward and aft below decks because of the tanks. The average person is apt to think of a tanker as a ship which has one huge tank in its belly pumped full of oil. Such a tank would be dangerous in more ways than one, so the main hull of the ship is divided into tank compartments. In the older ships these compartments run from side to side, but in the new vessels the largest tanks run through the center of the ship and are flanked on each side by smaller tanks. This makes it possible to trim the ship better, particularly when it is in ballast. The captain can fill up just as many tanks as he wishes and put the water where it will do the most good.

MOST of the new tankers are quite large, from 9,000 to 11,000 tons. They carry from 105,000 to 150,000 barrels of oil. The new Navy tankers are all of the largest size and, like the best of the tankers in private service, make sixteen knots or better. Whether any of these ships have been turned over to the British is a government secret, but probably the Navy is keeping the best of them on this side of the water. They are too valuable to the fleet to be given up.

Life on a tanker, except for the quick turnabouts, is much the same as on a merchantman, although the quarters and food vary with the age of the ship and the policy of the company. On the best lines the crews do not like to quit, despite their infrequent leaves, because the pay and food are good compared to the pay and food on other ships.

The captain and mates live in the midships superstructure, under the bridge, and the captain's quarters on some of the new ships rival those of a large liner. The mates' quarters are good, also, and there are usually two or three large staterooms for guests, for it used to be customary to move company officers and employes, with their families, on the ships. That shows how safe the tankers are considered.

The chief en- (Continued on Page 23)



OIL CANS'' OF THE SEAS

(Continued from Page 12) gineer, his assistants, and the boatswain, quartermasters, and all the other members of the "black" gang and the deck crew, live aft. Living quarters have to be bunched on a tanker because it is not practicable to carry food from the galley across the flying bridge in a storm-that is, not in any con-siderable quantity. The captain and his guests eat forward, of course. Life for the captain's steward during a storm is adven-turous; if he gets all his food forward while dodging seas that go roaring under the flying bridge or even across it, he is lucky.

The living quarters aft have been steadily improving on modern tankers. Although conditions may be uncomfortable and hot on the older ships, those on a few of the new ones are amazing. There is one company that is very proud of its marine division and Every man the men's quarters. aft, down to the lowliest helper in the engine room, has a room to himself. The rooms range from the big office and stateroom of the chief engineer to a tiny stateroom aft for an ordinary seaman. No matter how small, each room has a door and a place to hang pictures, as well as a comfortable bunk, a washbowl with running water, a table and a chair. And there are ample shower rooms. Match all that in the forecastle of a freighter.

HE men take pride in their quarters on these new ships, as much pride as the cook takes in his huge and spotless galley. where he cooks the same food for the men that the captain gets-at least on this line. The officers have their own mess aft, large and comfortable, and there is a similar room on the other side of the ship for some members of the crew, while the seamen and oilers and others have their mess one deck below.

Of course, not all tankers are so well equipped. Many of the older vessels have the poor quarters that generally characterized the merchant marine until recently, and the food is nothing to brag about. But the tendency is to cleaner and better and more com-

fortable ships, and apparently it pays.

The men on tankers earn a little more than those on other types of ships, because of their short periods of shore leave and the possible hazard in their job. There are thirty-five to forty-five men on a tanker, depending on its size. Many crew members, and particularly the officers, Scandinavians, men bred to the sea for generations. All officers are American citizens, and so are most of the créws on the larger tanker lines. A growing number of the younger officers are of American descent. They are a good lot.

UNE never knows what sort of men one will find in the crew of any ship, and that is true of the tankers. On one of the big, new tankers on which the writer made 'a coastal trip there were some interesting individuals. The mate was a typical Norwegian sailor, rugged and taciturn, spitting tobacco juice into the ocean while he poked into tackle and machinery that needed attention, moving around with the swift, easy motion of the natural sailor. He would sit on the bridge on watch, sewing on a bit of canvas and not saying a word for an hour, and then, with a twinkle in his eye, break into a torrent of conversation.

The cook was another odd character. He painted. He knew he wasn't a good painter, and he was right, but he thought he was pretty good. With his cook's cap on the side of his head he would dive under his bunk and bring out some of his current work with obvious pride. He liked to use long words and maintained an intense seriousness. His pictures were not worthy of a museum, but there was some groping for beauty in cookie's soul. It even came out in his cooking. A cake with strange green and pink lacing was something to look at twice before attempting a bite. That icing was a manifestation of pride in accomplishment—the artist would not be denied. And he was a good cook.

One of the wipers was a man who had had some domestic tragedy and had gone to sea to get away from it all. As soon as he was off duty in the evening he would go to his room and write and write and write. He was working on a novel. He didn't know whether it would be a good novel or not, but he had the urge to write, had always had it, and the sea seemed a good place to do it. Maybe he had been read-

ing about Conrad and McFee the latter an engineer on a tanker for years

The odd thing about many of the other men on this ship was that they liked cookie's painting, as well as his food. They also sympathized with the urge of the wiper who had to write. They didn't quite know why he should, and only one book could be found on the entire ship, but composing a novel seemed to them a worthy thing to do, even if rather incomprehensible.

THESE are the types of men who bring our oil from Texas, who carry it under other flags across the sea. Their life is not easy. There is always something to be done on a ship, and when the runs between ports are only a week or ten days, and the weather is bad, the deck jobs suffer. Something is always carrying away, some pipe or vent or lead needs repairing, there is painting to be done, and tanks need inspection.

If the weather is fair men will be swarming all over the deck during the day, under the direction of the boatswain and the mate. The amount of tapping, hammering, twisting of valves and other things that can go on is incredible. Down in the pump room-rooms that run far down to the bottom of the ship, where water slaps around under the plates-men are working on some bit of machinery. The air there is sickly with faint gasoline fumes, and the chief never lets a man go down to work alone there must always be two. It is not only that a man might become ill, which seldom happens, but also two men are more apt to play safe, for each watches the other to see that no sparks are born. They don't even carry matches in their pockets down into those chambers, no matter how short a time they are to be there.

VLEANWHILE, things are going on in the engine room, where the swifty revolving turbines turn grinding reducing gears which transmit power to a shaft that turns over about eighty revolu-tions a minute. There is a fully equipped machine shop at one side. Forward are all sorts of pumps and automatic equipment, and beyond a bulkhead door are the boilers, where a keen-eyed man watches dancing dials and peers occasionally through a peep-hole at the white flames. That's an awful lot of heat to be locked up on a ship with 110,000 barrels of oil or gasoline. But the boilers are operated almost automatically, and if anything goes wrong they correct them-selves by means of instruments more delicate than any watch.

Pretty intricate mechanisms, these tankers, with their power plants, safety devices, many pumps and deck lines and connections, all painted different colors so that the eye will not get confused in the forest of valves. They drive between New York and other coast cities and the Gulf or go down to South ports. America, or to the California coast, where their big tanks are filled. They start often for destinations about which little is said. And on those bound across the Atlantic, with lights out, the officers scan the gray seas-and hope.