

Marine Engineering

SKINNER MARINE UNAFLOW STEAM ENGINES

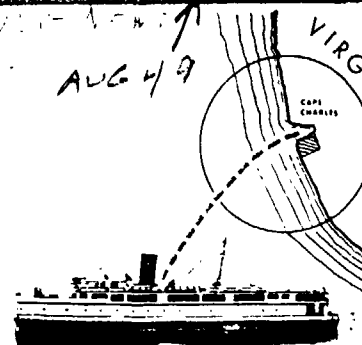
*...have propelled
these 3 ships the
equivalent of more
than 118 times
around the world*

Without a major repair!

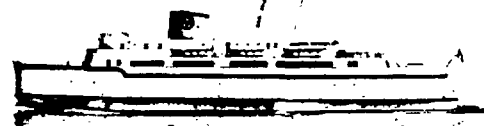
These three ships of the Virginia Ferry Corporation, plying the 26 miles between Little Creek and Cape Charles, have piled up a total of 2,949,504 miles—without a single major repair.

According to the owners: "The main engines have had no major repairs on any of these vessels. No steam or bulkhead packing has been renewed. No liners have been removed from any main bearings or crank boxes. Each vessel has had just one complete change of piston rings. You have to put your hand on the engines in order to tell they are turning over."

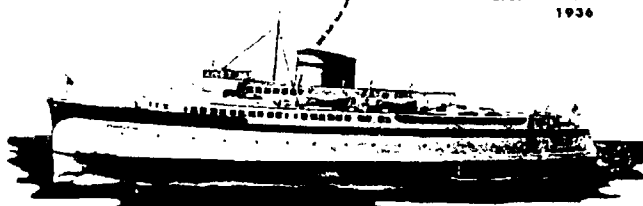
Each of the three ships is propelled by two 4-cylinder Skinner Marine Unaflow Steam Engines. Skinner Marine Unafloes are available in various lengths of stroke, and in sizes having from two to eight cylinders, with capacities from 400 to 6000 horsepower, suitable for the propulsion of ocean-going, coastwise, harbor, and inland waterways craft.



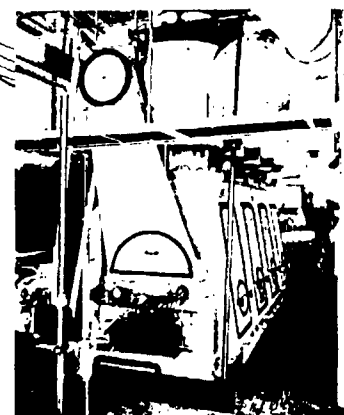
S. S. "DEL-MAR"
1934



S. S. "PRINCESS ANNE"
1936



S. S. "POCAHONTAS"
1941



One of the two 2,000-hp Skinner Marine Unaflo
Steam Engines in the S. S. "POCAHONTAS"

For Over 80 Years, Doing One Thing Well—Building Steam Engines
SKINNER ENGINE COMPANY, ERIE, PA.
Licensees for Canada; Canadian Vickers, Limited, Montreal

outstanding improvement in DIAPHRAGM VALVES by CRANE

**NEW SEATING ARRANGEMENT
MORE DURABLE...
SAFER...MORE EFFICIENT**

Now, after completing exhaustive tests, Crane presents this better diaphragm valve—better suited for more services under today's working conditions. Stemming from basic improvements, such as the radically new bonnet-sealing and valve-seating arrangement, this original Crane design introduces many outstanding service features like those shown here.

1. **LONGER DIAPHRAGM LIFE**, because diaphragm is used *only* to seal the bonnet—not for seating purposes.
2. **POSITIVE SHUT-OFF** in case of diaphragm failure. This is an exclusive Crane safety feature.
3. **ACCURATE SEATING**—new flat face disc with durable, resilient seating surface assures tight closure on all fluids.
4. **GREATER FLOW CAPACITY** with reduced resistance and pressure drop, assured by Crane Y-pattern body design.
5. **EASIER OPERATION**—Crane separate disc and diaphragm construction takes less torque—fewer turns—to operate.

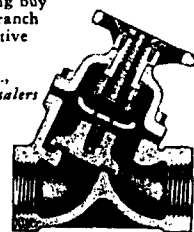
GET THIS DESCRIPTIVE CATALOG



See these new valves—the outstanding buy in their class—at your local Crane Branch or Wholesaler. Or write for descriptive catalog AD-1761.

CRANE CO., 836 S. Michigan Ave.,
Chicago 5, Ill. Branches and Wholesalers
Serving All Industrial Areas.

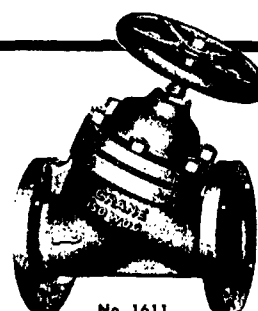
This new Crane line includes iron valves with screwed ends in sizes $\frac{1}{2}$ to 2 in.; with flanged ends from $\frac{1}{2}$ to 4 in. Neoprene coated valves—flanged ends only—in sizes from $\frac{1}{2}$ to 4 in.



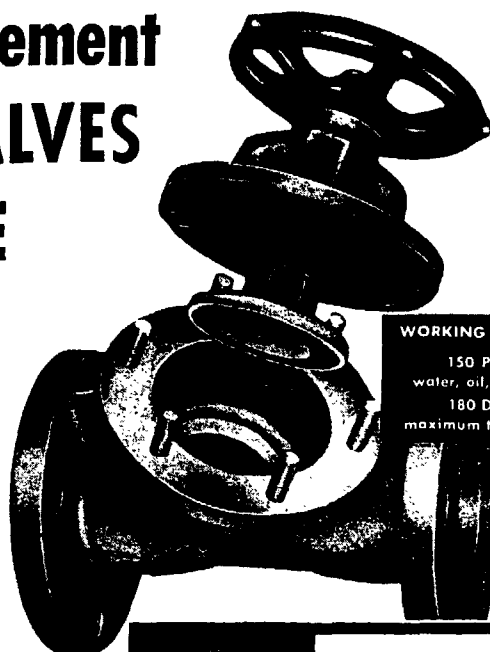
No. 1610, screwed ends



No. 1615,
flanged ends,
neoprene coated



No. 1611,
flanged ends



WORKING PRESSURE:

150 Pounds
water, oil, air or gas
180 Deg. F.
maximum temperature

HOW IT WORKS

The Crane diaphragm serves one function only—sealing the bonnet. It is not subject to crushing and rapid wear. The seating member is a separate circular flat face disc, firmly attached to the stem and joined to the diaphragm with a special leakproof connection. This independent seating feature permits positive shut-off with no loss of fluid, even in case of diaphragm failure.



Valve Open



Valve Closed

EVERYTHING FROM ...

VALVES
FITTINGS
PIPE

CRANE

PLUMBING
AND
HEATING

FOR EVERY PIPING SYSTEM