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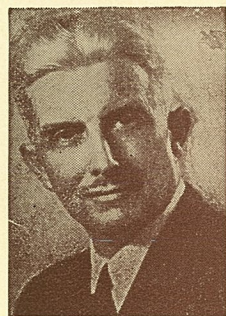
Number 1

ANTI-GUN LEGISLATION

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THE KRAISSL COMPANY, INC.



Consulting Engineer
Kraissl Associates

The tendency to believe that morals can be legislated, continues to demonstrate the immaturity of those who propose this approach to meeting social problems. The prohibition fiasco should be a documented proof that the cure can be worse than the disease.

If we believe in people and that they are competent to perform self-government we must agree that the great majority is capable of self-discipline. The ability to defend the individual, the family and/or group is a basic element of survival. If we are students of geology, we know that living creatures by the fact of survival had sufficient means of defense to make this possible.

Creatures with means of defense can use them as a means of offense. The first recorded murder was the killing of Abel by Cain as reported in Genesis. Cain did not use a fire arm. This was before their time. We can jump centuries and find that Caesar was murdered by a knife, in company with many others both before and after. The Medicii liked poison. This procedure is still favored by some murderers and the ancient office of King's Cup Bearer was originated so the Ruler could witness the reaction before accepting the cup. There is an Indian cult that likes strangling as did lynch parties that make a farcical ceremony out of the proceedings. Cleopatra tested out a venomous snake on an attendant before using it as a means of suicide.

So we must agree that it is not the means but the intent that should be given consideration, and apparently in spite of the ultimate in legislation, the first degree murder penalty has not kept murder from being perpetrated.

There is a terrible tendency to try to shirk personal responsibility by "passing a law" against the means of commission of a crime without insist-

ing that legislation must and should be directed against the criminal without permitting professional "do gooders" to nullify the effect of the courts or enforcement agencies. This carries from the extremes of protecting juvenile delinquents to avoiding penalties by such legal maneuvers as claiming temporary insanity. The fact that capital punishment still exists should prove that even the maximum penalty society has been able to legislate does not preclude murder.

The effect of proposed Anti-Gun Legislation should be alarming to a free people. One of the reasons that the right to bear arms was guaranteed in the Constitution was the belief that this way of life would be defended by a populace capable of defense. A second stems from a belief in the right of self defense. Enforcement officers cannot be everywhere and criminals can study their patrols. Violence from intruders is still a matter of daily occurrence, and in most cases the victims are unarmed. A third is the acknowledgement that as a carnivorous people, the capability of food procurement from the wild should not be lost. Conservation should be taught and practiced with public relations programs to prove that game increase has been made possible from hunting license fees. It should be an obvious fact that restrictions take guns only out of the hands of honest people. Criminals who require guns to perpetrate their crimes get them at all costs and give no more consideration to anti-gun laws than to anti-theft laws or anti-murder laws.

What is needed is less anti-gun legislation but more support of the activities of such groups as the National Rifle Association, Police Reserve Associations, Posts of Veterans and sportsman's organizations that will teach our youth the proper use of fire arms and rebuild in them the traditions of a self-reliant citizenry.

If you believe as I do, that we must avoid this type of restrictive legislation, contact your state and national Legislators, stating your position. If you also feel very strongly about the matter, I can assure you that membership in The National Rifle Association will lend support to an organization originated for this purpose, which has been in existence many years with an illustrious roster.

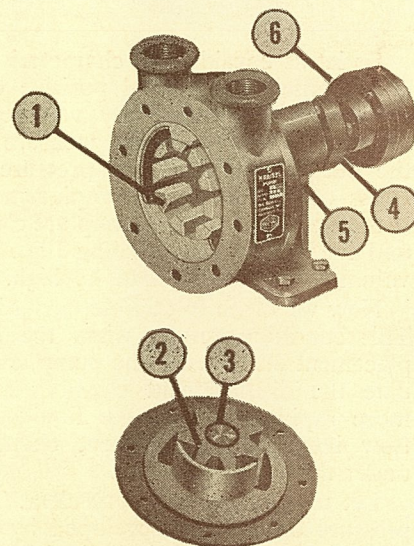
The address is 1600 Rhode Island Avenue, N.W., Washington, D. C. The dues are only \$5.00 a year, unless you wish to join me by becoming a life member.

WHY WE RUN OUR PUMPS AT SPEEDS CONSISTANT WITH VISCOSITY OF THE PUMPAGE

There are apparently many technically trained individuals who have not made a profession of hydraulics but are anxious to know what determines the proper speed for positive displacement pump operation. This article is written for them.

In the first place let it be said that there are mechanical speed limitations and hydraulic limitations. To explain the mechanical reason, there are certain design positive displacement mechanisms that have definite speed limitations. They may have other advantages for specialized applications that would make their use desirable but we are discussing only the matter of speed. A good example is our Class 90 mechanism. If this is run at a speed much in excess of 300 rpm the free running roller will not follow the cam shaped rotor and the roller will bounce eliminating displacing action.

CLASS 60 FEATURES

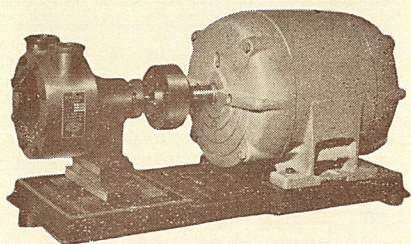


1. Internal gear design provides high suction lift characteristics.
2. Interchangeable idler best suited to application.
3. Integral bearing and idler assembly.

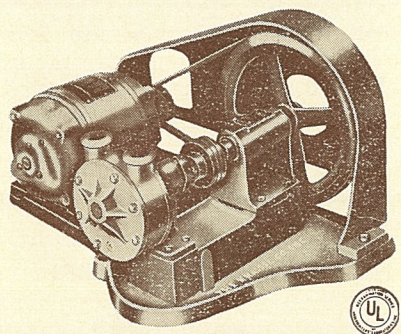
4. Adjustable stuffing box fitted with return seal and soft packing keeps shaft wear and chance of leakage to a minimum.
5. Interchangeable return seal design allows change of rotation in field.
6. Flexible coupling of our design available most sizes.

Our Class 60 and Class 66 series mechanisms are universal from the mechanical standpoint and can be run at direct motor speeds when the viscosity of the liquid handled will permit. For instance we suggest that this design be run direct connected at 1200 rpm when handling #2 oil which is of sufficiently low viscosity so cavitation does not develop at these speeds. To emphasize this point if any design is incapable of operation at high speed from the mechanical standpoint, the viscosity of the liquid would not be the controlling element.

CLASS 60 SERIES PUMPS DIRECT DRIVE FOR LIGHT OIL



REDUCTION DRIVE FOR HEAVY OIL



So let us consider the characteristics of an **efficient** universal positive displacement mechanism. By volumetric efficiency, we mean the measure of the out-put liquid at any pressure in terms of the theoretical displacement. If the clearances of the pump are close, and the liquid has a sealing film, the volumetric efficiency can be high.

Now we come to audible cavitation. This condition results when the displacement elements in the pump, evacuate the displacement chamber at a more rapid rate than the liquid can flow into the displacement chamber under the suction created.

Let us get this now very clear. The pressure differential developed by the suction of the pump is limited by atmospheric pressure and the rate of flow of the liquid into the displacement

chamber is controlled by the viscosity of the liquid under this pressure.

We have always taken the position with an **efficient** positive displacement mechanism, that it should be run at a speed consistent with the viscosity of the liquid being handled. Since we have used the Class 60 as an example, we will continue to use it. The same pump that can be run at 1200 rpm with number 2 oil should not be run at much greater speeds than 400 rpm on Bunker C oil when the viscosity of number 6 oil is much in excess of 2000 SSU. We make this stipulation because the viscosity of oil can be controlled by pre-heating but this is an entirely different matter.

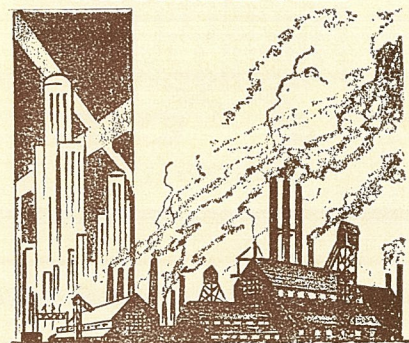
Some people do not understand why an efficient mechanism cannot be run at as high a speed as an inefficient mechanism without incurring audible cavitation. The reason for this is that the more efficient the displacement mechanism, the less fluid will discharge back from the positive pressure side to the suction zone through the clearances of the pump. In other words an uncontrolled internal by-pass is not provided. Conversely the internal by-pass of other types of mechanisms of the more loosely fitted type is just the reason high suction characteristics cannot be provided by these designs. When such an internal by-pass exists, fluid, either liquid or air from the discharge side can flow past the internal clearances to the suction zone and while destroying the suction capabilities of the pump, does satisfy the condition of cavitation.

This should explain the ridiculous paradox that the more volumetrically efficient a pump is of a positive displacement design, the more audible cavitation will show up if the displacement mechanism runs faster than the liquid can fill the evacuated chamber, under operating conditions. Since most of our suggested positive displacement designs are quite efficient, it also should explain why we strongly recommend running mechanisms at speeds consistent with the viscosity of the liquids being pumped.

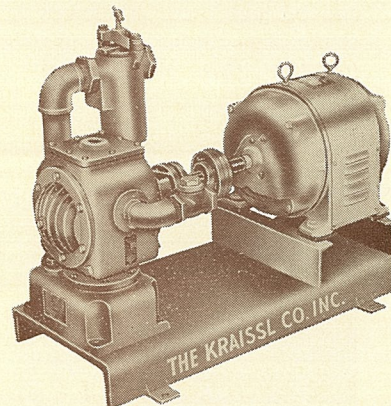
EDITORIALS

Our editors are the senior officers of this company and our policy permits each of us to express thoughts which we believe can be contributions to the voice of public opinion in business. It must be emphasized that the thoughts expressed are those of the author and not necessarily endorsed by the rest of the Board of Directors of this company. Kraissl Associates, acting in the capacity of consultants, handle the technical aspects of our public relations program.

INDUSTRIAL FIELD



PROGRESS REPORT AIR PUMP OIL BURNER APPLICATION BASIC CLASS 25 SERIES PUMP WATER COOLED

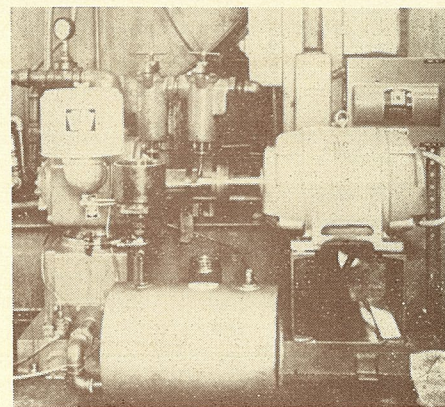


In our April 1964 issue we detailed an application to which our air pumps have been applied where previously other pumps had been reported as failing to meet the requirements.

This pump is still running on a continuous duty basis and a companion unit has been installed which is also being run on a continuous duty cycle.

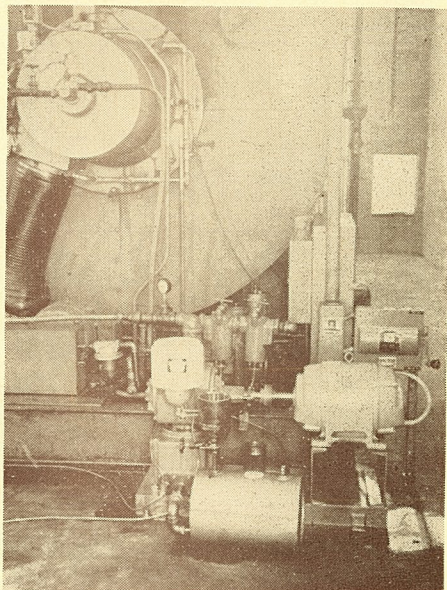
Several important considerations need emphasis. We attribute the ability to meet continuous duty requirements as being due first, to our patented force feed system of lubrication and oil recovery which feeds lubricant to the pump on an over supply basis and recovers the salvagable excess oil from the compressed air, returning it to the pump lubricating system.

WITH AUGMENTED LUBRICATING AND OIL RECOVERY SYSTEM

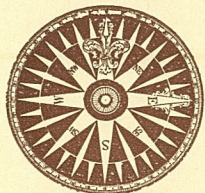


Then, secondly, to the fact that we have so far limited this application to our water cooled models. Since we build these pumps with the three systems of radiant cooling, fan cooling and water cooling, we cannot be prejudiced. We have supporting data to prove that water cooling supplies the best method of heat transfer for this type of service. Since water cooling can be stopped or started when the compressor runs, there need be no wasted water.

Lastly, pumps under these conditions of operation run on a comparable basis with automobiles at sixty miles per hour such as turnpike driving. At 60 miles per hour a car would travel 1440 miles per day and might be due for a new oil supply. With our system of oil recovery an oil change may not be frequently necessary but provision must be made for adding oil, when needed. This procedure has been simplified and one of several methods can be suggested to those interested.

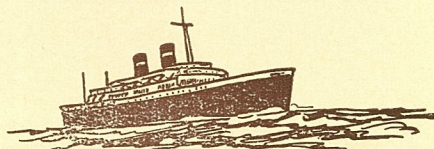


Oil Burner being operated by compressor assembly



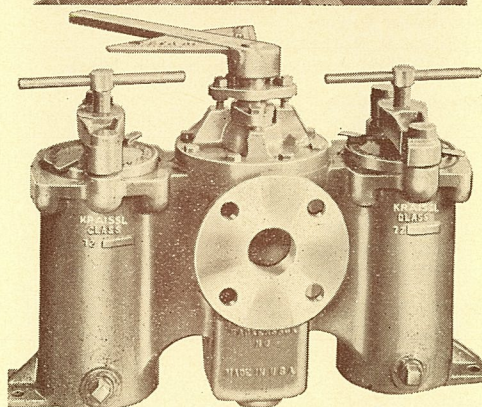
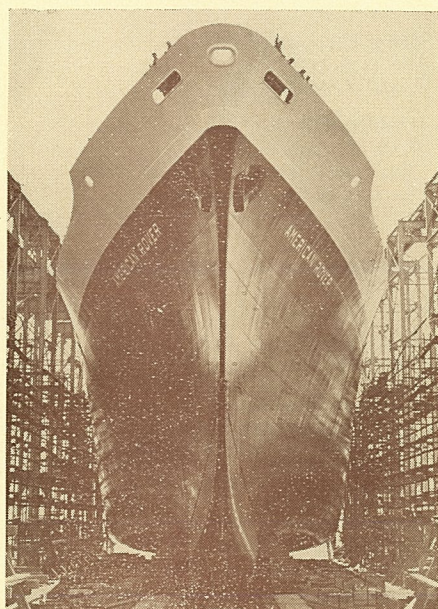
**MARINE
FIELD**

SHIPBUILDING INDUSTRY



**KRAISSL SEPARATORS PROTECT
FUEL OIL SUPPLIES ON SHIPS OF
U. S. LINES**

We are proud that we were selected by the Sun Shipbuilding and Drydock Company to furnish our Class 72 series

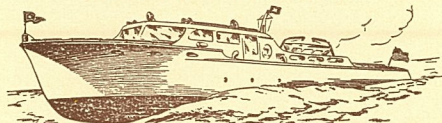


strainers for ships of the S. S. American Racer class.

Kraissl separators are being supplied to many of the major shipbuilding companies for such use as intake cooling water strainers, lubricating oil filters, and fuel oil filters.

Our separator elements are interchangeable in the same housings, the degree of separation determining whether a strainer or filter element is required.

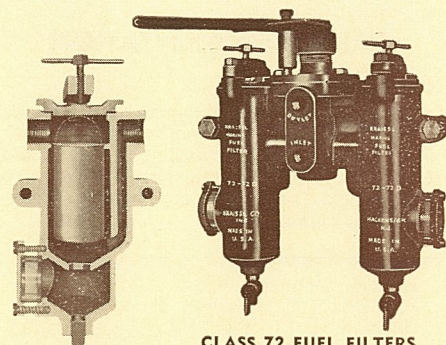
BOATING INDUSTRY



SAFETY AFLOAT

Safety from the boating standpoint is not limited to precluding a boat blowing up. There are other ways in which the unwary can get in a tight fix, and many of them relate to power failure occurring at the wrong time.

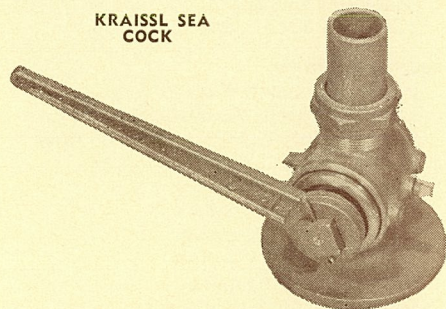
Three easy ways to get into trouble are first to permit condensate or extraneous matter to get into the fuel lines. Even two engines utilizing the same fuel supply will not get you out of this one, but this danger can be minimized by use of Kraissl Fuel Fil-



CLASS 72 FUEL FILTERS

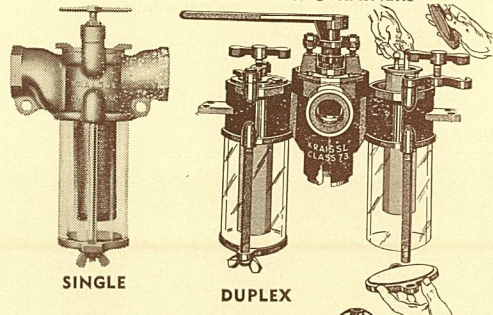
Then there is sinking at your mooring. Underwater through hull connections can link up with clamped on hose. Going through a heavy chop can loosen such connections, letting the sea in. Of course a Kraissl Sea Cock, if closed when you leave the boat, would just about preclude this type of accident.

**KRAISSL SEA
COCK**



Lastly the marine debris which is constantly getting worse in most harbors, can rip the cooling water pump to pieces or clog the heat exchangers on fresh water cooling systems. A Kraissl Sea View Strainer would minimize this possibility, particularly if occasionally inspected and cleaned.

CLASS 73 SEA VIEW STRAINERS



SINGLE

DUPLEX

Government boats would not put to sea without such protection, and larger vessels in the shipbuilding field would not be commissioned without their larger counterparts. But the boating public must like to live dangerously. It may not know any better and boat builders do not insist on furnishing these items whether of our manufacture or those of a competitor. When a family can afford a \$6,000 to \$60,000 toy you would think it would want to take all possible means to preclude power failure especially when this can be accomplished for such a comparative pittance.

HOME OFFICE

Northeast Region

Eastern Region

Southeast Region

North Central Region

Central Region

South Central Region

Northwest Region

Western Region

Southwest Region

Canada—Ontario and Quebec Provinces

Canada—British Columbia Province

Hawaii

Witness: "Yes, your Honor, I do, I was right behind you when your ball went into the water on the ninth hole".



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OF**

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