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YALE PUMPER

YALE & TOWNE

THE YALE & TOWNE MANUFACTURING CO., STAMFORD, CONN.

PIPE LINES

THINGS TO COME

Yale & Towne Pump Division is a beehive of activity these days. Experimentation and testing are going forward on new developments to meet wider fields of application and to bring in more Yale sales from a wider group of prospects.

VARIABLE HIGH PRESSURE CONTROL

One of the new features is a higher pressure variable control head for the variable control pumps. It is too early to release any information of a definite nature, but the design and added features look very good.

LIQUID FERTILIZER PUMPS

Something most interesting is happening in this field, and full information will be released just as soon as field results are in.

THE EDITOR

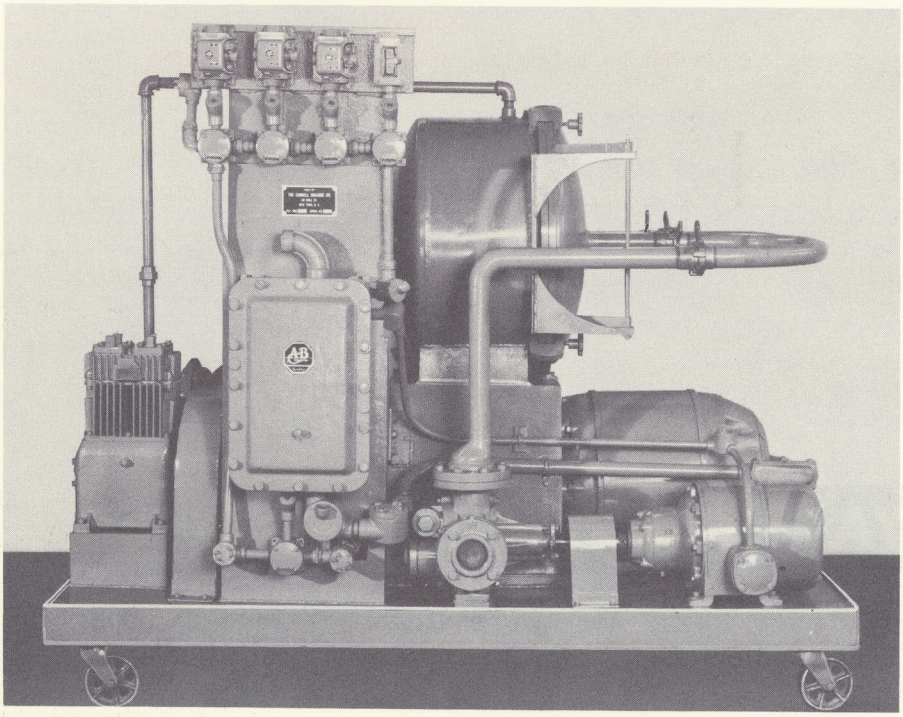
YALE SCORES AGAIN ON ADJUSTABLE FLOW AND SMOOTH PUMPING ACTION

PROCESSING EQUIPMENT MANUFACTURER USES TRI-ROTORS TO PUMP BLENDED GREASE AT VARIABLE RATES WITH NO CHANGE IN CONSISTENCY

Moving blended fluids is a common enough pumping application. Not so common, nor so easily solved, is the problem of moving these materials at variable flow rates without altering their consistency. All too frequently, emulsification, aeration, or bleeding due to pump action is encountered.

These considerations were particularly important to Cornell Machine Co., manufacturers of petroleum blending, homogenizing and processing equipment, and they were the determining reasons for selecting Yale Tri-Rotors for Cornell Cold Grease Homogenizers and similar equipment.

The Cornell homogenizer is widely used in petroleum processing to improve the quality, consistency and appearance of batch-produced kettle greases. In addition to imparting a smooth, over-all consistency to these greases, it eliminates lumps of undispersed soap, deaerates the grease and produces a standard grade compound with uniform characteristics throughout the entire batch. Maintaining this uniform consistency in transferring the product from the homogenizer to other processing steps requires a pump that does not chew, aerate or otherwise destroy the original consistency of the grease blend.



As a further requirement, efficient operation of this equipment demands a controlled rate of delivery from the machine to the varying "loads" encountered in subsequent processing. For example, where packaging in individual containers immediately follows homogenizing, a particular rate of flow will provide optimum process efficiency. Bulk packaging, intermediate storage, or further manufacturing steps, on the other hand, may call for different flow rate for most efficient operation. In handling these varying flow demands, no variations in blend consistency can be tolerated, since this would result in a non-uniform finished product.

YALE TRI-ROTOR PUMPER

In attempting to meet these two important requirements, many different types of pumps were tried and rejected by Cornell. Only the Yale Tri-Rotor proved effective both for moving these blended greases without destroying their consistency and in affording full control over rate of delivery.

Louis M. Barish, the Yale & Towne Pump Distributor for the New York Area, handled the demonstration and subsequent sales which now total 200 Yale pumps for this application. The Yale Model 100 CV was selected by Cornell principally for its simple, positive variable displacement feature, and for its "pushing action" which maintained original batch consistency over the full range of flow rates.

In the standard installation shown in the accompanying photo, the model 100 CV requires no special engineering. It connects to the revolving mixer of the homogenizer through a 2½" pipe and a 4" flange. The large flange at the pump input keeps the pressure drop at this point as low as possible and the reduced diameter of the suction line creates a high-velocity flow from the mixer to the pump inlet for better suction flow characteristics. Discharge from the pump is conventional through a standard 3" flange.

A 5 hp explosion-proof gearhead motor provides the necessary pumping power. Final drive at the pump is at 320 rpm through a direct coupling. This provides a normal pumping rate of 40 gallons per minute with a batch viscosity of 750 S.S.U. over a temperature range of 160° to 210° Fahrenheit. The required changes in flow are accomplished with a handwheel which is manually adjusted to give the desired pump displacement.

Since the initial installation of the first Tri-Rotor pump in Cornell processing equipment in 1940, the company reports "no replacement of spare parts". This durability plus the leak-free quiet operation of Yale Tri-Rotors were big selling points for Yale, quite apart from their variable displacement features and smooth pumping characteristics. These same Yale advantages represent important selling points across the board in the chemical and processing industries wherever routine or unusual pumping problems must be solved.

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