

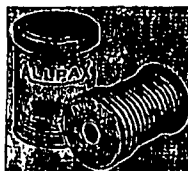
# ALLPAX

...the Packing that PACKS ALL



## "PACK UP YOUR TROUBLES"

Tell ALLPAX specialists all about your packing troubles and let them solve your problems once and for all. If your requirements are so different that a standard style won't do the trick, ALLPAX will develop a special packing just exactly right for your specific needs. ALLPAX Packings can be depended on to cost less because they last longer, retain resiliency, are leakproof without excessive pressures and protect against scaling.



### ALL TYPES

Available in cast, ring or less form for temperatures to 600°; special for higher temperatures.

### ALSO

Valve Disc, Sheet Packing, Retainer Packing, Molded and Mordal Cut Packing Rings, Packing Hooks, Gas-tight Cutters.



Send for complete catalog; contact your nearest distributor.



**THE ALLPAX COMPANY INC.**  
805 Mamaroneck Ave., Mamaroneck, N.Y.

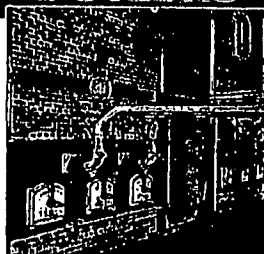
Superheat Sheet Packing... Oil Proof Sheet Packing  
... Red Rubber Sheet Packing... Diaphragm Sheet Packing... Cloth Interlaid Sheet Packing



## 3-Drum WATER TUBE BOILERS

"Standard of the  
Industry" FOR EFFICIENT  
STEAM GENERATION

Schools and institutions demanding low cost boiler operation with maximum steam output are an important part of the long list of Titusville 3-Drum Water Tube Boiler users in many different fields. May we consult on your coming needs?



State Teachers College, Edinboro, Pa.  
Two Titusville 120 Gallon, 150 lb. pressure spreader  
mokers. Contruction Drums Corporation, Pittsburgh, Pa.

**THE TITUSVILLE IRON WORKS COMPANY**  
a division of **Struthers Wells** TITUSVILLE, PENNA.  
Manufacturers of Iron and Steel Castings

## FIGHT POWER COSTS

operation costs chargeable to generators.

"Purchase price covered only generator with exciter, oil cooler and hydrogen coolers, main switchgear but no station service or transformers.

"Condenser Factor was another through much the same approach for four jobs had a weighted of 1.86. The erected cost, including direct charges, took in the cost system with tubes, circulating water condensate pumps, air jets, circulating water piping to station wall, screens the portion of auxiliary electrical chargeable to condenser auxiliaries. purchase price was made up of denser, tubes, air jets and pump drives.

"By applying these factors to the chase costs of the major elements get an estimated figure that represents about 75% of the total. The 25% is chargeable to building (from \$0.65 to \$1.20 per cu ft; dependent type) foundations, special applications.

## SUPERHEATER SLAG

oil, dew-point temperatures from 275 F were recorded. This indicates a possibility that air-heater temperatures above 150 F would be sufficient to prevent corrosion dolomite additive, whereas, metal temperatures above 275 F would be required without additive.

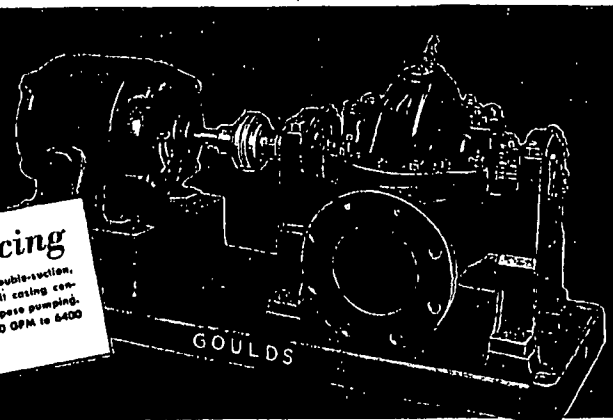
Analyses of superheater deposits before and after using additive indicated in the bar chart on p 87. Out additives the deposits were a fused, rocklike substance. With additives the deposits are granular, more powdery.

Analysis of the deposit formed alumina is the additive shows Al<sub>2</sub>O<sub>3</sub> composition of 53.7%, which indicates that the alumina is deposited with the ash in the same proportion which it is added to the oil. Fusing temperatures are all above 2900 F.

In analysis of the deposit with lime, total sulfur as SO<sub>2</sub> is 44% indicating that the ash with dolomite is more reactive to sulfur compounds than that with alumina. The V<sub>2</sub>O<sub>5</sub> dolomite is 4.9%, which may be tributary to either change in the ash analysis or dilution. Fusing temperatures with dolomite are lower with alumina, but still considerably higher than before using additive. Dolomite has been the additive in use for about one year. There is

## Announcing

The new Goulds Fig. 3403 double-section, centrifugal pump for general purpose pumping. 10 sizes. Capacities from 200 GPM to 6400 GPM. Heads up to 360 ft.



## This new pump gives you 5 big cost advantages

which you pay is only one element of a pump installation.

Good engineering practice also figures the cost of pump breakdowns, operating efficiency, change-over to meet new conditions, replacement parts inventories, even the time the installation takes up.

That's why the new Goulds centrifugal pump is designed to improve your cost experience in every one of these elements.

It combines seven design features that mean maximum operating efficiency and minimum maintenance.

One of these construction features is standard with this new design. Another they offer you, without extra cost, is a quality of service that's yours in its approach to general handling.

Interchangeable stuffing box bushings.

Sealing housings sealed against leakage and dirt.

c. Cowl-type glands suitable for use with quenching liquids.

d. Stainless steel impeller keys.

e. Teflon water seal rings.

f. Die-formed stuffing box packing.

g. Corrosion resistant gland bolts.

### 2. Interchangeability of parts.

With only three shaft and rotating parts assemblies to provide for 19 pump sizes and 38 pump combinations, this new design offers you a remarkable range of interchangeable parts. A glance at the interchangeability chart on page 7 of the descriptive bulletin will show you:

a. how this design gives you great flexibility in making field changes should your pumping requirements change;

b. why the first cost of this unit is so low due to standardization in manufacture; and

c. how this interchangeability helps

to reduce spare parts inventories.

### 3. Compact construction.

You will be particularly pleased with the short over-all length of this new design. Short bearing spans cut lengths as much as 50%. This means a real saving in floor space.

### 4. Flexibility of stuffing box.

You can use either conventional stuffing boxes or mechanical seals depending on requirement. And you can change from one to the other in the field if need be.

### 5. Easy rotation change.

A unique device, locking shaft seals, permits you to change from right-hand rotation to left-hand rotation or vice versa in the field without construction changes.

More than 50 years of experience in meeting industry's needs for general purpose centrifugal pumps come to a climax in this design.

**GET FULL DETAILS** This 12-page illustrated bulletin, No. 721.6, covers the complete details of the new Goulds Fig. 3403, including specifications, interchangeability tables and performance curves. Be sure you have the whole cost-advantage story before you select another general purpose pump. Contact your nearest Goulds representative or mail the coupon below today.



**GOULDS PUMPS, INC., Dept. PO, Seneca Falls, N.Y.**  
Please send me Bulletin No. 721.6 describing the new Fig. 3403 centrifugal pump.

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Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_