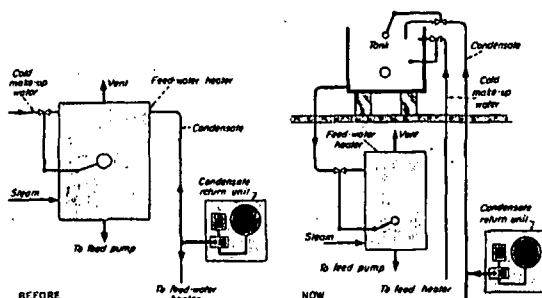


More PRACTICAL IDEAS



Feedwater Heater Hook-Up

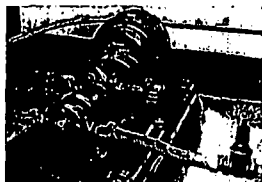
AS INSTALLED, a condensate line was piped direct to feed-water heater of a waste heat boiler. Cold make-up water was also piped to this heater and controlled by a float located inside the heater, sketch, *Before*. Condensate was being pumped to heater from a process plant by a motor-driven pump controlled by an on-and-off float switch. Owing to pump's intermittent operation, heater got more condensate than it needed whenever pump was running. But only cold water came through at other times. This caused unsteady feed water temperature and an excess condensate overflow.

To ensure minimum make-up water to this heater and to avoid condensate

waste, we modified as in the sketch, *Now*. Both condensate and cold make-up now feed an overhead tank (well lagged and roofed) and both lines have float-controlled valves. Condensate valve closes only when tank is full. Make-up water valve opens only when level in tank drops to less than one-third of full tank level.

Float inside heater now regulates flow from overhead tank to heater. When overhead tank is full, condensate valve is closed by float and surplus condensate flows to another heater at a higher elevation in main boiler plant. This system has been operating very satisfactorily for the past two years.

A RANGANATHAN Alwaye, S. India



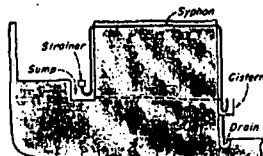
Flexible Lines Save Packing

FUEL-OIL PUMPS in our plant had to be packed twice a year when suction and discharge lines to pump were standard pipe. Difference in oil temperatures evidently caused pump to be moved slightly out of alignment.

I replaced lines with short sections of flexible metal hose, photo. That was five years ago. Pumps have not been repacked in that time.

Now we solve similar problems around our plant by installing flexible lines.

W J HEIM Rahway, N. J.



Self-Priming Siphon

AN UNDERGROUND PIPELINE (dotted line in sketch) carried away acidic waste-water from an underground sump to drain at lower level. Line had to be replaced after some years of service. Replacement would involve an immense amount of excavation as pipeline was about 30 ft long and 10 ft below ground.

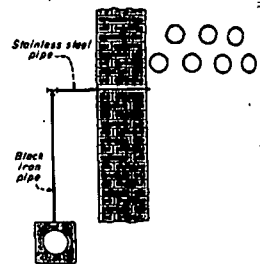
We installed siphon setup (solid line) to replace old pipeline. U-loop on each end saves priming siphon as action is automatic when pump fills.

A RANGANATHAN Alwaye, S. India

Draft Stops Slagging

WE HAD a serious slagging condition on outside of bottom-row tubes in 120,000 lb per hr cross-drum watertube boiler. Boiler came off the line about every two months for deslagging. Fuel burned was anthracite No. 3 buckwheat size, commonly known as barley.

Fine sizes of anthracite coal produced a lot of flyash, mostly small flakes of unburned coal during combustion period. Some of this flyash burns in suspension while passing upward through the furnace. It produced a slag formation on bottom row of our tubes. Condition kept getting worse as slag accumulated. If let go too long, it would bridge over openings between tube spacing and eventually block off the draft. We burn this fine-size anthracite coal



on chain-grate and traveling-grate stokers, usually maintaining a slight pressure or balanced draft over the fire.

While trying to remedy this slagging condition, we checked the draft conditions slightly below bottom-row tubes. There was a pressure. We, therefore, changed our forced- and induced-draft conditions to produce a draft of not less than 0.05 in. of water, at a point about eight inches below the bottom-row tubes. With draft at this point, flyash is carried up between tubes and passes before it has a chance to stick to tubes and form slag. We now operate boiler much longer periods without deslagging.

A 24-hr recording draft gage, sketch, helps operator maintain a constant minus draft below these tubes.

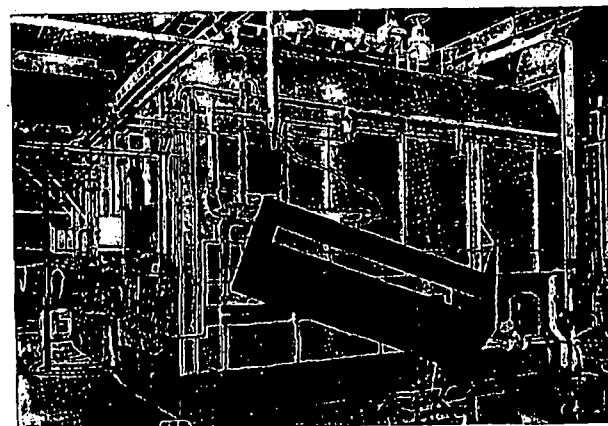
E E SMITH Clark's Summit, Pa.

Broom Handle and Cork

ED ECKERT (July Power) will find that broom handle works a lot better for removing light bulb bases (that bulbs have broken in) if he secures a cork in end of handle.

H HOLCOMBE Los Alamos, N. M.

THIS ERIE CITY "PACKAGE" INCLUDES A YARWAY SEATLESS



■ The above installation of two 300 hp. Erie City VL type boilers at a Detroit automotive plant shows Yarway Seatless Blow-off Valves as part of the "package" picture.

Good package-type boilers are better when equipped with Yarway Blow-off Valves.

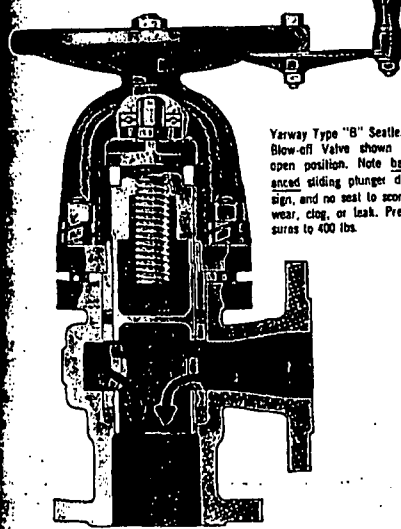
Get the advantages that have made Yarway Blow-off Valves guardians of blow-down lines in more than 15,000 boiler plants. On your package boilers—whatever the make—high grade blow-off valves pay off in dependable, trouble-free service.

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YARWAY

SEATLESS BLOW-OFF VALVES



Yarway Type "B" Seatless Blow-off Valve shown in open position. Note balanced sliding plunger design, and no seat to score, wear, clog, or leak. Pressures to 400 lbs.