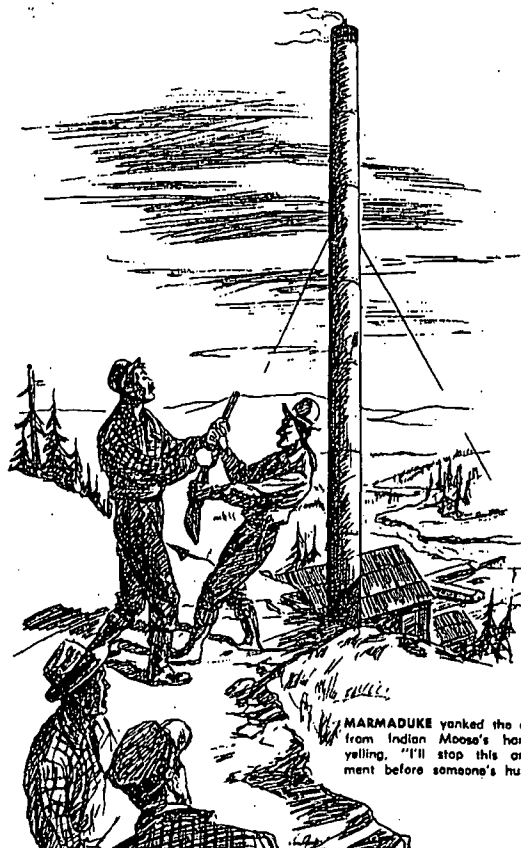




MARMADUKE yanked the gun from Indian Moose's hands, yelling, "I'll stop this argument before someone's hurt."

The Plugged Stack

► AFTER WADING THROUGH welding literature and visiting maintenance shops to run a few hard-facing beads ourselves, one morning we finally said, "To hell with welding." Then we headed for Bedlam's Bent Propeller Bar. This habit of blowing our safeties comes from our seafaring days, when we worked around the clock overhauling boilers down in Rio, then headed ashore with our fireroom gang for a well-earned steak dinner at El Toro Grande. We ended up by snatching the girls around the dance floor at Cafe La Vista until close to sailing time next evening.

The Bent Propeller in New York is a far cry from those South American hot spots we visited each trip, but it, too, is rewarding. For one thing, where else can you stand, sit or lie (as the case might be) at the feet of that master power engineer, Marmaduke Surfacer-blow?

Marmy was docked at his usual berth, all 6 ft 4 inches of him, holding up his end of the bar. The loud guffaws, clanking glasses and general confusion seemed not to disturb our hero's silent reverie. With his old gray bowler shoved down toward the bow of his massive

white dome, he just stared at the of Sandpaper Gin before him.

"You guys might of operated plants," a character near Marmy saying, "but I've done some fancy rule engineering in my day."

"BLUESWATER ON BOOK ENGINE WHO NEVER GET THEIR HANDS ROARED Marmaduke, suddenly coming life. "I'll tell you about unplugged plugged stack that had all the engineers at sea."

That did it. The cash customers their traps and settled down, for the master was about to sound off.

"Back in 1939 I landed at the River's mining camp in the wilderness of northern Ontario," bellowed Marmaduke in his foghorn voice. "We were going to sink a shaft in what turned out to be a rich deposit of rock with a high nickel content."

"The place was so far from everything that everything from machinery to supplies was flown in. And transportation alone for spuds cost \$18 a ton. There already were three bunk houses, a commissary, a mess hall and a power plant building when I arrived. But machinery was scattered all over the hillside. My job was to set it up and get up steam."

"I had a handful of men to help install two 90-hp boilers, one steam driven air compressor, a small generator, pumps and a steam hose in the mine cage. We put up the 60-ft stack with a large screen around it to keep sparks from burning the surrounding brush. That screen was four feet high."

"There was a large clapper on the screen to shake soot loose so the stack wouldn't plug up. The clapper was worked by a long chain running down the stack."

"The boilers were hand-fired with cordwood from the nearby brush, and used natural draft. Steam pressure was controlled by opening up or closing the stack dampers and asphalt doors."

"I had all the equipment set up and lit off the boilers a month after landing. With steam up, the camp really began to hum. And by the time the shaft was sunk, the plant was running around the clock, seven days a week down to Toronto. Said he had a lot of new help coming in. He wanted me to take a good rest so nothing up after I got back because the had to produce from the word go."

"I packed my bag and left of next plane. In Toronto I caught with civilization, bought supplies for good measure checked up on (Continued on page 204)

MARBLES for MICROBES

100,000X enlargement of latex spheres used to calibrate electron microscope in Nalco Laboratories. Actual diameter of spheres is 0.21 microns. — 00000173 Inset Right—Inserting specimen holder in vacuum chamber of Nalco electron microscope.

How they assist research toward better Water Treatment

PERHAPS even too small to make good marbles for microbes, these tiny spheres help Nalco Scientists in their investigations of the microscopic realms of matter only recently made visible to the human eye by the electron microscope.

Use of the electron microscope in water treatment research is significant because it typifies the continuing efforts of the entire Nalco organization to keep the Nalco System representative of the first and best in all phases of modern industrial water treatment.

If you are not already participating in the economy and efficiency of the Nalco System in your plant, write for details on real water treatment security today.

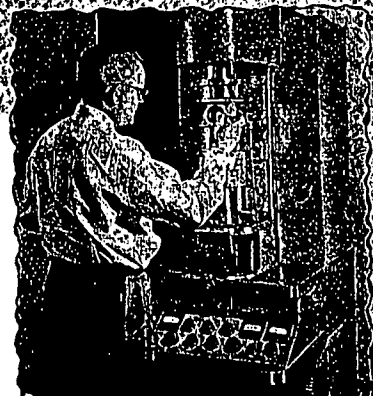
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Nalco WATER TECHS

New reprint of A.S.M.E. Paper No. 52-A-30: Experimental Studies of Boiler Tube Metal Temperatures: Effect of Heat Transfer Rate and Deposit Thickness, gives technical data on high-heat-transfer-rate effects (140,000 to 300,000 Btu/sq. ft./hr.) at pressures from 250 to 2500 p.s.i., 16 pages, with tables and diagrams. Author: C. Jacklin, Director, Engineering Research, National Aluminate Corporation.

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