

SPEAKING OF POWER

Note to power engineers: Don't build that new plant too close to an airport. A new law gives the Civil Aeronautics Administration broad powers, including condemnation authority, to prevent any construction near airfields which it considers a hazard to flying safety. At this writing, Braddock Light & Power Co is bumping against this new angle. For the new 160,000-kw generating station under construction at Alexandria, Va., plans call for 193-ft stacks. CAA says they would produce an "obstruction to air navigation" at Washington's National Airport more than a mile and a half away, wants them cut down to 162 ft. City officials of Alexandria, which has a comprehensive anti-smoke ordinance, say stacks that low would violate the ordinance, cause smoke and soot to pour over the city. All of which leaves Braddock right in the middle.

Generating facilities of the U. S. must be increased 80% in the next ten years, says Tomlinson Fort, manager of central station sales for Westinghouse. He forecasts a rise in electric power sold from 217 billion kwhr in 1947 to 374 billion in 1957. Basing his figures on Westinghouse planning studies, Fort credits heavy industry with 80 billion of the increase, points to potential gains in domestic, rural and commercial loads as well. Keeping pace with such growth would require that power companies spend in ten years an amount of money equivalent to the total now invested in all U. S. privately owned utilities.

Back from a 10,000-mile editorial trip which took him, entirely by air, from Seattle down the Coast to San Diego, then on to Mexico City and back through Texas and Oklahoma, Associate Editor Ben Skrotzki says that nowhere did he find power in ample supply, everywhere he found tremendous efforts being made to build for today's demands and the much bigger loads that most engineers expect for the future. In Portland at the time of the flood, he noted a very sort of compensation—although flood waters drastically reduced output of key hydro plants, the same waters took many industrial plants

off the line temporarily and there was no shortage of power for those in a position to use it.

R S Clark's verse about the fiendish propensities of the checker (Speaking of Power, May) drew the following rhymed rebuttal from I E Herman of Melbourne, Australia:

*The Checker's life, some people say,
Is sheer delight in every way.
His work is easy and so free
No sweat, no toil, just zestful glee.
But let's be fair and free from pride
Come on, look from the other side.*

*Any drawing fresh from its comple-
tion
Looks rather nice, above suspicion.
Layouts stem right, lettering's fine
Figures in row, arrows in line.
Thus it's thrown in the Checker's lap
"Here's your baby—let's hear you yap!"*

*From under all the outward glamor
Like sore thumb sticks out the error.
His pencil scars the drawing's beauty
He can't help it, that's his duty.
Marking all mistakes with horror,
The print soon goes Technicolor.*

*When that is done, then comes the
test:
To face the Spirit of Protest.
Faults, though tactfully presented,
More than likely are resented.
The Checker's ways can't be the
same,
He has to stand it, that's the game.*

*To err is human, so they say;
Some are too human in that way.
Though he knows mistakes don't ex-
ist,*

*The Checker stays an optimist.
He hopes that some day he will meet
A lovely, perfect, faultless sheet;
And find a man (if that's not too
much)*

*Who admits his faults and bears no
grudge.*

Industry and government have joined forces informally in a coordinated program of exploratory drilling and assay work in the Western Colorado shale-oil fields. At least 11 core-drill holes will be sunk this year in the Green River formation—said to be the world's largest single mineral deposit. Four or more holes are planned by Union Oil

Co of Calif. and seven by the Bureau of Mines acting for the Navy. In addition, Pacific Oil Co, a Standard Oil Calif. subsidiary, is carrying on geological and assay work. All core drilling and other exploration by private companies will be carried out on properties they hold in the area. Government-sponsored drilling will be at Naval Shale Oil Reservation No. 1.

Keep an eye on this development. It has interesting possibilities. In distillation of synthetic fuels, shale oil has received relatively little attention, though difficult to refine into some products, it makes a good burner fuel. The indications are that it can be produced and piped to the West Coast at not too high a cost. With an increasingly tight situation there, shale oil may be a substitute fuel to achieve acceptance.

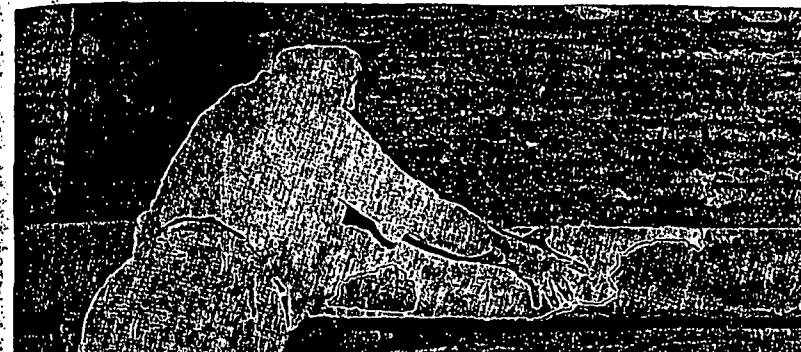
Enthusiasts of the old iron wiped a quiet tear one day this summer when the last steam locomotive left Schenectady shops of American Locomotive Co, now to be devoted 100% to manufacture of diesel-electrics. Steam railroaders took some comfort from the fact that a good share of Alco's steam locomotive facilities will be "phased out" to meet any future demand.

A Houdry-process gas turbine, destined for lend-lease to Russia, obtained from WAA by Bureau of Mines, has been made available to BCR's Locomotive Development Committee for experimentation with pulverized fuel at the Dunkirk plant of the American Locomotive Co. A smaller unit will be used in the underground coal gasification plant at Gorgas, Ala.

THIS MONTH'S COVER

Keeping the kilowatts coming to the job of maintenance crews at power plants all over the country. There's no glamor in it—labor at in cold blood, it's a matter of hard work, often done at odd hours and under trying conditions. But no plant—large or small, new or old—is any better than its maintenance, and like all necessary jobs, this one has its real satisfaction.

This month's cover—wrought-iron tubes going into the air heater of a central-station boiler—typifies the job and the men who do it.



1 Stripping off canvas jacket, covering 2-in.-thick sections of 85% magnesia insulation applied to a piping insulation at Waterside generating station of Consolidated Edison 46 years ago, showed that insulation sections were hard and firm.

Insulation Holds up 46 Years

WATERSIDE STATION of Consolidated Edison Co, New York has a heavy modernization program under way. In the course of this program magnesia insulation first applied 46 years ago had to be pulled off older equipment, slated to be scrapped.

Upon removal of the canvas jacket, insulation surface, Fig. 1, 2, and 3, showed hard and firm. Sections removed could be handled easily and gave little apparent indication of dimensional change in blocks from shrinkage or warping over the years.

Pipe insulation, Fig. 1 and 3, 2 in. thick, served on pipelines operating at 450 F 24 hr a day, 365 days a year, for 46 yr. Sections were laboratory-tested to determine thermal conductivity of the samples. They tested 0.52 at 300 F mean temperature. This is in agreement with the known fact that conductivity of the product at the beginning of the century ran somewhat higher than today's 0.45 conductivity average.



2 Insulation pieces taken from pipeline operating at 450 F, Fig. 1 above, under laboratory tests for conductivity, indicated little or no loss in this factor



3 Blocks of 85% magnesia, cut from standard sizes and applied to gridded surface of feedwater heater 46 years ago, show no apparent shrinkage or warpage