



The \$5 million fine coal plant addition to Arch of Illinois extends slightly above the preparation plant.

HANDLING MORE FINES BOOSTS RECOVERY

*Looking ahead to potential problems with fines,
Arch of Illinois plant increases recovery and Btu*

For more than 25 years, Arch of Illinois Inc. has had a steady, predictable, successful operation. The company currently produces 7.5 million tpy of clean coal. Along with typical surface mining equipment, it has had the world's largest shovel and the largest cross-pit wheel excavator, both working to feed the country's largest preparation plant. What little deep-mined coal had been included in its 2,800 tph feed was miniscule and of little operating consequence. That, however, is about to change drastically.

The company's preparation plant receives coal from four surface operations stretching over 25,000 acres: the Captain mine, still the largest producer east of the Mississippi; the Denmark mine; Horse Creek mine; and the Galum Creek box cut, which is being developed as the final home

for the huge Marion 6360 shovel (built in 1964 and in operation since 1966) and the Bucyrus-Erie 5872 Wheel Excavator.

Within just a few years, the feed to the plant will change from having virtually all surface mined coal to being half surface mined and half deep mined. That trend should continue as reserves go deeper and surface mining diminishes. Initially, the deep mined coal, about one million tpy clean, will come from the recently re-opened Kathleen mine, a three-section continuous miner operation.

UPGRADING EQUIPMENT

When the mine was idle, the three Joy 12CM11s were overhauled and upgraded to 12CM7s by adding radio remote control, hard-head cutting heads with increased horsepower and flooded-bed scrubbers with noise suppressors. Two units are run around the clock, while one is idle

each shift to allow for maintenance.

During 1990, the shuttle car haulage will be replaced with either battery or diesel haulers. Battery units appear to be the probable replacement. The old Lee-Norse double-boom bolters soon will be joined by two new Simmons•Rand articulated, double-boom bolters. Heavy clean-up on the section is accomplished with a Wagner diesel scoop, backed up with an Eimco battery unit.

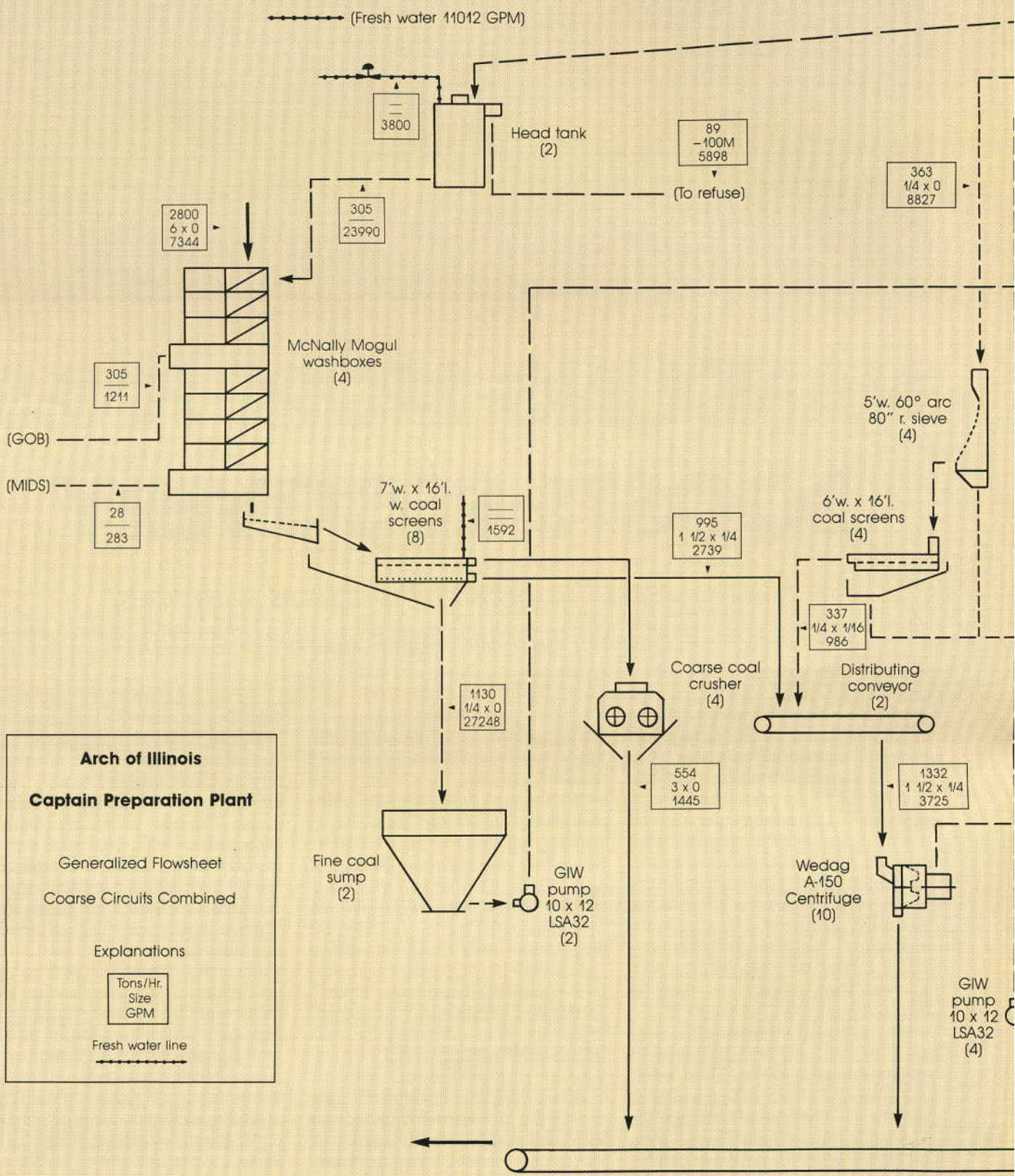
Presently, Kathleen produces approximately 1,000 raw tons per unit shift, with an average 1,100 tons expected. With the addition of the new equipment, a super section is planned in the latter half of the year. While adverse surface ownership precludes secondary (or retreat) mining now, mining plans call for that to be resolved in late 1991.

Ultimately, Kathleen's production is expected to account for 20% of the current plant feed. The remaining 30%, and more as surface operations

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Author information

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Arch of Illinois
Captain Preparation Plant

Generalized Flowsheet
Coarse Circuits Combined

Explanations

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|-------------------------|
| Tons/Hr. Size GPM |
|-------------------------|

Fresh water line
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