

INTER-OFFICE MEMORANDUM



TO
AT

See Distribution

DATE

May 7, 1968

FROM

O. A. Finsand

TOPICS TO

AT

O A Finsand

Middletown Construction

JOB NO.

7100

SUBJECT

KAISER ENGINEERS' WEEKLY FIELD ACTIVITY REPORT

Transmitted herewith is the subject report for the week ending May 7, 1968.

OAF/LH/sec

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cc: Central and Kaiser Reading Files
Armco Reading File

KEN 004329

KAISER ENGINEERS
WEEKLY FIELD ACTIVITY REPORT
Week ending May 7, 1968

WEATHER: Fair weather with
scattered showers.

TEMPERATURE: Maximum - 80°
Minimum - 33°

CLIENT: Armco Steel Corporation

LOCATION: Middletown, Ohio

JOB NUMBER: 6471

JOB VISITORS

None

SUMMARY FORCE REPORT

	Kaiser Engineers		Subcontractors	Foothill Electric	Total
	Exempt	Non-Exempt			
Management	4	4		1	9
General Supervision	15	1	21	5	42
Field Engineering	42	15	14	14	85
Warehouse & Mtl. Control	3	6		1	10
Survey	1	14	4		19
Office Service & Repro.	1	5			6
Clerical			17	13	30
Craft *	—	<u>788</u>	<u>919</u>	<u>576</u>	<u>2,283</u>
TOTAL	66	833	975	610	2,484

* Average for week of men on payroll.

Average for week of Crafts is as follows:

Kaiser Engineers	740
Subcontractors	790
Foothill Electric	<u>519</u>
Total Crafts Working	2,049

KEN 004330

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PROJECT PROGRESS

1. 7148 - HOT STRIP MILL

Armco operations continued with coil processing throughout the period with #1 and 2 reheat furnaces in operation. On Saturday, May 4th, a new record of 222 coils were processed. In the boiler area, the #1 boiler was placed in operation on Friday. Modification work has been completed for the #1 forced draft and induced draft fans according to the Worthington requirements. This modification required additional insulation at the fan pedestals and the turbine casing together with realignment.

At unit #2, the boiler was taken out of service in order that the Worthington rework requirements could be completed on the induced draft fan.

At unit #3, Salem-Brosius completed the refractory design requirements at the charge end of the furnace. All piping for this furnace was also completed. Progress is continuing on remaining insulation work and painting. The extractor doors will be ready for operation as soon as new sprockets are received at the job site. Components were previously taken from the #3 doors and used to repair damaged doors at furnace #1. The Worthington rework requirements are in progress at the induced draft and forced draft fans and the insulation portion has now been completed. The malfunctioning governor for the #3 forced draft fan has not been returned from the factory where it was sent for rework. Boil out and start-up of unit #3 is expected after completion of the modification work at the fans.

Eighteen KE pipefitters continued with remaining piping requirements in the hot strip mill. Punch list items were worked on in the finisher area as well as additional work order requirements for the fire protection system, additional service drops on the air system and rerouting of drains, water coolers and some steam piping in the bag houses.

Delta Pipeline Constructors completed the well water tie-in at column line 1 on D line. Pressure testing of the 10 inch fire protection line along D line remains to be completed. In the fuel oil storage area, remaining work consists of some insulation for the steam coil piping at the fill station together with final backfill and the slab-on-grade.

Stuart Painting and Owens Corning Fiberglas continued with a small work force in the hot strip mill on remaining painting and insulation requirements in the furnace area and north of the finishers.

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Foothill Electric Corporation maintained an average work force of one hundred and one electricians during the period. 3,400 lbs. of low voltage cable was installed for a total to date of 1,479,000 lbs. or 99% complete. 60 low voltage terminations were made for a total to date of 25,359 or 99% complete. 251 lbs. of structure grounding was installed for a total to date of 146,203 or 99% complete.

2. 7146 - SLAB MILL

- 2.1 Excavation and Backfill: 126 cubic yards of backfill was completed for a total to date of 299,426 cubic yards.
- 2.3 Structural and Miscellaneous Steel: An average work force of twenty-three ironworkers continued with miscellaneous iron installation in the slab mill. In the main mill aisle, the accumulator housing for hydraulic system #1 was completed. Progress continued on the installation of deck plate for the roll change sled in the main mill aisle. Installation of the closure between the motor room and the main mill was started and at the close of the period was 70% complete. In the scale pit area, collector rails were raised six inches to meet revised requirements. Roofing for the fume elimination building was completed and the siding for this structure was initiated at the close of the period. Sheet-metal workers continued with the installation of ductwork at the main mill office. This ductwork is now 40% complete.
- 2.5 Heating and Ventilating: Bag houses 3, 4 and 5 are in operation. At bag house 2, the electrical work was completed and the bags installed. At bag house 1, the shaker motor was received and installed. Remaining electrical work and installation of bags remain to be completed.
- 2.6 Mechanical: Eichleay Corporation maintained an average work force of thirty-five men on mechanical installation in the slab mill. In the main mill aisle, dowelling was completed on the upper main mill drive motor together with the installation of the spindle adapter. The over speed and tachometer brackets remain to be installed for this motor. Progress continued on final adjustments and alignment of the vertical mill drive motor. Removal of the drive motor bearings is being accomplished for cleaning and reinstallation. The lower spindle carrier supports were installed together with the upper drive motor spindle motor adapter. In the dry scale removal area, the scraper counterweights were installed. At roll tables 6, 7 and 8, additional clean out openings were being provided in the bases. The car pulleys in the scale pit area have been set in place and grouted and cable reeving will begin as soon as the rail tracks are installed. The ingot buggy has been tested and reeved and is now in operation.
- 2.7 Piping: Hunter Corporation maintained an average work force of fifty-one men on slab mill piping this period. Major piping systems worked on during the period were: oxygen, compressed air, slab mill air,

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completion of circulating oil system #3, hydraulic system #1 and bulk grease piping. 646 feet of piping was installed this period for a total to date of 40,617 feet. 12,626 feet remain to be installed. Lube oil system #3 was pickled and flushing is now in progress. Hydro testing was completed on hydraulic system #2 this period.

- 2.8 Electrical: Foothill Electric Corporation maintained an average work force of two hundred and eighteen electricians in the slab mill during the period. 2,827 lbs. of exposed conduit was installed for a total to date of 189,397 lbs. or 95% complete. 104 lbs. of structure grounding was installed for a total to date of 33,070 lbs. or 83% complete. 31,600 feet of low voltage cable was installed for a total to date of 449,000 feet or 92% complete. 711 of low voltage cable terminations were made for a total to date of 6,398 or 93% complete. 13,000 feet of control cable was installed for a total to date of 213,000 feet or 90% complete. 815 control cable terminations were made for a total to date of 6,611 or 68% complete. 3,800 feet of computer cable was installed for a total to date of 66,000 feet or 94% complete. 323 computer terminations were made for a total to date of 4,250 or 94% complete. 2,593 feet of TV and communications wire was installed and 380 terminations were made. 578 feet of cable tray was installed for a total to date of 19,971 feet or 95% complete. 410 lbs. of lighting conduit and 345 feet of lighting wire was installed this period.
3. 7143 - SOAKING PITS
- 3.1 Excavation and Backfill: 85 cubic yards of slag backfill was placed on W line in the soaking pit area this period.
- 3.3 Structural and Miscellaneous Steel: Ironworkers continued with the remaining safety items required on overhead crane 357. Installation of handrails throughout the soaking pit area was continued.
- 3.6 Mechanical: Loftus Engineering maintained an average work force of one hundred and four men on battery installation. At batteries 5 and 6, five pit covers are set in place and the sixth cover has been completed. Final refractory installation has been completed at batteries 5 and 6. This refractory work is continuing in the battery 4 area. Remaining electrical and piping requirements are being worked on in the battery 1 through 4 area. Batteries 5 and 6 are now essentially complete except for final test and start-up.
- 3.7 Piping: Delta Pipeline Constructors maintained an average work force of twenty-six men on service piping in the soaking pits area. Major systems worked on during the period were: natural gas, oxygen and well water. 510 feet of piping was installed this period for a total to date of 21,346 feet. 5,122 feet remain to be installed. The well water system was pressure tested and completed this period. The fuel oil steam tracer piping was completed.

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- 3.8 Electrical: Foothill Electric maintained an average work force of seventy-nine electricians in the soaking pits during the period. 4,645 lbs. of exposed conduit was installed for a total to date of 101,535 lbs. or 72% complete. 5,300 lbs. of lighting conduit, 1,000 feet of lighting wire and forty-six fixtures were installed. 1,900 feet of low voltage cable was installed for a total to date of 40,000 feet or 63% complete. 113 low voltage terminations were made for a total to date of 303 or 99% complete. 300 feet of control cable was installed for a total to date of 2,600 feet or 16% complete. 192 control cable terminations were made for a total to date of 272 or 45% complete. 184 lbs. of structure grounding was installed for a total to date of 4,751 lbs. or 47% complete. 2,800 feet of communications wire was installed and 86 terminations were made.

4. 7128 - BASIC OXYGEN FACILITY AND MOLD YARD

- 4.1 Excavation and Backfill: 5,683 cubic yards of excavation was accomplished at the B.O.F. facility this period for a total to date of 220,325 cubic yards. 1,772 cubic yards of backfill was completed for a total to date of 252,623 cubic yards. Excavation included the cooling towers, sanitary sewer from manhole 590 to 589 and underground conduit around the electrical control room. Backfill included areas around the electrical control room, the west half of the pump building, the clarifier sludge tunnel and various underground conduits.
- 4.2 Concrete: 641 cubic yards of concrete was placed at the B.O.F. facility for a total to date of 21,062 cubic yards. This concrete included the pump building basement walls, the west wall of the electrical control room to elevation 107, the operating floor between columns 22 and 25.5, underground conduit from the electrical control room and underground conduit at the transportation office.
- 4.3 Structural and Miscellaneous Steel: No structural steel was erected during the period due to the operating engineers' strike which started at 10:00 A.M. on May 1st. Miscellaneous steel erected during the period included the hot metal scale which was started on May 2nd and is presently 90% complete. Progress continued on the installation of connectors for the roofing and siding.
- 4.4 Roofing and Siding: Roofing progress continued during the period with 4,463 square feet being installed for a total to date of 46,335 square feet. This roofing included progress in the areas from D to D.8 line between columns 21 and 26 and D.8 to F line between columns 21 and 23. Ventilator erection continued over the charging aisle. 3,852 square feet of siding was installed for a total to date of 46,008 square feet. This siding included the completion of the elevator shaft and siding on the dormer from D to D.8 line between columns 18 and 19.5.

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- 4.6 Mechanical: Combustion Engineering continued assembly of the #1 unit gas coolers at the 169 elevation and on the ground. One section was raised to position on May 7th. A car load of gas cooler elements and headers was received on May 7th. The lower section of the cooler for furnace #1 was moved to the building and erection was started.
- 4.7 Piping: Progress continued on the installation of the roof drains on H line between columns 9 and 11 and F line from columns 16 to 21. Floor drains were being installed under the service floor at elevation 169 between columns 21 and 26. 105 feet of storm sewer was installed between columns 28 and 29. Sanitary sewer was installed between man holes 590 and 589. Progress continued on the installation of the underground pipe south of the B.O.F. building.
- 4.8 Electrical: Foothill Electric continued installation of the underground conduit banks from the electric control room including conduit to the elevator shaft. At the mold yard, progress continued on the installation of the feed rail for the traveling platforms, installation of exposed conduit and wire pulling. Electric work continued on cranes 502 and 508. 195 lbs. of structure grounding was installed for a total to date of 2,600 lbs. or 22% complete. 38,627 lbs. of embedded conduit was installed for a total to date of 249,500 lbs. or 61% complete. 723 lbs. of exposed conduit was installed for a total to date of 34,227 lbs. or 11% complete. 3,800 feet of low voltage cable was installed for a total to date of 6,300 feet or 5% complete. 192 lbs. of lighting conduit and 5,000 feet of lighting wire was installed.
- 4.9 Miscellaneous Subcontracts: Service Crane 502: Electrical progress continued on the termination of cable for this crane. Electrical work is now approximately 95% complete. Reeving has not yet been completed.

Teeming Crane 503: Electrical installation continued and conduit installation is now 75% complete with cable pulling at 50% complete. Cable terminations for this crane are presently 25% complete. Piping installation continued during the period.

Ladle Additive Crane 507: An Armco inspection has been set up for May 8th.

Maintenance Crane 508: Electrical installation continued on this crane during the period and this crane will be inspected together with crane 507 on May 8th.

Chicago Bridge and Iron received the second furnace drive during the period. Progress continued on the erection of #1 furnace which is now 60% fitted. Work continued on the preheating, welding and post heating of the panels for this furnace. Representatives are on site to supervise the assembly of the #1 trunnion which was started during the period. Progress continued on the erection of furnace #2.

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At the lab and office building, McGraw Construction Company continued with installation of first floor masonry and second floor dry wall partitions. Work on the suspended acoustical ceilings is scheduled to start next period. Electrical work continued with the installation of overhead conduit, wall switches and outlets. Progress was started on the exterior lighting. Toilet rough-in continued with the vent piping now installed and tested. At the flux material handling system, Thelen Construction Company was assembling conveyor structural steel for the inclined gallery trusses, however, progress is now curtailed due to the operating engineers' strike.

Otis Elevator Company delivered further material during the period but erection has not started due to the operating engineers' strike.

6. 7150, 7156 and 7159 - PICKLE AREA

- 6.2 Concrete: 462 cubic yards of concrete was placed on pickle line #4 during the period for a total to date of 14,786 cubic yards. Major concrete pours included the #4 and 3 bridle foundation and #6 pinch roll foundation and the top slab for #1 and 2 tension reel foundations at the east end of the #4 line. The footing for bag house "D" between columns 37 and 38 was poured and the curb for the lean-to between columns 34 and 36. 43 cubic yards of concrete was placed on pickle line #5 during the period for a total to date of 8,195 cubic yards. This concrete included the conduit encasement between columns 27 and 29.
- 6.3 Structural and Miscellaneous Steel: Progress was restricted to miscellaneous punch list items in the pickled coil storage building due to the operating engineers' strike.
- 6.4 Roofing and Siding: At the pickled coil storage building, 6,332 square feet of roofing was installed for a total to date of 60,049 square feet. Setting of Steelex siding continued on the north wall of the pickled coil storage building where 6,837 square feet was installed for a total to date of 16,887 square feet.
- 6.6 Mechanical: Ohio Valley's progress has been curtailed by the operating engineers' strike. During the period on #4 line, the #2 pay-off mandrel was set and grouted together with the #1 and 2 flatteners. Also grouted were #5 pinch roll, the looper car winch and the unfolding roll on #4 line. The welder is now being aligned on #4 line. Installation of catwalk and handrail was continued together with the welding of the pickle tanks.
- 6.7 Piping: Delta Pipeline Constructors maintained three crews in the pickle area during the period. Progress continued on prefabrication and installation of pipe in the maintenance room and along the G line columns. 9,820 feet of piping has been installed to date. Installation of the two inch softened filtered mill water piping along C line was initiated with the header piping being bolted to the pipe brackets.

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- 6.8 Electrical: In the green coil storage building, Lake Erie Electric has now completed the high bay lighting apart from the incandescent lights. Progress continued on miscellaneous work including the heaters, sump pumps and railroad signal lights. In the pickle line, welding panel installation on G line is now 60% complete and conduit installation is 70% complete. Work continued on the permanent wiring for the high bay lighting. In the #4 motor room, progress continued on the inter-connection wiring for the equipment. Conduit and safety switches were installed at the west end of the #4 line equipment. At the pickled coil storage building, preparations for the installation of the electrical equipment on cranes 406 and 407 were being made during the period.
- 6.9 Miscellaneous Subcontracts: Stuart Painting Company continued painting of structural steel in the pickled coil storage building ahead of the roofing installation.

Bender Construction has now installed seven rolled steel vent doors with progress continuing along E line.

Goodrich Company continued vulcanizing of the joints between the pickle tanks on #4 line and setting of the acid bricks in the tanks by Chemsteel is scheduled to start during next period.

7. 7160 - COLD MILL

During the period, 12,160 cubic yards of excavation was completed for a total to date of 110,817 cubic yards. Excavation for the dewatering well was completed and the well was set and backfilled during the period. Excavation of the temporary substation was continued and power will be available on May 8th.

8. 7186 - WASTE DISPOSAL FOR THE PICKLE FACILITY

134 cubic yards of backfill was completed during the period. 59 cubic yards of concrete was placed for a total to date of 2,260 cubic yards. This concrete included the sludge tunnel and pump room walls for the second clarifier. Foothill Electric ran ground wire in the pump room and sludge tunnel for the #1 clarifier. Construction of the masonry walls was continued during the period and will be completed on the 107 elevation during next period. Installation of the pneumatic supply piping to the limestone bins was completed and the two inch well water pipe between the building and the tank farm was installed. 174 square feet of siding was set for a total to date of 11,340 square feet. Ventilator support frames were set on the roof and steel walkway installation was continued over the aeration and flocculation tanks. Excavation for the conduit to the #1 and 2 disposal wells was completed during the period.

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8. UTILITIES

7105 - Water Distribution System: Little progress was made during the period due to the operating engineers' strike.

7109 - #2 Gas Dispatching Station: During the period, SK Construction Company started the excavation for the footings and floor slab with concrete scheduled for next period.

7110 - Power Distribution System: In the melt area switching station, progress continued on the pilot wire, demand reset and the Quindar-tone circuits. All conduit wire and terminal boxes have been installed and wire terminations are 50% complete.

7111 - Sanitary Sewers: In the steelmaking area, an inspection was held on May 1st and 2nd and a punch list of seven items was prepared.

7112 - Drainage and Site Development: 2,738 cubic yards of excavation was completed during the period for a total to date of 815,727 cubic yards. 8,191 cubic yards of backfill was placed for a total to date of 1,071,535 cubic yards. Westinghouse Electric Corporation has completed all work in area #2 except a small amount of backfill. Trenching and cable laying for the circuit from the green coil storage building to the outbound rail yards is complete apart from some backfill. The four 100 foot railroad lighting towers in the outbound yard have been erected and tested. All the 60 foot parking lot towers have been framed and wired. Trenching for circuit 7 west from the green coil storage building is now underway.

7113 - Trackwork: DHS Corporation placed ballast on the track west of the B.O.F. during the period. Track laying was reduced on account of the operating engineers' strike.

OAF/LM/sec

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KEN 004338