

INTER-OFFICE MEMORANDUM



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May 21, 1968

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O. A. Finsand

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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 21, 1968.

OAF/LM/sec

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KEN 004309

KAISER ENGINEERS
WEEKLY FIELD ACTIVITY REPORT
Week ending May 21, 1968

WEATHER: Fair weather with
scattered showers.

CLIENT: Armco Steel Corporation

LOCATION: Middletown, Ohio

TEMPERATURE: Minimum - 36°
Maximum - 78°

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	18	5	39
Field Engineering	42	16	13	14	85
Warehs. & Mtl. Cntrl.	3	6		1	10
Survey	1	14	3		18
Office Srv. & Repro.	1	5			6
Clerical			15	12	27
Craft *	—	<u>678</u>	<u>838</u>	<u>543</u>	<u>2,069</u>
TOTAL	66	724	887	576	2,253

* Average for week of men on payroll.

Average for week of Crafts is as follows:

Kaiser Engineers	657
Subcontractors	697
Foothill Electric	<u>501</u>
Total Crafts Working	1,855

KEN 004310

WEEKLY FIELD ACTIVITY REPORT
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PROJECT PROGRESS

1. 7148 - HOT STRIP MILL

Coil operations were discontinued from May 17th through the 20th. This down period was used for clean-up, repair work and necessary modifications throughout the hot strip mill. In the furnace area, the Worthington modifications were completed for the #2 forced draft fan together with the remaining modification work on unit #3 forced draft fan. The only fan remaining to be completed is the #3 induced draft fan which is scheduled to be completed and ready for test operations by Monday, May 27th. During the down period, refractory repair work was accomplished for furnaces #1 and 2. New sprockets and sheaves were also installed for the extractor doors. New Contramatic valves and additional insulation work were installed at furnace #2 together with repair work on the bosh drains and slag clean-out. In the bag house area, installation of traps and drains were completed for all bag houses except #4 and 9. A representative from Honeywell was on the job site to inspect the instrumentation related to the damper drives on bag houses 8 and 9. Fill concrete was placed in bag houses 7, 8, 12, 13 and 14 with four bag houses remaining to be completed. Follow up of reinsulation and touch-up painting was continued in the completed bag houses. In the finisher area, additional fill concrete was placed in the roll change pit to improve drainage conditions. Pipefitters installed reinforced supports for the mill high pressure header in the roll change area including seven new pipe supports. In the coil conveyor area, additional anchor bolts were installed for the head pulley support frame on conveyors #7 and 8. Stuart Painting and Owens Corning Fiberglas Companies continued throughout the period with remaining painting and insulation in the hot strip mill. On Tuesday, May 21st, the hot strip mill was placed in operation supported by furnaces #1 and 2. A new crew of Armco operators is being trained on a one shift basis. Eighty (80) coils were successfully processed during this first shift. Foothill Electric Corporation maintained an average work force of eighty-seven electricians in the hot strip mill during the period. 2,200 feet of low voltage cable was installed for a total to date of 1,482,200 feet or 99% complete. 24 control cable terminations were made for a total to date of 54,992 or 99% complete. 615 feet of computer cable was installed for a total to date of 953,229 feet or 100% complete. 739 feet of lighting conduit and 620 feet of lighting wire was installed. 11 lbs. of structure grounding was installed for a total to date of 146,308 lbs. or 99% complete. 22 lbs. of exposed conduit was installed for a total to date of 1,457,397 lbs. or 99% complete.

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2. 7146 - SLAB MILL

- 2.1 Excavation and Backfill: Excavation was completed for the 12 inch storm drain line between manholes #280 and 341 near scale pit #4. Installation of drainage pipe is now in progress.
- 2.3 Structural and Miscellaneous Steel: An average work force of twenty-four ironworkers continued with miscellaneous iron installation in the slab mill. During the period, laydown plates P157 and 158 were installed, the catwalk for the vertical edger was installed, the stairway at column 8C was also completed and the platforms for the piler pits are now 40% installed. Progress is continuing on installation of equipment guards in the main mill aisle. These guards are now 25% complete and 30% fabricated. A total of 200 guards are anticipated at completion. Siding was continued on the fume eliminator building. This work is now 30% complete.
- 2.5 Heating and Ventilating: Bag house #2 was released for testing and start-up. Bags are now being installed in unit #1. Completion of this unit is dependent on the delivery of the shaker motor sheave which is on order. At the main office complex, all ductwork has been completed for the heating and ventilating unit. The ridge ventilator for the fume eliminator building has also been completed.
- 2.6 Mechanical: Michleay Corporation maintained an average work force of twenty-seven men on mechanical installation in the slab mill. Most of Michleay's work during the period consisted of lubrication requirements, support of testing and start-up as well as some remaining equipment installation. Preliminary testing of the slab transfer cars is presently being delayed by a design modification related to the actuators for the limit switch. Because of excessive heat conditions, it was found necessary to locate the actuators further from the source of heat. These extension arms are being fabricated in the Armco shop and testing will proceed as soon as these components are completed. Delivery of the twenty-six (26) reamer units for the scarfer fume system will allow completion of remaining mechanical work in the scarfer fume area. The main pulpit hoist was installed together with bag house hoists this period. Progress continued on motor alignment and coupling installation in the main mill aisle throughout the period.
- 2.7 Piping: Hunter Corporation maintained an average work force of sixty-two men on slab mill piping systems this period. Major piping systems worked on were: hydraulic system #1, scarfer water and bulk grease. 217 feet of piping was installed for a total to date of 41,620 feet. A corrected total of 9,167 feet remain to be installed. Pickling of hydraulic system #2 was completed. Lube oil system #8 has been installed in place and flushing operations are now in progress on systems #9 and 10. Pickling of hydraulic system #1 is now in progress together with the pickling of the accumulator bottle for hydraulic system #2. Remaining pickling systems are the oxygen and grease headers which are scheduled to complete during the next two weeks.

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- 2.8 Electrical: Foothill Electric Corporation maintained an average work force of one hundred and ninety-four electricians in the slab mill during the period. 7,646 lbs. of exposed conduit was installed for a total to date of 203,119 lbs. or 92% complete. 13 lbs. of structure grounding was installed for a total to date of 33,456 lbs. or 84% complete. 11,700 feet of low voltage cable was installed for a total to date of 472,600 feet or 96% complete. 78 low voltage terminations were made for a total to date of 6,649 or 97% complete. 4,200 feet of control cable was installed for a total to date of 223,700 feet or 94% complete. 242 control cable terminations were made for a total to date of 7,417 or 74% complete. 35 computer terminations were made for a total to date of 4,433 or 98% complete. 359 feet of TV and communications wire was installed and 440 terminations were made. 6,039 lbs. of lighting conduit, 3,150 feet of lighting wire and fourteen fixtures were installed during the period.
3. 7143 - SOAKING PITS
- 3.3 Structural and Miscellaneous Steel: A work force of six ironworkers continued with miscellaneous requirements in the soaking pits this period. All structural requirements for the skip hoist tower has been completed. The tong limit access platform for crane 357 was installed and completion of the tong limit access platform for crane 358 is in progress.
- 3.6 Mechanical: Loftus Engineering maintained an average work force of one hundred and ten men on battery installation. Nine pit covers are now complete and in place with one additional cover complete and ready to set in place. Final refractory installation has been completed in pits #13 through 24. Refractory installation is now in progress in the final pit for battery 4 as well as the four pits at battery 3. A safety inspection was made in the soaking pit area and additional personnel protection guards are to be fabricated in Pittsburgh and shipped to the job site as a result of this inspection. A two week delay is anticipated in refractory progress for the remaining pit covers because of delivery of special skew refractory. Loftus continued with remaining piping and electrical requirements for batteries 4 through 1 during the period. It is anticipated that a considerable delay in completion of electrical work will result in these remaining batteries due to a large turnover of electrical workers now being experienced by McGraw Construction Company, lower tier for Loftus Engineering. Loftus anticipates completion of all battery work by September 15, 1968.

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- 3.7 Piping: Delta Pipeline Constructors maintained an average work force of twenty men on service piping in the soaking pits area. Major piping systems worked on during the period were natural gas and oxygen. 500 feet of piping was installed for a total to date of 24,041 feet. 2,427 feet remain to be installed. Insulation was continued on steam tracers in the battery 4 area during the period. Piping requirements for batteries 5 and 6 are essentially complete.
- 3.8 Electrical: Foothill Electric maintained ninety-seven electricians in the soaking pits during the period. 5,050 lbs. of exposed conduit was installed for a total to date of 113,420 lbs. or 81% complete. 3,900 lbs. of lighting conduit, 3,000 feet of lighting wire and fifteen fixtures were installed. 30 low voltage terminations were made for a total to date of 349 or 86% complete. 620 feet of low voltage cable was made for a total to date of 42,300 feet or 78% complete. 30 control cable terminations were made for a total to date of 441 or 73% complete. 489 lbs. of structure grounding was installed for a total to date of 5,537 lbs. or 55% complete. 1,340 feet of welding and utility feeders were installed for a total to date of 3,470 feet or 13% complete.
4. 7128 - BASIC OXYGEN FACILITY AND MOLD YARD
- 4.1 Excavation and Backfill: 2,840 cubic yards of excavation was accomplished at the B.O.F. facility this period for a total to date of 227,446 cubic yards. 2,855 cubic yards of backfill was completed for a total to date of 257,097 cubic yards. excavation included the cooling tower foundations, underground conduit to the weight display tower and from the electrical control room to the pump building, sanitary sewer and storm sewer. Backfill included underground conduit and sanitary sewers.
- 4.2 Concrete: 472 cubic yards of concrete was placed at the B.O.F. facility for a total to date of 22,036 cubic yards. This concrete included the operating floor between columns 17 and 19, the south wall of the electrical control room, grade beams on H and G lines, the base slab for electrical manhole 8, filter building piers, fill concrete in the electrical control room and various underground conduits.
- 4.3 Structural and Miscellaneous Steel: No structural steel was erected during the period due to the operating engineers' strike.
- 4.4 Roofing and Siding: Roofing and siding operations have been discontinued. Progress during the period consisted of 918 square feet of roofing for a total to date of 49,709 square feet. 1,854 square feet of siding was installed for a total to date of 49,517 square feet.

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- 4.6 Mechanical: Combustion engineering continued assembly of the #1 gas cooler during the period including fitting and welding of pressure part seals for the #1 upper cooler unit. An 11 ton section of #2 unit has been raised into position.
- 4.7 Piping: Progress continued on the installation of roof drains on H line between columns 15 and 19 and 21 to 26 with 454 feet installed during the period. 72 feet of floor drains were installed at column 21F. 451 feet of sanitary sewer pipe was installed from column 13 to 23 between F and G lines. Service piping installation continued from the combination valve #2 to steam expansion pit 56. Service piping was also installed into the office and lab building. 62 feet of plant air pipes was installed in the track hopper tunnel.
- 4.8 Electrical: Foothill Electric continued the installation of the underground conduit in the pump building, the electrical control room and between F and H lines columns 24 to 26. At the mold yard, the tagging of junction boxes, checking of traveling platforms and fixture installation continued during the period. Electrical work continued on crane 507. 781 lbs. of structure grounding was installed for a total to date of 3,635 lbs. or 30% complete. 19,145 lbs. of embedded conduit was installed for a total to date of 296,391 lbs. or 72% complete. 198 lbs. of exposed conduit was installed for a total to date of 34,490 lbs. or 11% complete. 700 feet of low voltage cable was installed for a total to date of 7,000 feet or 5% complete. 52 low voltage terminations were made for a total to date of 68 or 7% complete. 411 lbs. of lighting conduit and 1,460 feet of lighting wire was installed.
- 4.9 Miscellaneous Subcontracts: Service Crane 502: Electrical installation is complete apart from the resistor guards and modifications to the main collector supports. A safety inspection is scheduled for May 23rd.

Teeming Crane 503: Electrical installation is complete apart from resistor guards and main collector support modifications. A safety inspection is scheduled for May 23rd.

Chicago Bridge and Iron continued welding on the #1 furnace during the period. The shell of #1 furnace has fitted up to the top of the cone section and welding has been completed apart from the horizontal seam between the cone and the shell. Work has been started on the lip ring assembly for #1 furnace. Progress continued on the #1 trunnion ring which is now 35% complete. At the lab and office building, McGraw Construction Company continued the installation of the second floor overhead conduit. Progress was initiated on the conduit runs in the spectographic lab. All dry wall work has been completed on the second floor with all available ceiling grid now in place. Progress continued on the service piping with the main emphasis being on completion of water lines. At the transportation building, all underground pipe has now been tested. Otis Elevator has recommenced work after their labor dispute. Preparations for setting the car guides and counterweight were in progress during the period.

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5. 7150, 7156 and 7159 - PICKLE AREA

- 5.1 Excavation and Backfill: 400 cubic yards of excavation was accomplished on Project 7159 for a total to date of 161,361 cubic yards. This excavation included the finish grading for the floor slabs at the pickled coil storage building and further excavation for the welder foundation on pickle line 5.
- 5.2 Concrete: 439 cubic yards of concrete was placed on pickle line 4 during the period for a total to date of 15,579 cubic yards. Major concrete pours included the piers of #1 and 2 deflector rolls, #5 bridle foundation, the tank foundation at column 35 to the #2 catenary pit and conduit encasement between columns 35 and 37. 656 cubic yards of concrete was placed on pickle line 5 and in the pickled coil storage building during the period for a total to date of 9,200 cubic yards. Concrete included floor slabs between columns 42 and 45 in the pickled coil storage building and conduit encasement for #5 pickle line.
- 5.3 Structural and Miscellaneous Steel: Progress was restricted during the period due to the operating engineers' strike. Welding and grinding of handrail continued for the pickle tanks on #4 and 5 line together with miscellaneous steel in the pickled coil storage building.
- 5.4 Roofing and Siding: 8,176 square feet of roofing was placed on the pickled coil storage building for a total to date of 73,154 square feet. Erection of power ventilators continued during the period.
- 5.6 Mechanical: Ohio Valley's progress continued to be slowed by the operating engineers' strike. At pickle line 4, work continued on the wet loop pit side guides, levelling and aligning of #1 pinch roll, #1 entry coil carriage rails and installation of acid tank reinforcement tie beams.
- 5.7 Piping: Delta Pipeline Constructors continued with installation of piping in the maintenance shop along F and G columns and the #4 pickle line tanks. Plant air service drops were also installed during the period. To date, 12,436 feet of piping has been installed.
- 5.8 Electrical: In the green coil storage building, the permanent high bay lighting is now complete. The communication system is now 30% complete. In the pickle lines, Lake Erie Electric continued work on the electrical control equipment in the #4 entry motor room together with the installation of exposed conduit and disconnect switches and #1 and 2 pay-off mandrels on #4 line. Progress continued on the installation of conduit and wire pulling for the welding panels along G line and the lighting panels in the pickle building.
- 5.9 Miscellaneous Subcontracts: Goodrich Company has now completed vulcanizing the rubber lined joints in the #4 line pickle tanks. FBS Builders have recommenced the masonry block walls in the delivery motor room for #4 line.

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6. 7160 - COLD MILL

During the period, 10,709 cubic yards of excavation was completed for a total to date of 133,483 cubic yards. 1,999 cubic yards of backfill was placed for a total to date of 2,392 cubic yards. The installation of the dewatering piping west of the well is now approximately 70% complete.

7. 7186 - WASTE DISPOSAL FOR THE PICKLE FACILITY

During the period, 51 cubic yards of concrete was placed for a total to date of 3,336 cubic yards. The floor slabs at the 107 foot elevation are complete apart from the pump pads which are scheduled for completion during next period. The floor slab at the 132 foot elevation has been prepared for concrete which is scheduled for next period. Piping installation at the 129 foot elevation was initiated and the sanitary sewer piping outside the building has now been completed. Excavation for the piping support piers between the pickle building and the tank farm has been delayed due to wet weather. Backfill was placed at the sludge tunnel and pump room walls for the #2 clarifier. Valley Sheet-metal started the built-up roofing during the period and this should be completed during next period. Foothill Electric installed ground wire from the second floor in the waste disposal building. 16 lbs. of structure grounding was installed for a total to date of 1,354 lbs. or 71% complete. 66 lbs. of embedded rigid metallic conduit was installed for a total to date of 9,731 lbs. or 65% complete.

8. UTILITIES

7109 - Gas Dispatching Station: During the period, SK Construction Company completed all necessary plumbing and electrical items prior to the concrete for the footing and floor slab.

7110 - Power Distribution: The temporary reset relays have been installed in the hot strip mill dispatch office together with wire identification markers.

7111 - Sanitary Sewers: In the steelmaking area, Delta Pipeline Constructors continued on punch list items required before final inspection.

7112 - Drainage and Site Development: 3,300 cubic yards of excavation was completed for a total to date of 819,027 cubic yards. 234 cubic yards of backfill was placed for a total to date of 1,074,719 cubic yards. Delta Pipeline Constructors continued punch list item requirements during the period on storm sewers in the steelmaking area and are now ready for final inspection. Westinghouse Electric continued installation of roadway lighting poles and twenty-one poles were set

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during the period for a completion figure of 84%. Cable installation for circuit 6 has been completed. On circuit 8, cable has been installed along the road from the west end of the green coil storage building to the waste disposal building.

7113 - Trackwork: DHS Corporation has further reduced his manpower due to the operating engineers' strike. Ballast and track servicing continued at various places on the Project.

OAF/LM/sec

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