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DATE March 26, 1968

FROM O. A. Finsand

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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 March 26, 1968.

OAF/sec

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KEN 004397

KAISER ENGINEERS
WEEKLY FIELD ACTIVITY REPORT
Week Ending March 26, 1968

WEATHER: Approximately 10 inches of snow fell on March 22nd. The remainder of the period was fair and clear. TEMPERATURE: Minimum - 27 degrees Maximum - 65 degrees	CLIENT: Armco Steel Corporation LOCATION: Middletown, Ohio JOB NUMBER: 6471
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JOB VISITORS

none

SUMMARY FORCE REPORT

	<u>Kaiser Engineers</u> <u>Exempt</u>	<u>Non-Exempt</u>	<u>Subcontractors</u>	<u>Foothill Electric</u>	<u>Total</u>
Management	4	4		1	9
General Supervision	18	1	18	5	42
Field Engineering	42	14	12	14	82
Warehs. & Mtl. Control	3	7		1	11
Survey	1	14	3		18
Office Srv. & Repro.	1	5			6
Clerical			15	16	31
Craft *	—	<u>804</u>	<u>944</u>	<u>621</u>	<u>2,369</u>
TOTAL	69	849	992	658	2,538

* Average for week of men on payroll.

Average for week of Crafts is as follows:

Kaiser Engineers	736
Subcontractors	904
Foothill Electric	<u>577</u>
Total Crafts Working	2,217

WEEKLY FIELD ACTIVITY REPORT
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PROJECT PROGRESS

1. 7148 - HOT STRIP MILL

- 1.3 Structural and Miscellaneous Steel: An average work force of twenty-four ironworkers was maintained in the hot strip mill during the period. In the furnace area, progress continued on the installation of the valve access platforms at the 193 foot elevation for the 16 inch steamline. Installation of the scale shield under the extractors was completed. Progress was recorded on the installation of safety handrails at the skip hoist, dry scale and the slab reject car. In the finisher area, the descale hoods at finishers 1 and 3 were being reworked. In the runout area, progress continued on the installation of safety floor plates. At scale pits 1 and 2, handrail was installed in the flume at the inlet structure. An average work force of nine sheetmetal workers was maintained during the period. In the rougher area, the roof was installed on the pump control room located inside the small parts maintenance shop. In the downcoiler area, diffusers were installed on the downcoiler maintenance unit heaters.
- 1.5 Heating and Ventilating: Progress continued on the completion of items for the final inspection of bag houses. Bags were installed in the #12 bag house. General clean-up operations were in progress around the bag houses.
- 1.6 Mechanical: During the period, Eichleay Corporation maintained an average work force of fourteen men in the hot strip mill on support of Westinghouse testing requirements and remaining mechanical installation. In the finishing mill area, modification requirements involving redowelling for the turn tables continued throughout the period. In the downcoiler and conveyor areas, remaining mechanical equipment which included the downcoilers, conveyors, downenders and hydraulic systems 17, 18 and 19, lube oil system 10 and the downcoiler air were taken over by Armco operations on Monday, March 25th. In the scale pit 3 area, tests were completed for the drag system and the scale pit mechanical equipment was released to Armco operations. In the furnace area, testing continued on the dry scale removal system. Modifications for the skip hoist system were completed this period. These modifications involved installing a rectifier in order that the existing D.C. brake system could function properly as well as grinding a 1/4 inch off the skip hoist wheels which was completed in the Armco Machine Shop. Final test of this system is expected next period. In the roll shop, erection of the third roll grinder is underway. The support frame was set in place and grouted during the period. All mechanical equipment between the reheating furnaces through to the coil conveyors are now being checked out and tested by Armco operations. It is anticipated that the first coil through the hot strip mill will be made during the first week in April. The bearings on the bull gear in the Worthington speed reducer, which is between the Worthington turbine and #2 F.D. fan, were inspected and found bad. New bearings are being obtained through Worthington after their field representative inspected the bearings.

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- 1.7 Piping: During the period, the remaining 30 feet of pipe was installed for the grease piping in scale pit 3. Total pipe installed to date is 342,702 feet. Kaiser pipefitters were working with Richardson Chemical Cleaning Company during the period when the pickling of the first of four sections of the oxygen piping was started. The sump pump under test in the hot strip mill has been accepted and the new seals will now be installed in the remaining sump pumps. An average work force of forty-two men was maintained on hot strip mill piping during the period.
- 1.8 Electrical: During the period, Foothill Electric Corporation maintained an average work force of one hundred and sixty men on lighting, grounding, communications and miscellaneous building requirements throughout the hot strip mill. During the period, 6,700 lbs. of exposed conduit was installed for a total to date of 1,560,500 lbs. or 99% complete. 3,600 feet of low voltage cable was installed for a total to date of 1,965,000 feet or 99% complete. 50 low voltage cable terminations were made for a total to date of 33,500. 2,000 feet of control cable was installed for a total to date of 2,069,500 or 99% complete. 50 control cable terminations were made for a total to date of 62,650 or 99% complete. 1,600 lbs. of lighting conduit and 1,100 feet of wire was installed. 500 feet of communications and TV cable was installed. 190 lbs. of structure grounding was installed for a total to date of 147,100 lbs. or 99% complete.
- 1.9 Miscellaneous Subcontracts: Owens Corning Fiberglas Company maintained an average work force of thirty-one men on insulation during the period. Insulation was being removed from the condensate lines in the bag houses as required for the rework on these lines. In the boiler house, work continued on the insulation of piping for the #2 and 3 units.

Delta Pipeline Constructors continued installation of the 10 inch and 4 inch well water drops during the period with 135 feet installed. Pipe remaining to be installed is approximately 200 feet each of 2 inch and 4 inch well water on C line. During the period, the testing on the plant air piping was completed and preparations for pickling of the oxygen system continued. A work force of twenty-eight men was maintained during the period.

Salem-Brosius completed the repairs to the #3 roof refractories and continued with installation of plastics in the soak zone hearth. This is scheduled for completion next period. The repairs to the #2 charge end refractories will be initiated during next period. The repair work on the #3 F.D. fan shaft has been completed and a new bearing has been installed.

Stuart Painting Company maintained an average work force of sixteen men in the hot strip mill during the period. Progress was maintained on the painting of service piping and miscellaneous steel at the finishers, downcoilers and oil cellars. This subcontractor worked through Saturday, March 16th, on the downcoilers and the various piping systems on the finishing mills.

WEEKLY FIELD ACTIVITY REPORT
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2. 7146 - SLAB MILL

- 2.1 Excavation and Backfill: 2,000 cubic yards of excavation was completed this period for a total to date of 230,641 cubic yards. This excavation was accomplished between column line A and B in the slab storage area for the slab spray cooling system.
- 2.2 Concrete: 357 cubic yards of concrete was placed during the period for a total to date of 49,189 cubic yards. Period concrete consisted mainly of the completion for the gantry rail support slab and some fill concrete in the oil cellar between column 14.5 and 15.5. Approximately 200 cubic yards of concrete remain to be poured in the slab mill project.
- 2.3 Structural and Miscellaneous Steel: During the period, twenty-seven iron workers continued with miscellaneous iron installation and erection of the scale pit gantry crane. The gantry crane is now erected in place and remaining bolt-up and installation of access platforms are in progress. Progress was also evident on the installation of gutter grating in the motor room basement, the dust shields around the shear drive together with dust shields at the main mill, installation of grating at the transfer car landing table sumps was completed as well. Thirty sheetmetal workers continued throughout the period on remaining duct installation for the five bag houses. Three of these bag houses were completed at the close of this period. The fan motors in bag houses 3 and 4 were bumped for rotation and installation of bags for these units will be accomplished next period.
- 2.6 Mechanical: Eichleay Corporation maintained an average work force of fifty-three men on mechanical installation in the slab mill. In the main mill aisle, progress continued on installation of motor couplings together with motor brakes and indicating devices. Installation of the dry scale skip hoist cables, dry scale drag scrapers, bottom spindle carriers, roll tilters, and #2 slab pusher motor bases were also in progress. In the main mill area, the rotor for the upper horizontal mill was installed. The bottom stator section and the rotor was also installed for the vertical mill. Progress in this area consisted mainly of dowelling on the lower horizontal mill motors and cleaning and setting of bearings. The cable idlers for the ingot buggy drives were installed and reeving of the cables for this system is now in progress. At the fume elimination system on the east side of the hot strip mill, sheetmetal workers continued with inlet ductwork to the separator. Equipment grouted during the period included the lower mill main drive motor out-board bearing, bottom spindle carrier support, the roll change sled, the #1 slab pusher drive motor base, and the turn-sheave for the ingot buggy system.
- 2.7 Piping: Hunter Corporation maintained an average work force of fifty-five men on slab mill piping this period. Major piping systems worked on during the period were: hydraulic system 2, lube oil systems 3, 9 and 10, grease piping, natural gas and clarified water. 1,155 feet of piping was installed this period for a total to date of 33,933 feet. Circulation of permanent oil for lube oil system 6 was continued throughout the period and permanent oil was placed in lube oil systems 5 and 7. Lube oil system 11 was pickled and flushed and is now ready for permanent oil. The main plant air loop in the mill aisle was put into service this period.

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- 2.8 Electrical: Foothill Electric maintained an average work force of two hundred and sixty men in the slab mill during the period. The auxiliary MG sets 1 through 6 were energized and mechanically tested this period. Check out of the adjustable voltage and constant potential voltage panels is now in progress. During the period, Foothill installed 8,900 lbs. of exposed conduit for a total to date of 160,200 lbs. or 91% complete. 200 lbs. of structure grounding was installed for a total to date of 30,900 lbs. or 62% complete. 49,000 feet of low voltage cable was installed for a total to date of 283,000 feet or 57% complete. 600 low voltage terminations were made for a total to date of 3,400 or 50% complete. 19,000 feet of control cable was installed for a total to date of 108,000 feet or 46% complete. 371 control cable terminations were made for a total to date of 1,400 or 14% complete. 6,400 feet of computer cable was installed for a total to date of 29,000 feet or 41% complete. 600 computer terminations were made for a total to date of 3,800 or 84% complete. 80 lbs. of lighting conduit and 230 feet of wire was installed. 2,240 feet of communication cable was installed and 21 terminations were made during the period.
3. 7143 - SOAKING PITS
- 3.3 Structural and Miscellaneous Steel: Ironworkers completed the guard rail tubing north of Y line together with the door seals and jambs at the west end of the soaking pit building.
- 3.6 Mechanical: Loftus Engineering maintained an average work force of one hundred and eighteen men on battery installation during the period. At battery 6, a safety inspection was completed and a punch list developed. The items on this punch list are now being accomplished. The final course of refractory installation was started in pits 23 and 24. Testing and checking of electrical equipment for battery 6 continued through out the period. The basic back-up brick for all pits was completed this period. Cover carriages have been set in place over these pits with the exception of pits 1 through 4. The first cover has been set in the re-lining rack and cover refractory is scheduled to begin next period.
- 3.7 Piping: Delta Pipeline Constructors maintained an average work force of thirty-two men on service piping in the soaking pit area. The compressed air, natural gas, and coke oven gas piping is essentially completed. Period progress consisted mainly of oil piping, steam piping, water, and instrumentation. 886 feet of piping was installed for a total to date of 17,229 linear feet. Pressure testing was accomplished on the 10 inch natural gas header. Testing of the 3 inch natural gas header pipe is in progress.
- 3.8 Electrical: Foothill Electric installed 1,200 lbs. of exposed conduit for a total to date of 93,500 lbs. or 67% complete. 300 lbs. of lighting conduit was installed during the period.

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4. 7128 - BASIC OXYGEN SHOP AND MOLD YARD

- 4.1 Excavation and Backfill: 1,759 cubic yards of excavation was accomplished this period for a total to date of 215,916 cubic yards. 1,448 cubic yards of backfill was completed for a total to date of 274,867 cubic yards. Excavation included electric manhole 6, the west wall footing for the electric control room and electrical duct runs.
- 4.2 Concrete: 140 cubic yards of concrete was placed during the period for a total to date of 20,829 cubic yards. This concrete included the service floor from column 22 to 25, the electric manhole 6 base slab and the clarifier sludge tunnel base slab. In the mold yard, the concrete was placed for the canteen floor slab. This completed all concrete in the mold yard.
- 4.3 Structural and Miscellaneous Steel: 491 tons of structural steel was erected at the main B.O.F. facility for a total to date of 8,055 tons. (excluding 328 tons of anchor bolts and base plates). At the mold yard, 7 tons of structural steel was erected on the spray cleaning station. The erection of structural steel at the mold yard is now completed. At the main B.O.F. building, no work was done on March 22nd due to a heavy snow storm.
- 4.4 Roofing and Siding: At the main B.O.F. plant, roofing continued between column 17 and 20 from D to E line. Siding installation continued on the freight elevator shaft where 881 square feet of siding was installed.
- 4.6 Mechanical: The following equipment was received for the fume control system during the period: 10 tons of platform grating, two quencher pumps with 200 horsepower motors and one vent system fan and housing. The lower tier subcontractor, Combustion Engineering, moved on site on March 25th.
- 4.7 Piping: At the mold yard, installation and testing of the service piping systems continued during the period. At the main B.O.F. building, progress continued on the installation of the roof drain piping from column 17 to 20 between D and E lines. Work progressed on the installation of the lube and grease systems for cranes 501 and 506.
- 4.8 Electrical: At the main B.O.F. building, progress continued on the wiring of the charging aisle crane 501 together with the erection of the crane rail brackets for this crane. Laying of conduit was continued between electric manholes 6 and 7. Embedded conduit was set in the pump building basement slab. At the mold yard, electrical work continued in the rectifier building together with wiring of crane 521.

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- 4.9 Miscellaneous Subcontracts: McGraw Construction Company continued work on the floor slabs and decks for the office and lab building. Underground piping continued for this building and the sanitary system has now been tested and approved between columns A and B. The slab on the first floor between columns 1 and 4 is scheduled to be placed during next period and a start is also scheduled for the installation of the Steelex siding.

DHS Corporation has installed the new spur track to the B.O.F. teeming area. This was completed on March 26th.

Stuart Painting Company has now completed painting at the mold yard building apart from a small quantity of miscellaneous steel and column base plates. At the main B.O.F., painting continued with several further areas now released for painting.

5. 7145 - STRIPPER BUILDING

252 square feet of roofing was installed during the period for a total to date of 22,500 square feet. Electrical work continued in the rectifier building. The testing and check out of crane 354 continued during the period and the reeving of both the main column and the auxiliary hoist was completed on March 26th. The collector rail and brackets for crane 356 (crane repair hoist) are now completed. This crane was also reeved during the period. Wiring of the heating and ventilating system in the rectifier building continued during the period and is scheduled for completion by the end of March.

6. 7150, 7156 and 7159 - PICKLE AREA

- 6.2 Concrete: 358 cubic yards of concrete was placed on pickle line 4 during the period for a total to date of 12,543 cubic yards. Major concrete pours included the floor slab between columns 29 and 32, the fume scrubber base slab and the base slab for the hydraulic power unit for hydraulic 17. Various conduit runs were encased in concrete in the delivery motor room for #4 pickle line and at the wet loop pits at #5 line. On pickle line #5, 35 cubic yards of concrete was placed for a total to date of 7,114 cubic yards. Forming for the second lift of the concrete for catenary pit 2 on pickle line #5 continued with concrete scheduled for the next period. In the green coil storage building, placing of the slag floor continued and is now approximately 90% complete. The section between column lines 12 and 16 will not be completed until the coil buggy system is constructed.

- 6.3 Structural and Miscellaneous Steel: In the green coil storage area, Ohio Valley continued work on the punch list items for final completion. In the pickled coil storage building, bolt-up of roof sections and installing of purlin spaces continued during the period.

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- 6.4 Roofing and Siding: In the green coil storage building, progress continued on the erection of the roof vents. These are scheduled for completion during next period. In the pickle line building, installation of Steelex siding continued over the vent doors in the south lean-to. In the pickled coil storage building, 5,094 square feet of roofing was installed during the period for a total to date of 23,700 square feet.
- 6.5 Heating and Ventilating: During the period, Kaiser forces completed the installation of the heating and ventilation ducting in the maintenance aisle offices. This is now ready for the installation of the insulation.
- 6.6 Mechanical: Ohio Valley continued erection of the bolt-up of the pickle tank support steel on both #4 and 5 pickle lines. The first pickle tank section on #4 line were set on March 26th. On #4 pickle line, the #1 and 2 pinch rolls were set in position and additional equipment was off-loaded at the site including the shear entry side guides, the weld detector and the looping pit side guides. On pickle line #5, setting of the strip separator was initiated. In the green coil storage building, punch list work was accomplished on the grating for the coil conveyor trenches.
- 6.7 Piping: Delta Pipeline Constructors maintained one crew in the pickle lines during the period. 720 feet of piping was installed including 160 feet of plant air and 560 feet of oxygen piping for a total to date of 4,980 feet. This piping was installed from the east end of the pickle building along G line towards column 34. In the green coil storage building, Norm Woolley continued installation of 2 inch plant air piping and plant air drops.
- 6.8 Electrical: In the green coil storage building, Lake Erie Electric continued with the installation of conduit and disconnect switches along B and C lines. Wire has also been pulled in the conduit along C line. The installation of the high bay lighting feeders from column 1 to 10 between A and B lines is now 95% complete. In the pickle line building, disconnect switches #5 and 6 in the #4 motor room are wired and ready for energizing. Disconnect switches #4 and 3 are installed but cable has not yet been installed. The high bay lighting circuit disconnect switches are now 70% installed.
- 6.9 Miscellaneous Subcontracts: FBS Builders continued building the masonry wall in the entry motor room on E2 and F lines between column 17 and 19. The toilet room walls in the maintenance aisle office have now been completed.

7160 - GOLD MILL

During the period, 2,793 cubic yards of excavation was completed for a total to date of 14,168 cubic yards.

7186 - WASTE DISPOSAL FOR THE PICKLE FACILITY

During the period, forming for the aeration and flocculation tanks continued with concrete scheduled for the next period. Installation of the roof drains in the waste disposal building continued together with the setting of the acid unloading area drains south of the building. 4,054 square feet of flat deck roofing was set in the waste disposal building. Setting of the stairs inside the building was started during the period. Foothill Electric has completed the conduit in electric manholes 1 and 2 and continued setting the Transite duct bank west of #2 manhole.

7. UTILITIES

7105 - Water Distribution System: At the elevated water storage tank in the south area, Chicago Bridge and Iron were closing the top of the storage tank during the period. All items are scheduled for completion by the end of March apart from the painting.

7110 - Power Distribution: In the melt area switching station, the control cable connections to the Quindar cabinet were completed during the period. The station batteries and charger were installed and connected but not yet placed on charge. At the cold finish substation, progress continued on the relocation of aisleway leaders and relays. This work is scheduled for completion during a station outage on March 30th.

7111 - Sanitary Sewers: The subcontractor has repaired leaks at several manholes on the trunk line in the steelmaking area and preparations for an inspection are now being completed.

7112 - Drainage and Site Development: 2,800 cubic yards of excavation was completed during the period for a total to date of 798,023 cubic yards. 1,945 cubic yards of backfill was placed for a total to date of 1,048,710 cubic yards. Delta Pipeline Constructors placed 192 feet of 24 inch CMP from manhole 405 to 728 and 53 feet of 24 inch CMP from manholes 728 to 729 in the steelmaking area. This completes the pipe installation on this subcontract, and now remain approximately forty-five manholes to be completed in the vicinity of the soaking pits, stripper building, mold yard and B.O.F. Westinghouse Electric Corporation has now completed seventeen of the eighteen railroad lighting tower foundations. Parking lot tower foundation concrete has now been placed and wood poles for roadway lighting are presently being distributed.

7113 - Trackwork: DHS Corporation installed 2,114 feet of track and five turnouts in the steelmaking area during the period. This track is located between open hearth #2 and the B.O.F. and gives access to the teeming aisle.

7114 - Locker Rooms: In the steelmaking area locker room, installation of lighting and plumbing fixtures is nearing completion and general clean-up of the area is being continued. When the toilet partition and the exterior painting is completed, work on this facility will be essentially finished.

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