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TO See Distribution
AT

DATE March 12, 1968

FROM O. A. Finsand
O.A. Finsand

COPIES TO

AT Middletown Construction

JOB NO. 7100

SUBJECT Kaiser Engineers Weekly Field Activity Report



Transmitted herewith is the subject report for the week ending March 12, 1968.

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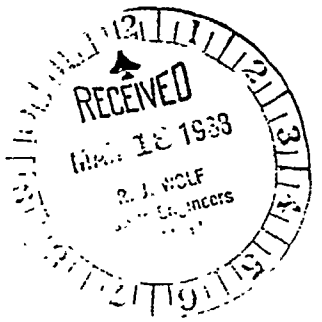
There was an unusual fatality on March 14 - See General Comments, p 3



KEN 004419

KAISER ENGINEERS
WEEKLY FIELD ACTIVITY REPORT
Week Ending March 12, 1968

WEATHER: Cold weather during most of the period with rain and snow on Tuesday.

TEMPERATURE: Minimum - 21 degrees
Maximum - 55 degrees

CLIENT: Armco Steel Corporation

LOCATION: Middletown, Ohio

JOB NUMBER: 6471

JOB VISITORS

none

SUMMARY FORCE REPORT

	Kaiser Engineers Exempt	Kaiser Engineers Non-Exempt	Subcontractors	Foothill Electric	Total
Management	4	4		1	9
General Supervision	18	2	17	5	42
Field Engineering	41	15	10	14	80
Warehs. & Mtl. Control	3	7		1	11
Survey	1	14	3		18
Office Srv. & Repro.	1	6			7
Clerical			13	16	29
Craft *	—	811	917	630	2,358
TOTAL	68	859	960	667	2,554

* Average for week of men on payroll.

Average for week of Crafts is as follows:

Kaiser Engineers	755
Subcontractors	864
Foothill Electric	561
Total Crafts Working	2,180

KEN 004420

WEEKLY FIELD ACTIVITY REPORT
Week Ending March 12, 1968

GENERAL COMMENTS

The manpower problem in the Slab Mill has been relieved as of Monday, March 11th, by removing some thirty to forty Electricians from the Hot Strip Mill. This will, of course, delay completion of certain punch list items in the Hot Strip Mill and this action was approved by Armco. From the week ending March 5th to week ending March 12th, we have lost thirty-five Electricians on pay-roll, however, the high absentee rate that we experienced around the 5th has returned to normal. We had 560 working on the 12th against 522 working on the 5th. We are presently hand carrying a petition through the proper authorities to obtain more Canadian Electricians. We know as of this date that there are more available in Canada. The manpower problem in the Soaking Pits still remains very critical and we have unfortunately not solved the problem there but hope to in the immediate future.

A minor skirmish occurred with the Ironworkers on Tuesday, March 12th, when we sent the outside crews home because of wind and snow. The business agent was called and the problem solved before a walkout could occur.

Generally speaking, current schedule dates in the Mold Yard, Stripper Building and Hot Strip Mill look good. In the Slab Mill, we are hopeful that the additional manpower plus proper concentration on sequential work will accomplish the June completion date. As has been stated before, this is an extremely tight schedule and because of the late start with adequate manpower, we are now dependent more upon completing certain critical items in sequence than we are on heavy manpower.

On Thursday, March 14th, we experienced our first fatality in a year. An Ironworker employed by Ohio Valley Riggers was crushed by a five ton heat shield as it was being picked from the car. The pieces that they were removing from the car were approximately 11 feet wide by 30 feet long tied down in the car with rod and angle clips. As they were removing the last three pieces, the Ironworker walked from the end of the car to the middle and as the operator tightened up on the load, it swung over against the side of the car pinning him there. As near as we can tell, the boom may not have been absolutely vertical above the load and was the reason for the strong tipping action on this piece of plate. The incident occurred at about 1:00 p.m. and the man was dead when I arrived there at ten minutes after.

WEEKLY FIELD ACTIVITY REPORT
Week Ending March 12, 1968

PROJECT PROGRESS

1. 7148 - HOT STRIP MILL

1.3 Structural and Miscellaneous Steel: An average work force of eighteen ironworkers was maintained in the hot strip mill during the period. In the furnace area, progress was recorded on the maintenance walkway for the 16 inch steamline. In the finisher area, the remaining platform was being installed at finisher 4. In the downcoiler area, the pyrometers were being installed. An average work force of twenty-three sheetmetal workers was maintained during the period. In the finisher area, they were installing spindle guards and in the downcoiler area and installation continued on the guards at the downcoilers and vents for the maintenance area unit heaters.

1.5 Heating and Ventilating: Progress continued on the completion of items for the inspection of the bag houses. All items have been completed on the bag houses south of #5. The bags are now being placed in bag houses to the north of #6 but the filter aid will not be placed at this time.

1.6 Mechanical: During the period, Eichleay Corporation maintained an average work force of twenty-six men in the hot strip mill to support Westinghouse testing requirements and installation of remaining mechanical equipment. In the rougher area, Armco ran sixteen slabs through the roughing train to test various computerized programs which involved sequence tests together with simulated rolling tests in the finishing mill. These programs included trouble checks and rougher by-pass tests. In the finishing mill area, redowelling of the roll changer turntables continued during the period. Some revision work was also accomplished on side guides. Mechanical requirements in the finisher area are essentially completed. Westinghouse completed all speed regulation tests in the finishing mill area this period. Automatic roll sequence checks were also completed on turntables for finishers 3, 5, 6 and 7. The run-out tables have been accepted by Armco. In the downcoiler area, progress continued during the period on testing of downcoiler auxiliaries. All mechanical tests were completed on downcoiler #2 and speed regulation tests by Westinghouse is now in progress. The mandrel for downcoiler #1 was replaced due to excessive noise developed during testing. In the coil conveyor area, coupled tests were completed for the downender #2, coil conveyors 4 through 10 and downcoilers #2 and 3 side guides. Uncoupled tests were accomplished for downenders #1 and 2. Minor modifications were being made during the period at the tail end of coil conveyor 6. Link-Belt representatives are scheduled to arrive at the job site on March 14th to establish necessary corrective measures to this conveyor. In the roll shop area, assembly of chocks and rolls continued during the period. The third roll grinder was received and unloaded. Erection is scheduled to begin next period.

WEEKLY FIELD ACTIVITY REPORT
Week Ending March 12, 1968

1.7 Piping: During the period, 250 feet of pipe was installed for a total to date of 342,462 feet. 240 feet of piping now remains to be installed and consists of grease piping in scale pit #3 and well water piping for the deluge valves in the fire system. Two sump pumps are now being returned from Cleveland for testing on site. If this test is successfull, the new seals will be placed in the other sump pumps. The remaining grease piping at the pyrometers will be completed as soon as the pyrometers themselves have been installed. Additional supporting of the mill top strip piping continued during the period and completion is expected during next period. During the period, a pipefitter force of forty-six men was maintained on hot strip mill piping operations.

1.8 Electrical: Foothill Electric installed 5,200 lbs. of exposed conduit during the period for a total to date of 1,549,000 lbs. or 98% complete. 4,000 feet of low voltage cable was installed for a total to date of 1,959,000 feet or 98% complete. 350 low voltage cable terminations were made for a total to date of 33,350 or 99% complete. 500 feet of control cable was installed for a total to date of 2,066,000 feet or 99% complete. 480 control cable terminations were made for a total to date of 62,400 or 99% complete. 800 feet of computer cable was installed for a total to date of 944,000 feet or 99% complete. 30 computer cable terminations were made for a total to date of 30,600 or 99% complete. 1,500 lbs. of lighting conduit and 9,600 feet of wire was installed. 1,400 feet of TV and communications cable was installed. 600 lbs. of structure grounding was installed for a total to date of 146,700 lbs. or 96% complete.

1.9 Miscellaneous Subcontracts: Owens Corning Fiberglas Company maintained an average work force of twenty-seven men on insulation during the period. Progress continued in insulation of the overhead piping in the hot strip mill. In the boiler house, progress continued on the insulation of the steamlines.

Delta Pipeline Constructors installed 50 feet of 10 inch well water on D line and continued correction of deficiencies in the hangers and supports. Two crews worked through the period on preparing the oxygen system for pickling and flushing which is scheduled for the end of the next period.

Salem-Brosius continued with refractory work in the heat and charge zone hearths and along the skid blocks in the soak zone of #3 furnace. The dry out of furnace #2 was completed at midnight on March 7th and was accepted for operation with some exceptions. Heated slabs were passed through this unit during the Friday trial run and Armco has requested acceptance of this furnace. The redesigned brickwork has been installed at the charge end of #1 furnace and clean-up of this area is virtually completed.

Babcock and Wilcox are still operating boiler #2 on gas firing. Boil out of #3 boiler has been deferred pending the repair of the #3 fan shaft. This corrective work is to be provided by The Manchester Machine Company and is scheduled for completion by the end of next week.

Stuart Painting Company maintained an average work force of nineteen men in the hot strip mill during the period. Progress was maintained on the painting of service piping, mill line equipment and miscellaneous structural steel. Painting was also continued in the waste heat boiler and oil cellar.

2. 7146 - SLAB MILL

2.2 Concrete: 189 cubic yards of concrete was placed in rail support slabs along the east sides of scale pit #4 for a total to date of 48,752 cubic yards.

2.3 Structural and Miscellaneous Steel: During the period, twenty-eight ironworkers continued with miscellaneous iron installation in the slab mill area. Erection of framework for the skip hoist tower enclosure was completed. Installation of the scarfer flume grizzly was also completed. Erection of the scale pit #4 gantry crane was initiated this period. At the close of the period, the vertical legs were erected and preparations are underway to complete the installation of the main girder. 60 feet of gantry crane rail base plates were installed as well. Remedial work was completed for the scarfer purge filter platform. Sheetmetal workers continued in the five slab mill bag houses with final erection of plenums and ductwork requirements. Progress continued throughout the period on closing the plenums to establish air tight conditions. This closure requirement is 50% complete for bag houses 2 and 3. Installation of the main office air conditioning unit and related ductwork was started. Some realignment to the duct system is presently being revised. A study is presently being made to accommodate the realignment requirements. An average work force of eighteen sheetmetal workers were recorded in the slab mill area during the period.

2.6 Mechanical: Eichleay Corporation maintained an average work force of fifty-seven men on mechanical installation in the slab mill. At the main mill, progress was continued on the installation of the vertical mill spindle and support carriages. In the motor room, the support frame for the vertical mill motor has been installed and leveled. Installation of the motor lower section is expected to begin next period. The upper horizontal main motor base has been secured in place and at the close of the period the lower stator section was being handled into position for final erection. Dowelling of the main drive MG set was completed and remaining dowelling for some of the other motor generator sets is in progress. In the main aisle area, progress continued on the installation of the crop pusher, the dry scale skip hoist rails, the dry scale removal system and the setting and alignment of motors and brakes. On

the east side of the slab mill, installation of the scarfer fume elimination system was continued with the separator now 50% completed. Stack erection was also in progress during the period. In the soaking pit area, the ingot buggy gear covers were installed and the slack cable idler rolls are being positioned and welded in place. Major items grouted during this period were: the slab shear drive motors, the slab pushers and one motor for piler #2.

2.7 Piping: Hunter Corporation maintained an average work force of fifty-nine men on slab mill piping during the period. Improved progress was evident due to an increase to the piping forces as well as progress continuing through Saturday, March 9, 1968. Progress for the period consisted mainly of piping for hydraulic system 1, circulating oil system 3, circulating oil system 11, completion of piping for circulating oil system 5, grease piping and water distribution piping. Permanent oil was circulated through lube oil system 6 with the permanent pumps in operation. This system was accepted by Armco on March 12th. The hydro pressure tests for lube oil systems 5 and 7 were completed and pickling is scheduled to begin on March 13th for these systems. Preparations are presently underway for pressure testing of lube oil system 11 which is scheduled for next period. The accumulator for hydraulic system 2 was set in place during the period. During the period, 1,074 feet of piping was installed for a corrected total to date of 32,133 feet.

2.8 Electrical: Foothill Electric maintained an average work force of two hundred and thirty men in the slab mill during the period. Full operation of the 250 volt dc substation was established on March 11th as well as the 2.4 KV substations #1 and 2 on this same date. During the period, Foothill Electric installed 5,900 lbs. of exposed conduit for a total to date of 144,800 lbs. or 83% complete. 120 lbs. of structure grounding was installed for a total to date of 30,400 lbs. or 61% complete. 26,300 feet of low voltage cable was installed for a total to date of 192,700 feet or 40% complete. 300 low voltage cable terminations were made for a total to date of 2,100 or 30% complete. 11,000 feet of control cable was installed for a total to date of 74,700 feet or 31% complete. 283 control cable terminations were made for a total to date of 600 or 7% complete. 6,800 feet of computer cable was installed for a total to date of 18,900 feet or 27% complete. 590 computer terminations were made for a total to date of 2,500 or 55% complete. 300 lbs. of lighting conduit and 600 feet of wire was installed this period.

3. 7143 - SOAKING PITS

3.3 Structural and Miscellaneous Steel: Installation of the square tube guard rail requirements were completed this period as well as the armor plating at the tong quench tank #2. A safety inspection by Armco is scheduled for March 14th on the east end overhead crane #358 and gantry crane #366.

3.6 Mechanical: Loftus Engineering maintained an average work force of ninety-five men on battery installation in the soaking pits. Installation of refractory continued during the period in pits 6 through 10. Three of these pits were completed and pits 1 through 6 remain to be completed. Walkway paving was completed at batteries 4, 5 and 6 during the period. One pit cover frame was set in place to test setting and handling. Bracing requirements for pit covers continued throughout the period. Loftus continued with the testing of gas, steam, air and fuel oil piping at battery 6. Electrical tests were also conducted on motors and related gear for both batteries 5 and 6. Final dry-out and check-out of battery 6 is scheduled to begin early in April.

3.7 Piping: Delta Pipeline Constructors maintained an average work force of twenty-three men on service piping in the soaking pit area. Installation of the 50 lb. natural gas header piping will be completed and ready for pressure testing next period. Completion of the air piping and steam piping will follow. 1,069 feet of piping was installed this period for a total to date of 15,121 feet. 10,634 feet of piping is remaining to be installed by this contractor.

3.8 Electrical: Foothill Electric installed 800 lbs. of exposed conduit during the period for a total to date of 92,200 or 66% complete. 500 lbs. of lighting conduit was installed and 2,000 feet of lighting wire during the period. 250 lbs. of structural grounding was completed for a total to date of 4,100 lbs. or 40% complete.

4. 7128 - BASIC OXYGEN SHOP AND MOLD YARD

4.1 Excavation and Backfill: 5,517 cubic yards of excavation was accomplished this period for a total to date of 212,262 cubic yards. 1,301 cubic yards of backfill was completed for a total to date of 272,001 cubic yards. Excavation consisted mainly of requirements for the clarifier foundations.

4.2 Concrete: 77 cubic yards of concrete was placed for a total to date of 20,586 cubic yards. This concrete included the north wall of the electrical control room, track hopper grade beams and piles, the sump pit in the pump building and steam valve pit #5 base slab. In the mold yard, the concrete for the curbs on the spray mixing station at column 4 was placed.

4.3 Structural and Miscellaneous Steel: 140 tons of structural steel was erected at the main B.O.F. facility for a total to date of 7,187 tons. (excluding 328 tons of anchor bolts and base plates). At the mold yard, bolt-up continued on the final two trusses and the west end wall. At the main B.O.F. building, the erection of charging aisle crane 501 continued and Lake Erie Electric progressed with the erecting of the electrical gear and wiring of this crane. The ironworkers walked off the

site at 11:30 a.m. on March 6th but their dispute was settled and the men returned to work on the following morning. All work was stopped on March 12th due to snow and sleet. Bolt-up continued throughout the period together with installation of handrail and toe plates at the main stairs. Work was initiated on the structural steel to accommodate the scrap preheating change on the E line elevation. Plate girders and platforms will have to be lowered and the lance crane girder support column will have to be lengthened.

4.4 Roofing and Siding: At the mold yard, 1,585 square feet of roofing was installed during the period at the west end of the building. 2,618 square feet of siding was installed at the main B.O.F. building during the period. This siding is on the elevator shaft and was started on March 8th.

4.6 Mechanical: At the mold yard, Norm Woolley has completed the installation of the heating and ventilating equipment apart from the power feed and three diffusers. The reeving of crane 522 was completed and power was available to this crane on March 12th. Testing and start-up operations on this crane will now proceed. The mold yard rectifier was energized on March 11th. The installation of grease system piping on crane 521 was completed on March 7th.

4.7 Piping: At the mold yard, the roof drain piping was completed on March 8th. Work was continued on the service piping for the area.

5. 7145 - STRIPPER BUILDING

5.3 Structural and Miscellaneous Steel: During the period, the roll-up door in the rectifier building was completed and the heating and ventilating was started in the rectifier building. The roof drain system was completed on March 8th and the rectifier building was energized on the 11th of March. Progress continued on the installation of the lube and grease piping on crane 354 together with the wiring for this crane.

6. 7150, 7156 and 7159 - PICKLE AREA

6.2 Concrete: 418 cubic yards of concrete was placed in pickle line 4 during the period for a total to date of 11,852 cubic yards. Major concrete pours for the period included the #1 and 2 processers, #1 and 2 pay-off reel shear side guides, scrap conveyor, and #1 and 2 pinch rolls. Conduit encasement was also placed for #4 pickle line between columns 37 and 40. 117 cubic yards of concrete was placed on pickle line 5 during the period for a total to date of 6,784 cubic yards. This concrete included the stairs at columns 28 and 29, the footing for #2 catenary pit and the top of #9 electric manhole together with conduit encasement between columns 21 and 22.

6.3 Structural and Miscellaneous Steel: In the green coil storage area, Ohio Valley completed the installation of the safety cable along the crane girder walkway and completed the stairway at column B18.

6.4 Roofing and Siding: Installation of fascia and flashing on the south lean-to roof continued through the period. 90% of the Steelox sheeting has now been installed between columns 22 and 28 on H line. Roofing was initiated on the pickled coil storage building during the period.

6.6 Mechanical: Erection of the pickle tank support steel and looper car rails continued during the period on pickle line 5. Ohio Valley has set the following equipment on the anchor bolts for #4 pickle line: Top and bottom looper cars, looper car winch drum and drive, #4 pinch roll and #5 pinch roll. In the green coil storage building, the lubrication of the cranes has now been completed and hooks have been reeved and the brakes and limit switches are presently being adjusted.

6.7 Piping: Delta Pipeline Constructors maintained two crews in the pickle line during the period. Progress was maintained on both the process piping and the plumbing. Pipe supports are being erected along G and F columns and the plant air and mill water headers are being installed. Total piping installed to date for this contract is 3,975 feet. In the green coil storage building, Norm Woolley completed the tie-in of the 4 inch oxygen line and is presently installing hangers for the 3 inch plant air lines.

6.8 Electrical: The transformer sections of all the installed switchgear in the #4 motor room have now been energized. This includes the 2.4 KV substation #1, the 250 substation #1 and the 480 volt substations #1 and 2. In the green coil storage building, conduit supports have now been installed on row B from column 1 to 10 and on row C from column 10 to 16. Lighting panels A, B, C and D have been installed together with two welding panels in the east end of the building.

7160 - COLD MILL

During the period, 3,730 cubic yards of excavation was completed. After 1,000 cubic yards of clay was excavated and deposited east of the pickled coil storage, we were requested by Armco to haul the remaining clay to the west side of the Project next to Reeds Yard. This necessitates a longer duration of haul time by approximately a factor of four. When we get to the sand and gravel excavation, we will be allowed to stockpile excavated material east of the cold mill.

7. UTILITIES

7106 - Air Distribution System: During the period, the #1 air compressor was out-of-service while corrective measures were taken to repair the oil leaks at the pump and motor bearings. Leaks at the pump bearings were corrected. In addition, the heavy duty oil pump was installed and the #1 air compressor is now ready for operation once again. The #2 air compressor was dynamically balanced this period and was operated on manual operations while #1 was out-of-service. The Hagan representative will be at the job site next period to complete final adjustments to the vane control in order to secure automatic operations.

WEEKLY FIELD ACTIVITY REPORT
Week Ending March 12, 1968

7110 - Power Distribution: At substation 604, the auxiliary cable has been installed and all rough-in wiring has been pulled, tagged and terminated. The power outage for this station has been scheduled for next weekend in order to complete this wiring and to test operation of relays and circuit breakers. At switching station 603 in the melt area, the termination of all incoming 13.8 KV cables and connections to the switch gear bus has been completed and taped.

7111 - Sanitary Sewers: Work on this subcontract is now essentially complete apart from several manholes and the infiltration problem in the steelmaking area trunk line. Delta Pipeline Constructors has brought in a outside company to reflush this trunk line. This operation has been completed from manholes 578 to 582.

7112 - Drainage and Site Development: 3,884 cubic yards of excavation was completed during the period for a total to date of 793,477 cubic yards. 11,925 cubic yards of backfill was placed for a total to date of 1,045,079 cubic yards. Delta Pipeline Constructors continued placing CMP from manholes 382 to 383 and from 382 to 421 located south of the basic oxygen furnace. Westinghouse Electric Corporation made the initial 16 foot concrete pour in the foundations for the four railroad lighting poles at the outgoing yard during the period. John R. Jurgensen Company is scheduled to resume paving operations near the end of March on the roads and access areas which service the east side of the hot strip mill.

7113 - Trackwork: DHS Corporation continued with the installation of three turnouts in the area immediately south of open hearth #2. Tracks were serviced in the steelmaking area including placing of ballast.

7114 - Locker Rooms: In the steelmaking area locker room, installation of acoustical ceiling continued on both the east and west locker areas. The seamless flooring has now been completed in the shower, wash and drying areas. Completion of the electrical fixtures continued during the period. Progress was maintained on the interior and exterior painting.

7186 - Waste Disposal for the Pickle Facility: 25 cubic yards of concrete was placed during the period for a total to date of 1,638 cubic yards. This concrete included the base slabs for the pipe and acid trenches in the waste disposal building. Forming was started on the walls for these trenches and the two electric manholes. The service water piping has now been connected from the 18 inch main to the building. The limestone bins have been welded up and are now ready to be set in the building.

OAF/sec

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