

INTER-OFFICE MEMORANDUM

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September 5, 1967

FROM

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 September 5, 1967.

CAF/sec

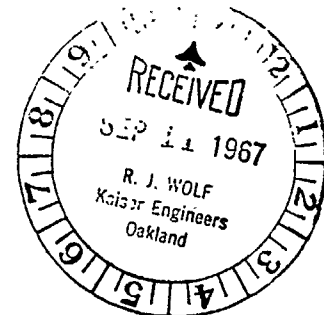
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KAISER ENGINEERS
WEEKLY FIELD ACTIVITY REPORT
Week Ending September 1, 1967

WEATHER: Fair and cool
throughout the
period.

Client: Armco Steel Corporation

Location: Middletown, Ohio

Job Number: 6471

TEMPERATURE: Maximum - 87 degrees

Minimum - 44 degrees

JOB VISITORS

L. H. Misner, S. Montell, I. D. Thunder

SUMMARY FORCE REPORT

	Kaiser Engineers		Subcontractors	Foothill	Total
	Exempt	Non-Exempt		Electric	
Management	5	3		1	9
General Supervision	18	3	20	6	47
Field Engineering	45	31	13	14	103
Warehs. & Mtl. Cntrl.	3	10		2	15
Survey	2	25	4		31
Office Srv. & Repro.		9			9
Clerical			15	20	35
Craft *	—	<u>1,807</u>	<u>1,171</u>	<u>640</u>	<u>3,618</u>
TOTAL	73	1,888	1,223	683	3,867

* Average for week of men on payroll.

Average for week of Crafts is as follows:

Kaiser Engineers	1,602
Subcontractors	1,123
Foothill Electric	<u>572</u>
Total Crafts Working	3,297



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WEEKLY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

GENERAL COMMENTS

Our pipefitter forces have increased by approximately sixty men in the past week and we are continuing to hire men. Unfortunately, we are still experiencing a loss of pipe-welders. There are indications that more welders will be available for test the week of September 11, 1967.

Delta Piping, who are doing the Hot Strip Mill service piping, have also acquired more men and appear to have a sufficient crew for this week.

The electrical manpower has remained about the same for the period. Although a number of men have been hired in the last week, we lost over sixty men in one day. When forty some summer help and twenty travelers terminated.

It appears that we will hire a number of electricians in the next week or so that are coming in from other areas.

Many of our recent and contemplated hires in the piping and electrical craft have and will come from strike bound facilities. We cannot, therefore, predict how long this type craftsman will be available.

WEEKLY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

PROJECT PROGRESS

1. 7LL8 - HOT STRIP MILL

- 1.1 Excavation and Backfill: 480 cubic yards of excavation was accomplished during the period for a total to date of 1,106,542 cubic yards. 5,051 cubic yards of backfill was completed at the Hot Strip Mill for a total to date of 880,495 cubic yards.
- 1.2 Concrete: 251 cubic yards of concrete was placed during the period for a total to date of 208,814 cubic yards. The major concrete pour was the slab reject transfer car foundations. Approximately 1,000 cubic yards of concrete are remaining to complete this project.
- 1.3 Structural and Miscellaneous Steel: At the Clarification Building, structural and miscellaneous steel is essentially complete except for outside access ladders and monorails. At the Pump House facility, progress was maintained on the deflector plates for the softened and unfiltered mill water entrance to the basement. Miscellaneous ironwork in the Hot Strip Mill was accelerated during the period. The heater platforms in the motor room are now 80% complete and 8" square handrail tubing was installed at the extractor area and along the flume line between column line 1 and column line 3 of the main mill aisle. This heavy handrail work is now 70% complete. Progress was continued at the dry scale removal at both ends of the furnace. The deflector plate installation at the charge end is now 70% complete. At the discharge end, dry scale removal work is 75% complete. Installation of lay down beams was completed during the period and slab lay down installation is now 80% complete. Major work items in the Hot Strip Mill remaining consists mainly of handrail, grating, platforms and deflector plates for piping in the flume area.
- 1.5 Heating and Ventilating: Good progress was continued during this period on installation of the fifteen bag houses for the Hot Strip Mill. Bag house units #8, 9 and 3 are now complete. #8 is in operation. #3 has been started and is in the final stages of test-out. #9 is scheduled for charging on September 8 and should be operating by the end of the next period. Bag house #9 is now 90% complete. Remaining items to be completed are power wiring, lighting and electrical terminations. Bag house #11 is 90% complete. Remaining work is essentially electrical wiring and terminations. At bag house #4, the duct work is 80% complete. The remaining work consists mainly of electrical conduits, lighting, wiring and terminations. At bag houses #5 and 15, progress is 70% complete. Remaining work consists mainly of dampers, shakers, some duct work and electrical wiring. Progress was maintained during the period on the remaining seven bag houses which are now 70% complete.

WEEKLY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

Bag house erection is scheduled to complete during the next six weeks. The heating and ventilating units for the R2 director room, the extractor director room and the finishing mill director room are completed except for the diffuser installations which will be completed after final ceiling work is accomplished. At the downcoiler director room, the air handling unit and duct work was completed during the period. The condensing unit, related piping and electrical work remains to be completed. The finishing mill office heating and ventilating unit is complete and operating. At the instrument repair house, the heating and ventilating duct work was completed during the period. At the boiler house control room, the air conditioning unit is set in place and the duct work including installation was completed during the period. At the slab yard scheduling office, the heating and ventilating unit has been set on the office roof and progress is continuing on related duct work. At the Clarification Area, no progress was evident on heating and ventilating work.

- 1.6 Mechanical: Eichleay Corporation maintained good progress in all areas of the Hot Strip Mill during the period. At the rougher area, the following activities were worked on during the period: the vertical scalebreaker entry and delivery roll motors, R2 spindles and balance cylinders, R4, 5 and 6 work rolls, R1 and 3 spindles and balance cylinders and remedial work on edgers 2 and 4. At the finishing mill, alignment checks were made on the main mill motors and main drive shafts. In the downcoiler area, progress consisted mainly of installation of pinch roll carry over tables and motors, pinch roll side guide motors and pinch roll table adjustable side guides. Progress was initiated on the scale removal system at Scale Pit #3.

The following uncoupled tests were accomplished during the period: the F1 and F6 ram and the F7 screwdam. The following coupled tests were completed: the R2 edger and the F3, 4 and 5 screwdams.

Speed regulation tests were made on finishing mill motor #1. The air gap problem at the vertical scalebreaker main motor was corrected during the period. At the R2 edger, excessive noise was encountered during a test run and United Engineering is investigating this problem. At the mill conveyor facility, progress consisted mainly of conveyor support installation between the Hot Strip Mill and the Green Coil Storage Building. The vertical curve problem encountered earlier consisted of incorrect identification of support units. This problem has been resolved. Eichleay Corporation worked on Saturday, September 2, 1967, on mechanical installation at the downcoiler and finishing area.

- 1.7 Piping: During the period, 6,256 linear feet of piping was installed for a total to date of 239,392 linear feet. The remaining quantity to complete is 110,223 linear feet. Major piping systems worked on during the period were: steam, grease, high pressure descaling,

WEEKLY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

hydraulic system 12, lube oil 4, hydraulic systems 15 and 16, water cooling, and instrumentation. During the period, repickling was completed on lube oil #4. Morgoil #4 flushing was completed and is scheduled for permanent oil next period. Hydraulic system 12 is presently being hydro tested. All Sier-Bath pumps have been returned from the factory after rework except for one pump for the lube oil #4 system. Final testing and system balance was completed for lube oil 5.1, 5.2 and 6 during the period. Delta Pipeline Contractors continued with service piping in the Hot Strip Mill throughout the period. 1,700 feet of service piping was installed for a total to date of 11,643 linear feet.

- 1.8 Electrical: Foothill Electric Corporation installed 2,700 lbs. of embedded conduit during the period for a total to date of 1,492,700 lbs. or 97% complete. 23,900 lbs. of exposed conduit was installed for a total to date of 1,177,900 lbs. or 97% complete. 700 lbs. of structural grounding was installed during the period for a total to date of 127,700 lbs. or 95% complete. 3,300 feet of 2.4 KV cable was installed during the period for a total to date of 28,200 feet or 64% complete. 32,000 feet of low voltage cable was installed during the period for a total to date of 1,207,500 feet or 82% complete. 1,300 low voltage cable terminations were accomplished for a total to date of 24,800 or 81% complete. 47,600 feet of control cable was installed during the period for a total to date of 1,513,000 feet or 88% complete. 1,500 control cable terminations were accomplished for a total to date of 35,100 or 61% complete. 28,000 feet of computer cable was installed during the period for a total to date of 494,200 feet of 61% complete. 700 computer cable terminations were made for a total to date of 11,700 or 39% complete. 2,400 lbs. of lighting conduit and 2,600 feet of lighting wiring was installed during the period.

- 1.9 Miscellaneous Subcontracts: Chicago Bridge and Iron completed painting and remaining activities at the fuel oil storage tanks. Some rework will be required on the water line before this facility is completed.

Bilbrey Masonry Contractors completed block work at Elevation 154 in the boiler house. Remaining block work in the Hot Strip Mill consists of the recorder rooms at column line E-61 and D-50.

Moeschl-Edwards installed roll-up doors at the Clarification Building during the period. The slab mill motor room door was received during the period. Fabrication will be completed on remaining E-line doors next period.

WEEKLY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

The Owens-Corning Fiberglass Company insulated 450 feet of 165 lb. steam line during the period. Insulation of the deaerator and storage tanks is now 80% complete. Insulation of the condensate tanks at Elevation 154 is now 70% complete.

Ohio Valley Riggers and Erectors completed installation of the flocculators and mixers at the Clarification Plant. They are presently installing the coagulant acid mixers and tanks in this area.

Salem-Brosius maintained good progress on the three reheat slab furnaces during the period. The furnace #1 refractory installation was in progress for the waste gas stack lining, the skid block castables and the air manifold lining. Refractory work for this furnace is expected to complete in two weeks. Furnace piping for unit #1 is near completion. The fuel oil, steam and steam tracing pipelines are installed and ready for testing. Progress during the period was maintained on impulse lines, compressed air and drains for unit #1. The furnace electrical work during the period consisted mainly of wire pulling and terminations at unit #1 and some conduit installation for furnace #3. A shortage of electricians for the lower tier subcontractor, Newco Electric, is restraining furnace progress at the present time. Unit #1 is now 91% complete, #2 is now 79% complete and #3 is now 66% complete. The overall furnace contract completion is now 78% complete.

Babcock and Wilcox maintained good progress during the period on heating and ventilating, air ducts and draft fan installation. During the period, refractory work was continued in the #2 combustion air ducts and the transition duct between the boiler and furnace. Insulation and lagging of combustion air and hot gas ducts were maintained at unit #1 and 2. Duct work installation was continued throughout Saturday, September 2, 1967. The forced draft fan #2 rotor has been set and is presently being aligned with the turbine drive. Progress also continued on pedestals and bearings for induced draft fan #2. Ventilation ducts and fans for unit #3 were installed above Elevation 180. This subcontract is now 58% complete.

The Mc Piping (Contractor for the Waste Heat Boiler 2 $\frac{1}{2}$ " and over piping) is now 63% complete. During the period, progress was continued on the 425 lb. steam to the air heater at unit #1, drain lines at Elevation 154, hangers for boiler safety valve blow off piping, setting solenoid trips and fuel oil header piping at boiler #2.

Norm Woolley (Contractor for the Waste Heat Boiler 2" and under piping) is now 31% complete. This contractor worked a small force of fitters on Saturday, September 2, 1967. Progress during the period was accomplished on pump trim piping, compressed air header, atomizing steam piping at boiler #1 and miscellaneous piping for the desuperheater units.

DAILY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

Minneapolis-Honeywell (Instrumentation Contractor for the Waste Heat Boiler Area) is now 18% complete. During the period, stainless steel tubing was installed between boiler #1 and 2 and the master control panel. Progress was also accomplished on installation of bulkheads and instruments at the deserator and boiler #1.

2. 7146 - SLAB MILL

- 2.1 Excavation and Backfill:** 1,329 cubic yards of backfill was accomplished during the period for a total to date of 162,021 cubic yards.
- 2.2 Concrete:** 191 cubic yards of concrete was placed for a total to date of 42,062 cubic yards. Major concrete pours during the period were: the mill office footings, electrical fill, railroad bumpers at E-line, conduit encasement and the crop conveyor support deck.
- 2.3 Structural and Miscellaneous Steel:** During the period, the support steel for the piler pulpit was erected and progress was continued on support steel for the bag house units. Installation of the flume cover plates continued during the period.
- 2.6 Mechanical:** During the period, Richleay Corporation maintained progress on motors and motor bases for approach table #2 and mill runout table #10, shear approach table #4, mill approach table #3, scarfer runout table #13 and the horizontal and vertical main mill installation. 200 tons of Hesta equipment was received at the job site during the period for a total to date of 4,329 tons or 56% complete. Major items received were components for tables #16, 17, and 18, piler tables, slab transfer cars and table #12 side guides.
- 2.7 Pipings:** Hunter (Piping Contractor for the Slab Mill Piping) during the period continued with installation of the three lube oil systems in the oil cellar and the oil cellar water piping. Progress was also maintained on hydraulic system #2, service piping headers on D-line, and pipe supports for service headers along E-line of the main mill aisle. Hunter now has twenty qualified welders on the job site.
- 2.8 Electricals:** 10,600 lbs. of embedded conduit was installed during the period for a total to date of 568,900 lbs. or 89% complete.

3. 7143 - MAKING PIT

- 3.1 Excavation and Backfill:** 252 cubic yards of backfill was completed during the period for a total to date of 110,990 cubic yards.
- 3.2 Concrete:** 232 cubic yards of concrete was placed for a total to date of 26,097 cubic yards. Major concrete pours during the period were: the charging track slab at column 3.5, Y-line trench slabs at column 10.5 and 11.5, the loading dock slab at column 14.5, and conduit encasement south of pusher #1.

WEEKLY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

- 3.3 Structural and Miscellaneous Steel: 119 tons of structural steel was erected during the period for a total to date of 3,989 tons.
- 3.4 Roofing and Siding: 13,300 square feet of roofing and siding was installed for an adjusted total to date of 82,968 square feet.
- 3.5 Heating and Ventilating: Installation of ridge ventilators is now complete.
- 3.6 Mechanical: Refractory work in the six soaking pit stacks is now complete. During the period, progress was continued on fine steel erection at pits #1, 2, 3 and 4. The remaining electrical control consoles arrived at the job site during the period and the motor control centers have been shipped and are due to arrive next period. Refractory work continued in pits #23 and 24 during the period. Deck steel at Elevation 124 near battery #4 was initiated during the period. Delta Pipeline was given notification to proceed with soaking pit piping.
- 3.8 Electrical: 6,000 lbs. of embedded conduit was installed for a total to date of 59,400 lbs. or 77% complete.
4. 7128 - BASIC OXYGEN SHOP
- 4.1 Excavation and Backfill: 6,764 cubic yards of excavation was accomplished during the period for a total to date of 163,073 cubic yards. All major excavation is now completed along C5 and E-line. 29,722 cubic yards of backfill was completed along G and H lines during the period for a total to date of 141,033 cubic yards.
- 4.2 Concrete: 931 cubic yards of concrete was placed for a total to date of 14,374 cubic yards. Major concrete work during the period consisted of: completing the last pile cap, G-27, furnace #1 trunnion support piers, first list, the last pour of the hot metal reloading pit wall, and seventeen (17) smaller piers in the furnace area.
- 4.3 Structural and Miscellaneous Steel: 137 tons of structural steel was erected at the Mold Yard for a total to date of 1,863 tons. Structural steel erection of the Mold Yard Building is expected to complete in two weeks.
5. 7145 - PICKLE AREA
- 5.3 Structural and Miscellaneous Steel: 33 tons of structural steel was erected at the Stripper Building during the period for a total to date of 497 tons.
6. 7150, 7156, 7159 - PICKLE AREA
- 6.2 Concrete: At pickle line #4, the entry motor room slab was placed during the period and the maintenance aisle slab is scheduled to complete next period. The temporary dewatering facility at J-line in the pickle coil storage is now in operation continuously on a 24-hour basis.

WEEKLY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

- 6.3 Structural and Miscellaneous Steel: During the period, bolt-up continued at the Green Coil Storage facility and by next period a large portion of this building will be available for roofing and siding to proceed.
- 6.4 Roofing and Siding: 5,600 square feet of siding at the Pickle Line Building was installed for a total to date of 94,764 square feet. 8,932 square feet of roofing was installed at the Pickle Line Building for a total to date of 51,752 square feet.
- 6.8 Electrical: At the Green Coil Storage, embedded conduit south of the A-Line coil conveyor is now 75% complete. Embedded conduit at the Control room is now 50% complete and is scheduled to complete by September 15. Collector rail installation along B-line of the Green Coil Storage Building is 50% complete. The crane collector rails at the Pickle Line Building are now complete.

Green Coil Storage piping has been awarded to Norm Woolley Company.

7. UTILITIES

7104 - Steam: During the period, the ironworkers completed all ladder adjustments at the steam pits. Painting at the steam pits is in progress and some structural modification work remains to be completed at anchor pit #41. Steam was shut down by Araco on Saturday, September 2, for 8 hours and then placed back in service.

7105 - Water - Work Order by McGraw - Water Treatment Plant: At the Water Treatment plant, the warm process system was activated during the period and is presently being checked out and balanced. No major problems have been encountered so far. At the River Pump Station, no progress was recorded during the period. The factory representative for the pump is due to arrive next period to check out the noise problem encountered in the Delaval pump last week.

7109 - Piping: Final tie-in work west of Yankee Road was in progress during the period. Remaining work on this project consists mainly of additional valve supports and final testing of systems.

7110 - Power Distribution: During the period, work was completed in the Mill substation transformer on the faulty by-pass via by General Electric. In the mill area switch station, the underground conduit run to manhole #2 was poured in place this period. Sheet piling at tower #14 was completed during the period and foundations for tower #15 was completed. Progress continued on 13.8 KV underground power lines to the Basic Oxygen Shop. The first section of this run is expected to complete by September 15. Walls for manhole #2 were also poured during the period. At the cold finishing substation, all high voltage conductor lines were pulled in during the period and progress

WEEKLY FIELD ACTIVITY REPORT
Week Ending September 5, 1967

is continuing on the low voltage conductors. Driving of the ground rods is now complete and the ground mat is presently being laid out and cad-welded. At the Stripper Building, the manhole #1 for the 13.8 underground power line is formed up complete and is expected to pour next period.

7111 - Sanitary Sewers: 227 cubic yards of backfill was installed for a total to date of 49,302 cubic yards. During the period, Delta Pipeline Contractors continued with progress on manhole tops for E and F type manholes from manhole 570 to 578 in the Steelmaking Area. Manholes 553, 554 and 557 through 560 in the south area have been formed and are ready for pearing.

7112 - Drainage and Site Development: 15,918 cubic yards of excavation was completed during the period for a total to date of 513,143 cubic yards. 35,757 cubic yards of backfill was accomplished for a total to date of 822,318 cubic yards. Delta Pipeline Contractors concentrated their work effort on installation of the storm sewer system in the Basic Oxygen Shop Area. During the period, 441 linear feet of 15" and 12" G&P pipe was laid in this area.

7113 - Tracks: During the period, 930 feet of track was installed west of the Stripper Building and 514 feet of track installed south of the Mold Yard including two turnouts. Latest estimated trackwork at completion is now 171,700 feet. To date 76,941 feet of track has been laid. This work is approximately 40% complete.

7114 - Locker Room: David L. Smith Construction Company continued with progress of the south area locker room throughout the period. Granular backfill and fine grading was completed during the period and the subfloor mudmat preparation is in progress. At the Steel-making Area, erection of the steel framework was completed and installation of the subfloor heating and ventilating duct system was continued during the period.

7186 - Lagoon Work: 18,362 cubic yards of excavation was accomplished during the period for a total to date of 62,429 cubic yards. 3,499 cubic yards of backfill was completed for a total to date of 44,577 cubic yards.

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