

INTER-OFFICE MEMORANDUM

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KEN-44

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DATE April 3, 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 April 3, 1968.

OAF/sec

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KEN 004385

KAISER ENGINEERS
WEEKLY FIELD ACTIVITY REPORT
Week Ending April 3, 1968

WEATHER: Generally fair and mild
throughout period with
some scattered showers.

CLIENT: Amco Steel Corporation

LOCATION: Middletown, Ohio

TEMPERATURES: Minimum - 34 degrees
Maximum - 75 degrees

JOB NUMBER: 6471

JOB VISITORS

none

SUMMARY FORCE REPORT

	<u>Kaiser Engineers</u> <u>Exempt</u>	<u>Kaiser Engineers</u> <u>Non-Exempt</u>	<u>Subcontractors</u>	<u>Foothill</u> <u>Electric</u>	<u>Total</u>
Management	4	4		1	9
General Supervision	18	1	21	5	45
Field Engineering	42	14	14	14	84
Warehs. & Mtl. Control	3	7		1	11
Survey	1	14	3		18
Office Srv. & Repro.	1	5			6
Clerical			16	15	31
Craft *	—	<u>799</u>	<u>910</u>	<u>634</u>	<u>2,343</u>
TOTAL	69	844	964	670	2,547

* Average for week of men on payroll.

Average for week of Crafts is as follows:

Kaiser Engineers	753
Subcontractors	877
Foothill Electric	<u>575</u>

Total Crafts Working 2,205

WEEKLY FIELD ACTIVITY REPORT
Week Ending April 2, 1968

GENERAL COMMENTS

At 9:41 p.m. on Tuesday, April 2, the first slab was processed through the entire roughing and finishing train and coiled. Before the evening was over sixteen more coils of acceptable quality were turned out. From the writer's point of view, this was an outstanding start-up, void of panics and serious complications. On Wednesday night, twenty-two coils were made and on Thursday night seventy-one coils were made. An indication that the construction work was properly accomplished is that each morning, following a night's run, there has been very little work to do by the construction forces that could be termed an emergency. Discussions with Armco personnel have indicated that they too are happy with the start-up and consider it to be an exceptional beginning. Although the operating personnel were just recently moved into the hot strip mill, their operating effort showed the effects of excellent training and a desire to cooperate in making the start-up a success.

The organization effort in the slab mill has resulted in a good performance during the period, however, under the present ground rules, it does not appear likely that we can make up the time that has been lost due to the shortage of manpower and other reasons.

GLR/sec

KEN 004387

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WEEKLY FIELD ACTIVITY REPORT

Week ending April 2, 1966

PROJECT PROGRESS

1. 7148 - HOT STRIP MILL

- 1.3 Structural and Miscellaneous Steel: An average work force of twenty-one ironworkers was maintained in the hot strip mill during the period. In the furnace area, the installation of the valve access platforms for the 16 inch steamline at elevation 193 has been completed. Installation of safety handrails at the skip hoist, dry scale and slab reject car has been completed. Extractor and charging dry scale removal systems were being reworked during the period. In the finisher area, the width gauge calibration plate has now been installed. In the runout area, the safety requirements have been completed and the downcoiler TV camera protective guards has been installed. At scale pits 1 and 2, progress continued on the completion of the punch list items. An average work force of fifteen sheetmetal workers was maintained in the hot strip mill during the period. In the furnace area, guards were installed at the skip hoist. In the finisher area, spindle guards were installed at finishers 4 and 7 and extensive rework was made to the fume elimination system ductwork. At scale pit 3, rework continued on the guards for the conveyor structure.
- 1.5 Heating and Ventilating: Progress continued on the completion of items for the final inspection of the bag houses.
- 1.6 Mechanical: During the period, an average work force of eight men was maintained by Eichleay Corporation in the roll shop on the installation of the third roll grinder. The support frame for this grinder was grouted in place and the assembly is now 50% complete. In the furnace area, the wheel clearances for the dry scale skip hoist as well as the dry scale skip hoist brake system was corrected and the dry scale system has been tested for operations. In the reheat furnace area, the bearings for the #2 induced draft fan reduction gear were removed and found defective. New bearings have been ordered by Worthington and are expected to arrive on Monday, April 8th, for installation. The forced draft and induced draft fans for reheat furnace #3 have been corrected and reassembled ready for start-up tests. The successful operation of these fans will allow boil out and start-up of waste heat boiler #3 which is now scheduled to begin next period. In the finishing mill area, the refractory work was completed for the fume exhaust system and test out of this system was accomplished. It is expected that this system will be accepted by Armco to support operation requirements by next period. On Tuesday, April 2nd, Armco operations ran seventeen slabs through the reheat furnace #1, the roughing train, the finishing mills and the downcoilers. A successful operation was experienced marking an important milestone for the hot strip mill. Fourteen coils were made from slabs marking an accomplished start-up. The coils were coiled utilizing the computers marking a first in the steel industry for a non-manual start-up. In the pump house, the 1500 horsepower motor for #2 air compressor was removed and sent to the factory for necessary repairs to a pole winding that broke. This motor was repaired and back in service by the close of the period.

KEN 004388

WEEKLY FIELD ACTIVITY REPORT
Week ending April 2, 1968

- 1.7 Piping: Kaiser pipefitters continued working on the pickling of the oxygen piping which is scheduled for completion during next period. The new seals are being installed in the sump pumps that were returned from Hamilton and the vendor's representative will be on site next week to install the seals on the remaining fourteen sump pumps. The piping rework has been completed in three of the bag houses.
- 1.8 Electrical: During the period, Foothill Electric Corporation maintained one hundred and forty seven electricians throughout the hot strip mill. Foothill installed 4,500 lbs. of exposed conduit for a total to date of 1,565,000 lbs. or 99% complete. 2,100 feet of low voltage cable was installed for a total to date of 1,967,400 feet or 99% complete. 15 low voltage cable terminations were made for a total to date of 33,235 or 99% complete. 8,600 feet of control cable was installed for a total to date of 2,087,500 feet or 100% complete. 380 control cable terminations were made this period for a total to date of 63,030 or 99% complete. 950 lbs. of lighting conduit and 3,700 feet of lighting wire was installed. 860 feet of TV and communications cable was installed. 24 TV and communication cable terminations were made. 120 lbs. of structure grounding was installed for a total to date of 147,240 lbs. or 99% complete. 1,600 feet of computer cable was installed for a total to date of 950,500 feet or 99% complete.
- 1.9 Miscellaneous Subcontracts: Owens Corning Fiberglas Company maintained an average work force of twenty-eight men on insulation during the period. Insulation rework was continued in the bag houses as they became available. Insulation of the fuel oil lines and the water lines continued in the hot strip mill. In the boiler house, this subcontractor has now completed the insulation of the piping in this basic contract. Work under additional work orders continued in the boiler house.

Delta Pipeline Constructors completed the testing on the natural gas piping. The 10 inch fire protection line was prepared for testing and the remainder of the oxygen system was pickled and passivated except for the portion running to the green coil storage. During the period, the subcontractor has been excavating for the fuel oil unloading station. A work force of twenty men was maintained during the period.

Salem-Brosius continued the design change on the refractory work on the charge end of #2 furnace. Use of this furnace has been deferred for the owner until April 15th. Furnace #3 discharge door and counterweight installation is nearing completion together with the steel design changes at the charge end of #2 furnace. This work is scheduled for completion between April 9th and 11th.

WEEKLY FIELD ACTIVITY REPORT
Week ending April 2, 1968

Stuart Painting Company maintained an average work force of twelve men in the hot strip mill during the period. Painting progress was concentrated in the downcoiler oil cellar and on equipment piping systems north of column 42. Painting of the various piping systems continued in the boiler house.

2. 7146 - SLAB MILL

- 2.1 Excavation and Backfill: 1,050 cubic yards of excavation was completed during the period for a total to date of 231,691 cubic yards. This excavation was accomplished in the slab storage area for the slab spray cooling system. Excavation for this system is now 80% complete. Clean up and backfill was also initiated in the scale pit 4 area in order to proceed with remaining track requirements east of the slab mill.
- 2.3 Structural and Miscellaneous Steel: An average work force of twenty-one ironworkers was maintained on installation of gantry crane 364 and other miscellaneous requirements for the slab mill. The jib assembly was erected on crane 364 together with crane access platforms and miscellaneous requirements. The cab erection was initiated at the close of this period. Installation of rail support plates at scale pit 4 is 70% complete. Sheetmetal workers initiated roofing for the skip hoist tower enclosure this period. Completion of plenum and ductwork requirements for bag houses 1, 2 and 5 was also in progress.
- 2.5 Heating and Ventilating: Hunter Corporation completed their pressure test on the steam pipe system to bag houses 3 and 4. Filter bags were installed for these units which are now scheduled for initial operation 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 area, the lower mill drive motor is now completed apart from dowelling of the bearing pedestals and mounting a tachometer and over-speed switch which is in progress. The upper main mill drive motor is presently being levelled and aligned. All components for this motor are set in place. The vertical mill motor has also been installed in place but some difficulty has been encountered in final levelling and alignment due to movement caused by temperature changes in the support structure. Further levelling progress has been temporarily suspended until a decision is established by Project Engineering regarding the final setting of this unit. During the period, the shear MG set was test operated together with the auxiliary motor generator sets 1 through 7. The main MG unit is scheduled for initial operation next period. In the mill aisle, progress consisted mainly of installation of motor couplings, brakes, tachometers, limit switches and related requirements.

WEEKLY FIELD ACTIVITY REPORT
Week Ending April 2, 1968

Progress was also continued on the installation of sheaves and cables for the dry scale removal system as well as the slab transfer car system. Manual lubrication was also initiated in order to lubricate the rolls and gear boxes for initial coupled test requirements which will precede the completion of the lubrication systems. At the fume elimination area, installation of the fan is in progress together with ducts and refractory work.

- 2.7 Piping: Hunter Corporation maintained an average work force of fifty-three men on slab mill piping this period. Major piping systems worked on during the period were: compressed air, natural gas, clarifier water, circulating oil system 3 and bulk grease piping. 1,445 feet of piping was installed this period for a total to date of 35,379 feet. Circulating oil system 11 has been successfully pickled and flushed. This system has been accepted for support of initial coupled testing. Circulating oil systems 5 and 7 are now functioning with permanent oil in the systems. Piping for systems 9 and 10 are completed this period.
- 2.8 Electrical: Foothill Electric maintained an average work force of two hundred and forty-five men in the slab mill during the period. During the period, Foothill continued with the installation of remaining electrical equipment related to the main mill motors, installation of conduit, structural grounding, low voltage cable, control cable, computer cable and communications cable was continued throughout the period. Actual quantities installed this period will be included in next week's report since a general review is presently being made to establish the estimate at completion quantities together with a check of actual quantities installed to date.
3. 7143 - SOAKING PIT
- 3.3 Structural and Miscellaneous Steel: A force of seventeen ironworkers continued during the period in the soaking pit area on installation of miscellaneous steel requirements. Fabrication was continued on posts for the cinder dump facility. The tong columns for crane 358 were rigged in place and are now ready for installation. The trolley for crane 366 was removed and shipped to the factory for necessary modifications. These modifications involve lengthening the main drum supports in order to provide proper lifting clearances for handling of pit covers.
- 3.6 Mechanical: Loftus Engineering maintained an average work force ninety-two men on battery installation this period. At battery 6, a mechanical check out has been completed. Electrical check outs were in progress for both batteries 5 and 6 throughout the period. Initial dry-out together with coupled tests are scheduled to begin next period. Cables have been reeved from the east ingot buggy drive to the ingot buggy. Installation of the hoist for the cinder dump system has been completed. Remaining pit cover carriages were set in place this period.

- 3.7 Piping: Delta Pipeline Constructors maintained an average work force of thirty-three men on service piping in the soaking pit area. Pressure testing of the natural gas fifty pound header system was completed. The air header in the soaking pit area has also been pressure tested and accepted. Installation of quench tank drains was completed this period. 962 feet of pipe was installed for a total to date of 18,191 feet. Arrangements are underway to fill the furnace cooling water pipeline in the soaking pit area.
- 3.8 Electrical: Foothill Electric installed 2,300 lbs. of exposed conduit during the period for a total to date of 95,800 lbs. or 68% complete. 370 lbs. of lighting conduit was installed. 500 feet of low voltage cable was installed for a total to date of 26,700 feet or 42% complete. 15 low voltage terminations were completed for a total of 109 or 35% complete.
4. 7128 - BASIC OXYGEN SHOP AND MOLD YARD
- 4.1 Excavation and Backfill: 1,660 cubic yards of excavation was accomplished this period for a total to date of 217,576 cubic yards. 1,084 cubic yards of backfill was completed for a total to date of 275,951 cubic yards. Excavation included the continuation of the west wall and the footing for the electrical control room and conduit excavation from electric manhole 6 to the control room. Excavation was continued from electric manhole 7. Backfill consisted mainly of storm sewer work and conduit backfill from electric manhole 6 and 7.
- 4.2 Concrete: 163 cubic yards of concrete was placed during the period for a total to date of 20,992 cubic yards. This concrete included the walls and top for electric manhole 7, the conduit and risers from manhole 7 and the conduit between manholes 6 and 7.
- 4.3 Structural and Miscellaneous Steel: 289 tons of structural steel was erected at the main B.O.F. facility for a corrected total to date of 8,404 tons (excluding 328 tons of anchor bolts and base plates). Bolt-up work continued and girts and sag rods were being installed on the end wall on line 21. Gutter and fascia were being welded on D, E, F and G lines. Welding continued on the bins and abrasive-resistant plate. The rework required along E line for the scrap pre-heating has now been completed. At the mold yard, progress continued on the hoist beam platforms and the spray cleaning stations.
- 4.4 Roofing and Siding: At the main B.O.F. plant during the period, roofing continued with 6,056 square feet of roofing installed. Siding installation continued on the freight elevator shaft with 1,783 square feet installed. At the mold yard, 3,384 square feet of siding was placed on the west end wall and on the mold spray station between columns 20 and 21. Roofing and installation of the ventilator continued at the west end of the mold yard.

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- 4.6 Mechanical: The following equipment was received for the fume control system during the period: one car load of ID fan housing dampers, one truck of ID fan rotors and 6.4 tons of structural steel. Combustion engineering continued to set up their offices at the site.
- 4.7 Piping: Progress continued on the installation of roof drains from column 17 to 20 between D and E lines. Welders were jointing pipe ready for laying in the trench at the east end of the B.O.F. building. The 18 inch steamline was being installed between valve pits 2 and 5. At the mold yard, the testing of toilet 12 was completed and the installation of service piping to the mold spray buildings continued.
- 4.8 Electrical: At the main B.O.F. building, installation of the main power feed to the charging crane 501 continued and the wiring and testing of the lance crane was completed on April 2nd. Lake Erie has completed the major portion of wiring of crane 501. Laying of underground conduit continued from electrical manhole 7 to 6 together with the conduit from the electrical control room to manhole 6. At the mold yard, miscellaneous electrical work continued in the rectifier building together with the wiring of crane 521.
- 4.9 Miscellaneous Subcontracts: McGraw Construction Company placed the floor slab between columns 1 and 4 and A and B on the office and lab building. Additional concrete will be placed in the spectographic lab floor slab between columns 4.3 and 6 during the next period. All the duct has been fabricated for the second floor and installation will start early next period. Progress was continued on the storm and acid drains and the underground sanitary lines have been completed and are now under test. 4,880 square feet of painted siding was placed on the building during the period.

Ohio Valley Riggers continued the laying of the floor decking from E to F line from columns 26 to the west. Erection of the service aisle crane 502 was started on March 28th. Reeving of the lance crane was started at the end of the period.

Stuart Painting Company continued painting at the main B.O.F. building. To date approximately 2,000 tons of structural steel has been painted.

5. 7145 - STRIPPER BUILDING

Electrical work continued in the stripper building on the completion of the punch list items for crane 354 together with wiring in the rectifier building. Ohio Valley Riggers completed their erection work of crane 354 including all items on the completion and safety pump list on April 2nd. Progress was recorded involving the electrical equipment enclosure at column 3a. The pier foundation was completed this period and structural fabrication is in progress in the shop. This work is scheduled to complete during next period.

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6. 7150, 7156 and 7159 - PICKLE AREA

- 6.2 Concrete: 286 cubic yards of concrete was placed on pickle line #4 during the period for a total to date of 12,829 cubic yards. Major concrete pours included the curb wall between column 16.5 and 17, the floor slab between columns 24 and 25 and the top of #10 electric man-hole. On pickle line 5, 181 cubic yards of concrete was placed for a total to date of 7,295 cubic yards. Major concrete pours included the walls for #2 catenary pit and conduit encasement between columns 19 and 20 and 20 and 21.
- 6.3 Structural and Miscellaneous Steel: In the pickled coil storage building, bolting continued on the top and lower cords on the roof trusses together with the installation of purlins and spacers. Six bays of roof steel were released for painting.
- 6.4 Roofing and Siding: In the pickled coil storage building, 3,720 square feet of roofing was installed during the period for a total to date of 24,720 square feet. In the green coil storage building, the vents have now been completed and progress continued on the completion of the roof flashing.
- 6.6 Mechanical: Ohio Valley continued levelling and aligning of the pickle tanks on #4 pickle line and preparing the joints for field welding. Equipment erection on #4 line included the #1 and 2 pay-off reels and the #1 and 2 flatteners which were set on their anchor bolts. On #5 pickle line, the looper car winch and the looper car winch drive were placed in position. Progress on equipment setting continued to be very slow.
- 6.7 Piping: Delta Pipeline Constructors maintained one crew in the pickle lines during the period. 1,066 feet of piping was installed including 200 feet of plant air, 360 feet of natural gas, 140 feet of softened filtered water and 360 feet of oxygen piping. Pipe and pipe supports were being installed along F and G lines and toilet plumbing was started at column 16.5 F at the end of the period. In the green coil storage building, Norm Woolley installed 480 feet of 2 inch plant air and 6 inch plant air drops. Total pipe installed to date is 3,265 feet.
- 6.8 Electrical: In the green coil storage building, Lake Erie Electric completed the installation of permanent high bay lighting between columns 1 and 10 in the north aisle. Progress will now continue on the conduit along C line between the lighting distribution panels and the lighting fixtures. In the pickle line building, conduits have been prepared for installation to the pull boxes for the conduit relocation on F line.
- 6.9 Miscellaneous Subcontracts: FBS Builders continued building masonry block walls in the entry motor room for #4 pickle line. Blockwork has started in the toilet room at column 16.5 on F line.

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7160 - GOLD MILL

During the period, 19,801 cubic yards of excavation was completed for a total to date of 33,969 cubic yards.

7186 - WASTE DISPOSAL FOR THE PICKLE FACILITY

During the period, 179 cubic yards of concrete was placed for a total to date of 1,817 cubic yards. This concrete included the walls for the aeration and flocculation tanks. The 110 foot elevation slab in the building is presently being formed and the rebar being set. 1,600 square feet of flat deck roofing was set during the period for a total to date of 5,654 square feet. The siding for the building was started and 1,722 square feet was installed on the east wall of the building. International Pollution Control have brought their drilling equipment on the site to start the second deep well. Drilling will commence early next period.

7. UTILITIES

7105 - Water Distribution System: Chicago Bridge and Iron has completed the erection of the elevated water storage tank in the south area. This tank will be painted at a later date. Delta Pipeline Constructors installed 6 inch and 8 inch well water piping during the period.

7110 - Power Distribution: At the melt area switching stations, batteries were placed on charge during the period. Check out of the breakers was started under the supervision of the General Electric representative. At the cold finish substation, relocation of the aisleway relays and meters was completed during a scheduled outage on March 30th.

7111 - Sanitary Sewers: The subcontractor replaced a damaged section of pipe near manhole 572. An inspection is scheduled for the near future.

7112 - Drainage and Site Development: 2,865 cubic yards of excavation was completed during the period for a total to date of 800,888 cubic yards. 631 cubic yards of backfill was placed for a total to date of 1,049,341 cubic yards. Delta Pipeline Constructors continued on installing manholes in the steelmaking area. Westinghouse Electric Corporation has now completed all the railroad lighting tower foundations. All parking lot foundations have been poured apart from two in parking lot 2. 30% of the wood roadway lighting poles have been distributed to their respective locations.

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7113 - Trackwork: DHB Corporation installed 550 feet of track west of the stripper building during the period and ballast was placed for this track. The subcontractor continued to install tracks west of the B.O.F. facility.

7114 - Locker Rooms: In the steelmaking area locker room, work is essentially completed apart from general clean-up items including color coding and tagging of piping and electrical tagging. All items are scheduled for completion during next period.

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KEN 004396