

HAER, OH, 18-CLEV, 34-

HISTORIC AMERICAN ENGINEERING RECORD

MASTER PROJECT RECORD

OH-13

Corrigan, McKinney Steel CompanyCleveland
Cuyahoga County
Ohio

CREDIT BERNI RICH, SCORE PHOTOGRAPHERS, AUGUST 1979, FOR PHOTOS 1 through 11.

- OH-13-1 COPY OF C. 1927 MAP OF WORKS NORTH OF CLARK AVENUE: BLAST FURNACE PLANT IS ON THE WEST SIDE OF THE RIVER: ON THE EAST SIDE ARE OPEN HEARTH FURNACES. BLOOMING AND BULLET MILLS, BAR MILLS, AND THE PLANT OFFICE. MAP COURTESY REPUBLIC STEEL CORPORATION, CLEVELAND, OHIO.
- OH-13-2 COPY OF MAP DATED 12-10-73, OF THE CLEVELAND DISTRICT STEEL PLANT, REPUBLIC STEEL CORPORATION. MAP COURTESY REPUBLIC STEEL.
- OH-13-3 COPY OF EARLY 20th CENTURY PHOTOGRAPH SHOWING BLAST FURNACE PLANT, CORRIGAN, MCKINNEY COMPANY. VIEW LOOKING NORTH, PHOTO COURTESY THE CLEVELAND PRESS.
- OH-13-4 COPY OF PHOTOGRAPH TAKEN JUNE 1, 1915, SHOWING no. 3 BLAST FURNACE UNDER CONSTRUCTION. IN FOREGROUND, FOUNDATION FOR THE POWER HOUSE HAS BEEN LAID. VIEW LOOKING NORTHEAST. PHOTO COURTESY REPUBLIC STEEL CORPORATION.
- OH-13-5 COPY OF 1947 PHOTOGRAPH LABELED "FOUR BLAST FURNACES AT CORRIGAN MCKINNEY WORKS, CLEVELAND, OHIO." VIEW LOOKING NORTHWEST PHOTO COURTESY CLEVELAND PICTURE COLLECTION, CLEVELAND PUBLIC LIBRARY.
- OH-13-6 COPY OF 1947 PHOTOGRAPH LABELED "CORRIGAN MCKINNEY PLANT, TAKEN FROM CLARK AVENUE BRIDGE." VIEW LOOKING NORTHWEST. PHOTO COURTESY CLEVELAND PICTURE COLLECTION, CLEVELAND PUBLIC LIBRARY.
- OH-13-7 COPY OF 1947 PHOTOGRAPH LABELED "VIEW OF BLAST FURNACES AND ORE DOCKS AT CORRIGAN MCKINNEY WORKS." BROWNHOIST ORE BRIDGE, REECTED C. 1912 IS AT RIGHT. VIEW LOOKING NORTH. PHOTO COURTESY CLEVELAND PICTURE, COLLECTION, PUBLIC LIBRARY.
- OH-13-8 COPY OF PHOTOGRAPH TAKEN APRIL 6, 1914, SHOWING OPEN HEARTH BUILDING UNDER CONSTRUCTION. THE FOUNDATION FOR THE MIXER BUILDING CAN BE SEEN IN LEFT FOREGROUND. VIEW LOOKING NORTH PHOTO COURTESY REPUBLIC STEEL CORPORATION.

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- OH-13-9 COPY OF PHOTOGRAPH TAKEN JUNE 1, 1915, SHOWING 40-INCH BLOOMING MILL UNDER CONSTRUCTION. MACHINERY BUILT BY UNITED ENGINEERING AND FOUNDRY COMPANY. VIEW LOOKING NORTH. PHOTO COURTESY REPUBLIC STEEL CORPORATION.
- OH-13-10 COPY OF PHOTOGRAPH TAKEN SEPT. 21, 1926. LABELED "MCKINNEY STEEL PLANT." PHOTO SHOWS THE ORIGINAL NUCLEUS OF CORRIGAN, MCKINNEY CO. STEEL PLANT: MIXER BUILDING, OPEN HEARTH BUILDING, 40-INCH BLOOMING MILL (21 inch and 18 inch SHEET BAR AND BILLET MILLS NOT VISIBLE.) VIEW LOOKING NORTH. PHOTO COURTESY THE CLEVELAND PLAIN DEALER.
- OH-13-11 COPY OF PHOTOGRAPH TAKEN IN 1947. SHOWING THE SIX FINISHING STANDS OF THE 98-INCH CONTINUOUS HOT STRIP MILL, ERECTED BY REPUBLIC STEEL IN 1937. PHOTO COURTESY CLEVELAND PICTURE COLLECTION, CLEVELAND PUBLIC LIBRARY.

ADDENDUM
FOLLOWS

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NOTE: All photographs were taken by Jet Lowe, HAER photographer, during the summer of 1979

- OH-13-12 VIEW LOOKING WEST FROM THE PARKING LOT ADJACENT TO THE STEEL PLANT OFFICES. BAR AND BILLET MILLS AND, IN THE DISTANCE, THE BASIC OXYGEN FURNACES MAY BE SEEN.
- OH-13-13 OFFICE BUILDING FACADE, LOOKING SOUTHWEST.
- OH-13-14 DETAIL TO MAIN ENTRANCE
- OH-13-15 TAKING A CAST AT FURNACE NO. 1 HOT SLAG, BY-PRODUCT IN THE SMELTING OF PIG IRON, CAN BE SEEN FLOWING INTO THE SLAG YARD. VIEW IS LOOKING SOUTH.
- OH-13-16 ORE STORAGE BRIDGE, VIEW LOOKING SOUTH. THE TOP OF FURNACE NO. 4 CAN BE SEEN IN THE BACKGROUND.
- OH-13-17 PLANT FURNACE NO. 3, NO LONGER IN USE, LOOKING SOUTH.
- OH-13-18 TAKING A CAST AT FURNACE NO. 1.
- OH-13-19 MOLTEN IRON FLOWS INTO A "BOTTLE" AT FURNACE NO. 1. THE IRON WILL BE TRANSPORTED BY RAIL TO THE OPEN HEARTH OR BASIC OXYGEN FURNACES, WHERE IT IS A MAJOR COMPONENT IN THE PRODUCTION OF STEEL.
- OH-13-20 TAKING A CAST AT BLAST FURNACE NO. 1. WORKERS, LIKE THE ONE STANDING ON THE BRIDGE ABOVE THE "BOTTLE" INTO WHICH THE HOT IRON FLOWS, ARE PROTECTED BY HEAVY FIREPROOF GARMENTS.
- OH-13-21 BLAST FURNACE NO. 1, LOOKING NORTHWEST. IN FOREGROUND ARE THE STOVES THAT HEAT THE HOT AIR BLAST.
- OH-13-22 ORE STORAGE BRIDGE AT PLANT'S LOWER DOCK, LOOKING SOUTH. THE WELLMAN ORE BRIDGE (THERE ARE TWO AT THIS DOCK) WERE ERECTED IN 1908 BY THE CORRIGAN, MCKINNEY COMPANY.

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- OH-13-23 BLAST FURNACE NO. 3 (1916), NO LONGER IN USE, LOOKING SOUTH. AT LEFT IS THE WELLMAN ORE STORAGE BRIDGE (1908). BOTH WERE ERECTED FOR THE CORRIGAN, MCKINNEY COMPANY.
- OH-13-24 FURNACE NO. 3 (NO LONGER IN USE), LOOKING NORTHWEST.
- OH-13-25 DETAIL OF FURNACE NO. 3, WHICH IS NO LONGER IN SERVICE. FURNACE NO. 3 WAS BLOWN IN ON MAY 13, 1916. IT WAS ERECTED BY THE VARIETY IRON & STEEL WORK OF CLEVELAND FOR THE CORRIGAN, MCKINNEY COMPANY.
- OH-13-26 FURNACE NO. 4, LOOKING NORTH.
- OH-13-27 MESTA STEAM ENGINE, INSTALLED IN 1916 BY THE CORRIGAN, MCKINNEY COMPANY, STILL DRIVES THE PLANT'S REVERSING BLOOMING MILL.
- OH-13-28 MESTA STEAM ENGINE, INSTALLED BY THE CORRIGAN, MCKINNEY COMPANY IN 1916, STILL DRIVES THE 44-INCH REVERSING BLOOMING MILL. THE TWIN TANDAM, COMPOUND CONDENSING, REVERSING STEAM ENGINE HAS A RATED CAPACITY OF 35,000 H.P. IT WAS BUILT BY THE MESTA MACHINE COMPANY OF PITTSBURGH.
- OH-13-29 INDUCTION MOTOR (6600 VOLTS, 5750 H.P.) DRIVES THE 21-INCH AND 18-INCH BILLET MILLS. MOTOR WAS MANUFACTURED BY THE GENERAL ELECTRIC COMPANY, SCHENECTADY, NEW YORK.
- OH-13-30 STEEL INGOTS RECEIVE THEIR FIRST ROLLING ON THE 44-INCH BLOOMING MILL, SHOWN HERE. BLOOMS THEN TRAVEL ON ROLLERS DIRECTLY TO THE 21-INCH MILL AND/OR THE 18-INCH MILL FOR FURTHER REDUCTION INTO BILLETS. BLOOMING MILL WAS BUILT FOR THE CORRIGAN, MCKINNEY CO. BY THE UNITED ENGINEERING & FOUNDRY CO. OF PITTSBURGH.
- OH-13-31 VIEW AT THE HEAD OF THE 44-INCH BLOOMING MILL. STEEL INGOT, READY FOR ROLLING, IS HELD BY CRANE AT CENTER. AT RIGHT IS THE PULPIT, WHERE THE MILL OPERATORS SIT.
- OH-13-32 OPERATORS INSIDE THE PULPIT OF THE 44-INCH BLOOMING MILL. LEFT TO RIGHT, THE STATIONARY STEAM ENGINEER, THE ROLLER, THE MANIPULATOR.
- OH-13-33 FOUR ROUGHING STANDS AND CONTINUOUS FURNACE, 10-INCH BAR MILL.
- OH-13-34 THESE INGOT MOLDS OF STEEL - 32" x 83" IN SIZE - ARE READY TO BE TAKEN TO THE STRIPPER, WHERE THE MOLDS WILL BE REMOVED. INGOTS WILL NEXT BE PLACED INTO A "SOAKING PIT," WHERE THEY ARE HEATED TO A UNIFORM TEMPERATURE PRIOR TO ROLLING.

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- OH-13-35 18-INCH BILLET MILL.
- OH-13-36 VIEW FROM THE PULPIT IN THE 10-INCH BAR MILL.
- OH-13-37 21-INCH BILLET MILL. BILLET AT THIS POINT HAS BEEN SCARPED (1/8-INCH REMOVED FROM ALL FOUR SIDES IN ORDER TO ELIMINATE DEFECTS AND ROUGH EDGES) AND SHEARED (TRIMMED EVENLY AT THE ENDS).
- OH-13-38 18-INCH BILLET MILL.
- OH-13-39 COOLING BEDS FOR THE 12-INCH BAR MILL. SHOWN COOLING HERE ARE 1-19/32-INCH ROUNDS.
- OH-13-40 STEEL INGOTS, ON INGOT BUGGIES, WAIT TO BE STRIPPED. STRIPPER CRANE CAN BE SEEN AT THE END OF THE RAILROAD TRACKS, AT CENTER.
- OH-13-41 44-INCH SOAKING PITS. A MORGAN CRANE LOWERS THE STEEL INGOT INTO A "SOAKING PIT," WHERE IT IS HEATED TO A UNIFORM TEMPERATURE PRIOR TO ROLLING. THE INGOT RECEIVES ITS FIRST ROLLING ON THE 44-INCH BLOOMING MILL.
- OH-13-42 FINISHING STAND, 24-INCH MILL.
- OH-13-43 DISCARDED INGOTS STAND IN A LIMESTONE STORAGE YARD ON THE EAST BANK OF THE CUYAHOGA RIVER.
- OH-13-44 EXTERIOR VIEW, 98-INCH HOT STRIP MILL.
- OH-13-45 FINISHING STANDS, 98-INCH CONTINUOUS HOT STRIP MILL, WORLD'S LARGEST AT THE TIME OF INSTALLATION IN 1937. THE MILL WAS REPLACED BY A NEW 84-INCH MILL IN 1971 AND IS SEEN HERE PARTIALLY DISMANTLED IN PREPARATION FOR DEMOLITION.
- OH-13-46 84-INCH STRIP MILL. SLABS ROLLED AT THE PLANT'S SLABBING MILL ARE REHEATED IN ONE OF TWO CONTINUOUS FURNACES, THEN PUSHED OUT ONTO A CONVEYOR THAT CARRIES THEM TO THE ROUGHING AND FINISHING STANDS.
- OH-13-47 ROUGHING STANDS, 84-INCH STRIP MILL.

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- OH-13-48 COILING MACHINERY AT THE END OF THE 84-INCH CONTINUOUS HOT STRIP MILL. EACH STEEL SLAB BY THIS POINT HAS BECOME A SINGLE STRIP VARYING IN WIDTH AND THICKNESS ACCORDING TO THE CUSTOMER'S ORDER. THE STRIP IS AUTOMATICALLY COILED, COOLED BY WATER SPRAYS, AND TRANSFERRED BY MECHANICAL ARMS ONTO A CONVEYOR.
- OH-13-49 DETAIL, END OF THE LINE AT THE 84-INCH STRIP MILL, WHERE THE HOT STRIP IS WATER-COOLED AND ROLLED ONTO COILS.
- OH-13-50 HULETT ORE UNLOADERS UNLOAD CARGO FROM THE "RAYMOND H. REISS."
- OH-13-51 LOOKING NORTHWEST FROM THE CLARK AVENUE BRIDGE. BLAST FURNACES AND LOWER ORE DOCK CAN BE SEEN AT CENTER; COKE CONVEYOR IS AT LEFT; AT RIGHT, THE TERMINAL TOWER CAN BE SEEN IN THE DISTANCE.
- OH-13-52 SLABBING AND BLOOMING MILLS AND FOUNDRY (IN FOREGROUND), AS SEEN FROM THE CLARK AVENUE BRIDGE. AT RIGHT, REAR, IS THE BASIC OXYGEN FURNACE. VIEW LOOKING NORTH.
- OH-13-53 VIEW LOOKING SOUTHWEST FROM THE CLARK AVENUE BRIDGE. REPUBLIC SPRAWLS ALONG 798 ACRES ON BOTH SIDES OF THE CUYAHOGA RIVER. IN THE DISTANCE, AT CENTER, BLAST FURNACES NOS. 5 AND 6 AND THE PLANT'S UPPER DOCK CAN BE SEEN. VERTICAL LEFT BRIDGE, IN FOREGROUND, CONNECTS BLAST FURNACES NOS. 1 AND 4 WITH THE STEEL FURNACE AND ROLLING MILL.
- OH-13-54 STEEL COMPLEX FROM CLARK AVENUE BRIDGE, LOOKING NORTHEAST. FOUNDRY IN FOREGROUND, INGOT MOLDS ON TRACK AT RIGHT, BASIC OXYGEN FURNACE ON TRACK AT RIGHT.
- OH-13-55 VIEW OF ORE UNLOADERS, LOOKING NORTH.
- OH-13-56 ORE UNLOADING DOCK. AT CENTER IS THE WELLMAN ORE STORAGE BRIDGE.
- OH-13-57 VIEW OF PLANT'S LOWER DOCK ON THE WEST BANK OF THE CUYAHOGA RIVER, WHERE THREE HULETT'S UNLOAD IRON ORE BROUGHT BY GREAT LAKES CARRIERS. ORE IN THE FORM OF TACONITE PELLETS COMES FROM MINNESOTA AND MICHIGAN AND IN ITS NATURAL STATE FROM THE MESABI RANGE IN MINNESOTA AND THE LABRADOR REGION OF CANADA.

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All color xerographic copies were made from a duplicate color transparency.

Note: Photographer, Jet Lowe

OH-13-58 (CT) TAPPING OF FURNACE, SLAG RUN RIGHT FOREGROUND