AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

MATERIALS HANDLING CONFERENCE

Program

PICK-CARTER HOTEL

Cleveland, Ohio

April 24-25, 1962

Sponsored by
AIEE Materials Handling Sub-Committee
  W. J. Kutcher, Chairman
  R. C. Tench, Vice-Chairman
  with
AIEE Cleveland Section as Host
  L. S. Shaffer, Chairman
  C. A. Schurr, Secretary
III. "ASPECTS OF DESIGN AND OPERATING OF A NEW SINTER PLANT."

EARL J. DVORAK, Superintendent of Maintenance, Chicago Plant, Interlake Iron Corp. This paper describes the equipment and operation of a recent sinter plant to produce lime-bearing sinter for beneficiated blast furnace burden. The material handling system flow diagram and outline of engineering features are covered. Electrical equipment and a different approach to grouping of Motor starters are described. A section of the paper is devoted to electrical and mechanical maintenance and operating experiences.

12:15 P.M. LUNCH:DO-LORENZO CARTER ROOM

Speaker: BIAHAR HARTLEY, Complaints Manager Halle's Department Stores

Title: "Customer is Almost Always Right"

2:00 P.M. AFTERNOON SESSION-Grand Ballroom

Chairman: R. P. ANDERSON, District Manager Cleveland Crane & Engineering Co. Wickliffe, Ohio

IV. "EXPERIENCE WITH A. C. CRANE CONTROLS"

D. J. ROBE, Plant Electrical Engineer, Bolier Division, The Babcock & Wilcox Company, Barberton, Ohio

Experience dates back to the early 1940's, involving use of drum switch controls with mechanical load brakes, a-c dynamic lowering, a-c reactor type, and a-c eddy current brake type of controls. Experience to date favors a-c dynamic lowering for general purpose cranes, and a-c eddy current brake type for those cranes involving necessity for high speeds and handling precision.

V. "THE GARY STEEL WORKS BUCK-BOO'T OR BREEZE?


By utilizing the basic principles of buck-boost drives, it was possible to supply a new Gary Works ore bridge with electric equipment providing the advantages of adjustable voltage operation at only a slight premium over the price of conventional constant potential equipment. Since this successful installation may set the pattern for replacement or uprating bridges at many locations, bridge users and manufacturers will be well served by the work in this description of the features provided.

VI. "DESIGNING SAFETY INTO CRANES"

W. T. McLEAN, General Supervisor Safety, U. S. Steel Corp., Youngstown, Ohio

Since cranes are relatively expensive investments in an expected life of twenty years or more, it becomes increasingly important to design them in a manner which will facilitate maintenance and prevent injuries to personnel. The routine greasing, inspection, changing of cables, and day to day maintenance all require men to board and leave various parts of the crane. The designer must consider their safety while getting to and from their work area. Clearances around control equipment and the use of ladders must be closely examined.

Wednesday, April 25, 1962

8:45 A.M. MORNING SESSION

Chairman: R. C. RICE, Manager Crane Department Whiting Corporation Harvey, Illinois

VII. "LOADING AND UNLOADING 60,000 POUND CONTAINERS BY TRAVELING DOCK CRANES"

S. G. SMITH, Principal Electrical Engineer, Dravo Corporation, Neville Island, Pittsburgh, Pennsylvania.

To meet the growing demand of handling and shipping products by containers, Dravo Corporation put into operation two "Dockmaster" container cranes to handle on a 2-1/2 minute cycle, 8' x 8' x 30', 60,000 pounds loaded containers for a chemical plant to transport from Texas to the East Coast at a production and loading into ships for export. Smooth and rapid response, satisfactory reactor control was selected for all main drives.

VIII. MOVIE: "COAL BIN OF THE WORLD"

EMIL SZAKS, C & O Railroad.

SYNOPSIS--This is a movie showing methods of loading coal at the mine, cartage to Hampton and landing into ships for export. It shows many of the modern material handling facilities which are erected at Newport News, Virginia.

IX. "SELECTION OF ELECTRIC DRIVES FOR DOCK UNLOADING CRANES"

E. W. TAYLOR, Vice-President, Industrial Brownhoist Corp., Bay City, Michigan.

This paper is a comparison of the electric drives of three grab bucket unloaders of the same capacity. It compares a-c counter torque control with adjustable voltage d-c control and adjustable voltage control with hoist counter-weighted. The three types are adjusted to a common basis with respect to the flexibility and power consumption of each type.

INSPECTION TRIPS -- WEDNESDAY, APRIL 25

A choice of two trips are available and bus transportation will be provided. Buses will leave the Plaza Hotel at 1:30 P.M. and return to the Hotel by 4:30 P.M.

Inspection trip ticket sales deadlines will be posted at the Registration Desk. Tickets should be purchased as early as possible to facilitate the arrangement for buses.

Ticket Fares are as follows:

Jones & Laughlin Steel Corp. $2.50
American Steel & Wire Division $2.50

AMERICAN STEEL AND WIRE DIVISION

Raw Material Handling System at Central Furnaces and Docks.

The new raw material handling system is a combination of rubber tired mobile equipment, transfer bins, belt conveyors, and trippers. This handles the movement of raw materials from storage area to blast furnace. This system is equipped with rubber tired mobile equipment which transports the raw materials in the new system from the storage area to fourteen bins. The materials from the bins are conveyed to the twenty-six stock bins by an operator who controls the conveyor system through a mimic panel.

JONES AND LAUGHLIN STEEL CORPORATION

Basic Oxygen Steelmaking

The recently completed "Basic Oxygen Furnaces, at the Cleveland Road, takes the first of its type in the Cleveland area. The two furnaces refine iron into steel through the use of a jet of high purity oxygen.
The Cleveland Works' furnaces, more than twice the size of any of this type in the world, have produced heats of 240 tons in 59 minutes, while good open hearth furnaces in this country produce steel at the rate of 40 tons per hour, tap to tap time.

Specially designed material handling equipment enables scrap to be charged in less than a minute. The slag forming raw materials are charged by means of conveyor belts and a chute leading from the storage bins above the furnace.

The addition of the basic oxygen process enables the Cleveland Works to produce steel by three of the most modern methods. The other steelmaking facilities consist of two electric furnaces and three oxygen-lance-equipped open hearths.

GENERAL INFORMATION

HEADQUARTERS AND TECHNICAL SESSIONS:
Hotel Pick-Carter
1012-32 Prospect Avenue
Cleveland 15, Ohio
Telephone: Prospect 1-7200

REGISTRATION FEE:

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<tr>
<td>AIEE Members</td>
<td>$6.00</td>
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<tr>
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*Less Conference Proceedings

CONFERENCE PROCEEDINGS:

Conference proceedings which will include all papers and written discussions will be distributed free at the Conference to those in attendance. Additional copies of the proceedings may be purchased at a price of $3.00. Copies of the 1960 and 1961 Proceedings may also be purchased at the Registration Desk.

HOTEL ACCOMMODATIONS:

A block of rooms has been set aside at the Hotel Pick-Carter for those attending the Conference. Daily rates are as follows:

- Single Room: $7.50 - $12.00
- Double Room: $10.00 - $16.00
- Twin Bedroom: $12.00 - $18.00

Please make reservations directly with the hotel and refer specifically to the AIEE Materials Handling Conference.

FUTURE MAILING LIST:

Those not attending the Conference who, nevertheless, wish to remain on the mailing list are asked to return the registration card marked accordingly.

Make checks payable to:

1962 AIEE Materials Handling Conference

Address correspondence to:

C. Chermelty
Clark Controller Company
1146 East 152nd Street
Cleveland 10, Ohio

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J. P. Wagstaff..........Dept. of the Navy, Bureau of Yards & Docks
*H. A. Zollinger........Industrial Engineering Dept., 10-L, Westinghouse,Electric Corp.,
East Pittsburgh, Pa.

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