

**AMERICAN INSTITUTE OF
ELECTRICAL ENGINEERS**

Thirteenth Annual

**MACHINE TOOLS
INDUSTRY
CONFERENCE
PROGRAM**



November 26, 27, 28, 1962

STATLER-HILTON HOTEL

DETROIT, MICHIGAN



Sponsored by

The

Machine Tools Industry Committee

J. I. EHRHARDT, Chairman

and the

Michigan Section

A. C. FAGERLUND, Chairman

MONDAY—NOVEMBER 26

8:00 A.M.-2:00 P.M.—REGISTRATION

Advance registrations may be picked up at the hotel Sunday, November 25, 3:00 p.m. to 9:00 p.m.

PLANT TOURS

Choose either (A) or (B)

9:00 A.M.—DE Vlieg MACHINE COMPANY, Royal Oak, Michigan

(A)

Manufacturer of precision horizontal boring, milling and drilling machines. This tour will feature the installation and operation of various numerically controlled systems as applied to DeVlieg machines.

10:00 A.M.—GENERAL POST OFFICE, Detroit, Michigan

(B) MR. EDWARD L. BAKER, Postmaster

The world's most modern mechanized Post Office using the latest automatic letter, parcel and sack sorting machines and the Mark II facer-canceller with a capacity of 30,000 letters per hour. Complex conveyor systems, a siding for 14 railroad cars, 90 trucks on the ground floor and 63 trucks on upper floors will also be seen.

AFTERNOON SESSION

Conference Program Chairman—H. A. MARTENS, The Cross Company

2:00 P.M.—WELCOME

J. I. EHRHARDT—Chairman A.I.E.E. Machine Tool Industry Committee

A. C. FAGERLUND—Chairman Michigan Section A.I.E.E.

2:10 P.M.—MAN—THE MASTER OF MACHINES

ROBLEE B. MARTIN, President Dundee Cement Company, Dundee, Michigan

Mr. Martin is head of the most automated cement plant in the world. As such, he deals constantly and personally with the relationship between men and machines. In addition, his many other civic and professional activities give him ample opportunity to study the social effects of automation. With this background he can speak with authority on the impact of automation on society.

TECHNICAL SESSION

Session Chairman—R. L. BILLINGSLEY, Westinghouse Electric Corporation

TODAY'S MACHINES FUNCTIONING IN INDUSTRY FAIL TO PROVIDE CERTAIN FEATURES NEEDED TO SATISFY PRODUCTION REQUIREMENTS.

2:45 P.M.—WHAT IS NEEDED IN MACHINE TOOLS FOR TODAY'S INDUSTRY. CPA62-5085

JOSEPH MILLER, Manager, Headquarters Manufacturing Planning, Westinghouse Corporation

Mr. Miller will tell us how today's industrial needs require more than is presently available from the industry.

3:00 P.M.—WHAT IS NEEDED IN MACHINE TOOL CONTROL BY TODAY'S INDUSTRY. CPA62-5086

WAYNE HOSTETLER, Plant Engineering Department, Delco Remy Division, General Motors Corporation

Mr. Hostetler will show that simplified circuitry is required to speed maintenance, and will suggest some approaches to accomplish this end.

3:25 P.M.—10 MINUTE RECESS

NEW PRODUCTS AND MATERIALS WILL DEMAND A CHANGING TECHNOLOGY FROM THE MACHINE TOOL INDUSTRY.

3:45 P.M.—ANALYZING THE FUTURE NEEDS OF INDUSTRY FOR MACHINE TOOLS. CPA62-5087

DR. W. W. GILBERT, Manager, Machine Development Service, General Electric Company

Dr. Gilbert will indicate how today's laboratory developments will be applied to future industrial requirements.

4:20 P.M.—HOW MACHINE BUILDERS WILL MEET THE CHALLENGE OF THE FUTURE. CPA62-5088

DORR GRISWOLD, Supervisor, Machine Development, Ex-Cell-O Corporation

Mr. Griswold will discuss steps being taken by the machine tool builder to meet industry's continuing requirements for greater accuracy. He will also discuss methods of machining some of the new exotic materials.

4:55 P.M.—SOME NEW ELECTRICAL PRODUCTS FOR THE MACHINE TOOL INDUSTRY

A. J. PASION, Square D Company

J. M. RICE, Allen-Bradley Company

W. C. BERNSTEIN, Gemco Electric Company

EVENING SESSION

7:30 P.M.—BANQUET—Main Ballroom

J. M. MORGAN, Chief Engineer, Cimtrol Division, Cincinnati Milling Machine Company will introduce the banquet speaker.

NEW EXECUTIVES—NEW DEMANDS—NEW METHODS

DR. LOUIS T. RADER, President, Univac Division, Sperry Rand Corporation

Dr. Rader, a fellow of the A.I.E.E., who has been associated with the machine tool control industry for many years, is well known to many of us. In his climb through the executive ranks he has noted that changing times have created new demands on the executive. His talk tonight will point up how executive education must keep pace with the revolutionary demands of modern technology.

TUESDAY—NOVEMBER 27

MORNING SESSION — 9:00 A.M.

Session Chairman—S. F. NEWMAN
General Motors Corp.

PRESENT ELECTRICAL STANDARDS WERE WRITTEN TO INFLUENCE MACHINE AND MACHINE CONTROL DESIGN TO BETTER FIT PRODUCTION NEEDS.

9:00 A.M.—THE CYCLE OF MACHINE TOOL DESIGN. CPA62-5089

WILLIAM KING, Pontiac Motor Division, General Motors Corporation

Mr. King will tell how the lessons learned with yesterday's equipment appear to have been forgotten in some of today's applications.

9:25 A.M.—THE WORLD OF ELECTRICAL STANDARDS
DONALD FITZPATRICK, Allen-Bradley Company

Mr. Fitzpatrick will discuss some of the pros and cons of today's jumble of electrical standards.

9:50 A.M.—A UNIVERSAL SET OF STANDARDS

L. D. PRICE, Manager, Engineering and Safety Regulations Department, National Electrical Manufacturers Association

Mr. Price will report on the steps being taken to produce a universal electrical standard through the formation of the Industrial Electrical Equipment Council.

10:05 A.M.—DISCUSSION PERIOD ON STANDARDS

The three preceding speakers will form a panel to answer questions on their talks.

10:25 A.M.—10 MINUTE RECESS

THE POTENTIAL OF APPLYING DATA PROCESSING TO IMPROVE AUTOMATIC OPERATIONS HAS YET TO BE FULLY REALIZED.

10:40 A.M.—DATA PROCESSING IN QUALITY CONTROL. CPA62-5090

N. L. JEGLUM, Assistant Manager, Auto-Metrology Section, Sheffield Corporation

Mr. Jeglum explains the techniques and benefits to be obtained from the use of data processing in quality control.

11:05 A.M.—DATA PROCESSING APPLIED TO TRANSISTOR MANUFACTURING. CPA62-5091

W. T. LEMEN and JOHN CALABRO, Delco Radio Division, General Motors Corporation

A two-part paper in which Mr. Lemen and Mr. Calabro will describe how data processing is applied to the manufacture and testing of transistors. They will also illustrate how these data processing techniques can be applied to machine tools.

11:40 A.M.—MODERN AUTOMATIC GAGING. CPA62-5092

JAMES P. PHILBIN, JR. and PHILIP OHRINGER, Industrial Application Engineering, Airborne Instruments Laboratory Division, Cutler-Hammer, Inc.

Messrs. Philbin and Ohringer will discuss some of the latest techniques in gaging and in-process feed-back control. Methods of part recognition, gaging compensation and machine tool logic will be covered.

LUNCHEON SESSION

12:30 P.M.—LUNCHEON—Wayne Room

Luncheon Speaker—EDGAR A. GUEST, JR.

"Bud" Guest, lecturer and humorist, is Detroit's most famous radio and T.V. personality. His wit and humor has captivated audiences for many years, and it is certain that his message will be appreciated by all.

AFTERNOON SESSION

Session Chairman—J. D. NORTH
Micromatic Hone Corporation

IN THE CONTINUING SEARCH FOR BETTER COMPONENTS FOR ELECTRICAL CONTROLS, INVESTIGATIONS ARE BEING CONDUCTED TO DETERMINE THE TYPES OF RELAYS BEST SUITED FOR MACHINE TOOL APPLICATIONS.

2:00 P.M.—CONTROL RELAY CONTACT RATINGS. CPA62-5093

L. J. BULLIET, Electrical Controls Division, W. F. & John Barnes Company

Mr. Bulliet's paper will point out the need for a more comprehensive rating system for control relay needs.

2:30 P.M.—CONSIDERATIONS IN THE DESIGN OF A RELAY. CPA62-5094

Z. J. KRUZIC, Control Design Engineer, Standard Control Division, Westinghouse Electric Corporation

Mr. Kruzic will tell how a relay is designed to meet the ever-increasing demand of modern machine tools.

3:05 P.M.—INDUSTRIAL APPLICATION OF MERCURY WETTED RELAYS. CPA62-5095

A. J. KODA, Senior Development Engineer, C. P. Clare Company

Mr. Koda will discuss the factors affecting the applications of mercury wetted relays to machine tool loads. He will explain why these relays need special attention when switching inductive loads, and the proper way of applying them to obtain good switching characteristics and long life.

3:40 P.M.—10 MINUTE RECESS

TUESDAY (Con't)

3:55 P.M.—REED RELAYS AS LOGIC ELEMENTS. CPA62-5096

L. A. BURNETTE, Cimtrol Division, Cincinnati Milling Machine Company

Mr. Burnette will discuss the application of reed relays to machine tool control.

4:30 P.M.—A WIRE CONTACT RELAY FOR NUMERICAL CONTROL. CPA62-5101

DR. ANDRE LE BLANC, International Business Machines Corp.

Dr. LeBlanc will tell us of a new wire contact relay and show how it may be applied to the logic circuitry of a numerical control system.

5:00 P.M.—SOME NEW ELECTRICAL PRODUCTS FOR THE MACHINE TOOL INDUSTRY.

RICHARD T. HOLTkamp, Cutler-Hammer

B. D. CAMPBELL, General Electric Company

JOHN COURCOULAS, Westinghouse Electric Corp.

**EVENING SESSION
PLANT TOUR**

7:00 P.M.—ENRICO FERMI ATOMIC-POWER PLANT

(C) Lagoon Beach, Lake Erie (near) Monroe, Michigan

1. The Power Reactor Development Company, a non-profit organization, consisting of 18 electric power companies and seven manufacturing firms associated together for the purpose of financing, construction, owning and operating the reactor and related nuclear facilities for producing heat energy.

2. The Detroit Edison Company built, owns and operates the conventional portion of the plant which will be operated on heat energy purchased from P.D.R.C. These facilities consist of steam generators, a 150,000 KW turbine generator and auxiliary equipment

WEDNESDAY—NOVEMBER 28

MORNING SESSION — 9:00 A.M.

Session Chairman—J. E. ELLIS
Walter P. Hill, Inc.

CONTINUING EXPERIENCE WITH NUMERICAL CONTROL POINTS UP SOME OF ITS PRESENT IMPERFECTIONS AND SHOWS THE DIRECTION OF FUTURE DEVELOPMENTS AND INCREASED MARKET AREAS.

9:00 A.M.—MAINTENANCE EXPERIENCE WITH NUMERICAL CONTROL. CPA62-5097

E. W. PIPES, Union Carbide Nuclear Company

Mr. Pipes will present a maintenance program for numerically controlled machines, and will relate his experience in maintaining one of the largest installations of numerically controlled machines in the world.

9:45 A.M.—THE NUMERICALLY CONTROLLED LATHE. CPA62-5098

J. L. DUTCHER, Supervising Engineer, Metalworking Machinery Sales & Engineering, General Electric Company

Mr. Dutcher will describe the application of numerical control to a series of contouring lathes.

10:25 A.M.—10 MINUTE RECESS

10:40 A.M.—LOW COST NUMERICAL CONTROL. CPA62-5099

R. M. NELSON, Manager Marketing, Industrial Controls Section, The Bendix Corporation

Mr. Nelson will explain how increased experience and technological advances have made possible new dimensions in numerical control system design.

11:20 A.M.—A NUMERICALLY CONTROLLED STEEL MILL ROLL GRINDER. CPA62-5100

A. T. PARRELLA, Manager, Roll Grinding Engineering, Farrel-Birmingham Company, Inc.

Mr. Parrella will describe in detail the design and construction of the numerically controlled steel mill roll grinder which will be a feature of the afternoon plant tour of the Great Lakes Steel Company.

**AFTERNOON SESSION
PLANT TOURS**

Choose Either (D) or (E)

1:00 P.M.

(D) GREAT LAKES STEEL CORPORATION, Division of National Steel Corporation, Ecorse, Detroit, Michigan.

This tour features the numerically controlled steel mill roll grinder as described in the paper presented in the morning session. Processing of steel from the slab to the hot rolled coil on the most modern 80" hot strip mill which was completed in September, 1961, will also be included.

(This tour is limited to 100 persons.)

(E) LIVONIA PLANT, Transmission and Chassis Division of Ford Motor Company, Livonia, Michigan

This is one of three plants producing automatic transmissions. It also manufactures component parts and assemblies for all transmissions and is the only plant making the new three-speed constant-mesh synchronized manual shift transmission. The automatic machining and assembly of aluminum, cast iron and steel into gears, gear cases, convertor housings and extensions will be of outstanding interest in this tour.

(The Livonia Plant Tour bus will stop at Willow Run and Detroit Metropolitan Airports on return to the hotel.)

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