

New England HOSPITAL ENGINEERS SOCIETY Newsletter



VOLUME XV

FEBRUARY 1970

NUMBER 1

REGISTER NOW FOR ANNUAL N.E.H.E.S. MEETING MARCH 24, 1970

The Annual NEHES Meeting will be held Tuesday, March 24, 1970, at the Sheraton-Plaza Hotel. The morning program is as follows:

The proposed revisions to N.F.P.A. Bulletin No. 76 will have an effect on all hospitals regardless of size or location and also will effect other codes as they apply to hospitals. Therefore, it is important that all hospital engineers be knowledgeable of the proposed changes as they pertain to their hospitals.

Vincent Gardner, P.E. Administrative Engineer at Beth Israel Hospital, Boston, is a member of the Advisory Committee for N.F.P.A. that is evaluating the proposed changes to "76". The New England Hospital Engineers' Society is indeed fortunate to have Mr. Gardner, a past President of the Society, make a presentation on this subject at the Annual Meeting in Boston, March 24, 1970.

BY-LAWS

NOTICE

By-Laws, as proposed, will be voted on at the Annual Meeting. These By-Laws were written with the memberships' welfare in mind to make a stronger Society.



BERNARD F. DOWD

KNOW BERNARD DOWD

Plant Engineer
Lawrence Memorial Hospital
of Medford
Medford, Massachusetts

Born in Worcester, Mass. and educated in public schools in that city.

After graduation from high school, Mr. Dowd attended and graduated from Wentworth Institute in Boston majoring in Building Construction. He then took a position with Pittsburgh Plate Glass Company as a contract salesman in the construction phase of glass installation.

(Continued on page 2)

WELCOME ABOARD

ROBERT A. CORSINI

Chief Engineer -
Supt. Buildings & Grounds
Fanny Allen Hospital
College Parkway
Winooski, Vermont

CLAUD W. DAIGLE

Chief of Maintenance
and Engineering
Maine Coast Memorial
Hospital
50 Union Street
Ellsworth, Maine

RENE PAUL COLLETTE

Chief Engineer
Leominster Hospital
Hospital Road
Leominster, Massachusetts

LEON GEORGE BLAKE, JR.

Assistant to the Chief,
Operating Services
for Plant & Equipment
Maintenance and the
Housekeeping Service
U.S. Naval Hospital
Newport, Rhode Island

(Continued on page 4)

BERNARD DOWD

(Continued from page 1)

An Army veteran, he served with the 12th Engineering Battallion in Furth, Germany as a combat construction specialist.

With the service behind, Mr. Dowd entered college and spent the next four years at Worcester Polytechnic Institute, where he majored in Mechanical Engineering, obtaining a Bachelor of Science Degree in Mechanical Engineering. Upon graduation, he took a position with the Shell Oil Company as an Industrial Representative. After a short time in the industrial field, he returned to the construction field and worked as project engineer for the prime mechanical contractor on the Hartford Hospital's "Continuing Care" unit.

At this point, he became interested in the hospital engineering field. When the construction project was nearing completion, he accepted a position with the Lawrence Memorial Hospital of Medford as the plant engineer where he has been for the past four years.

Lawrence Memorial is a community hospital serving the Boston Suburban communities of Medford and adjacent areas. The hospital is in the midst of a \$4.2 million expansion program that will bring its total bed capacity to 225.

Mr. Dowd lives in Meford with his wife, Marilyn and their three children, Patrick - 6, Catherine - 5, and Lynne - 3.

**REPORT FROM
RESEARCH COMMITTEE**

The research and technical committee reports the following activities for the calendar year 1969:

Several discussions were initiated with manufacturers of hospital equipment. After the annual meeting paper by Doctor Brunner, it was felt that the avenue of electrical unipotential was one of our most serious and dangerous situations related to hospitals and patient care.

It seems that the possibility of electrocution by minute amounts of current can occur by use of electrocardiographs and monitors simultaneously. The hazard can also be amplified by use of electric beds, electrically operated suction machines, motor operated O₂ tents and cooling mattresses.

Our primary approach was to discuss with manufacturers the immediate and urgent requirement that only "U" type grounding caps be used on all portable equipment. This in turn demands the use of "U" type wall receptacles in hospital buildings and checking for integrity of ground. The use of "cheaters", of course, must be policed.

One manufacturer of cardiac monitors (using modular and

inter-changeable amplifiers) was induced to change his design so that an E.C.G. monitor unit could not be misconnected to an arterial strain gauge monitor. Former use of the same connector cap presented such an opportunity.

A fan manufacturer agreed to make "on order" and ship only "U" grounded fans to hospitals if requested. Another fan manufacturer has agreed to incorporate this in next year's (1970) production as a standard.

The manufacturer of two electric beds was contacted and suggestions were made regarding future changes pending on new models. This involves a continuous green grounding wire bonding all segments of this bed. A present pending suit does not permit further discussion at this time.

The matter of unipotential should be the first and most important consideration of all engineers in hospital services because of the many electrically operated devices and the possibility of involving patients through the interaction of several devices.

*Robert Kellogg
Chief Engineer
Backus Hospital
Norwich, Conn.*

CONTROLLING CONSTRUCTION COSTS

Controlling Hospital Construction costs can best be realized by an owner having representatives that are knowledgeable in the discipline of the building industry. This fully informed group can ensure that the various items described in the following sentences are evaluated to the particular needs of the owner. The proper application of all Codes having jurisdiction, construction methods and the use of materials and equipment. The necessity of turning on and off utilities an hour before and after the working day as this costs many thousands of dollars. Duplication of engineering services and inspections, that no two trades are specified to accomplish the same item of work and where possible existing facilities are made use of. Depending upon the type of contract, bonding the mechanical and electrical contractor along with the General Contractor should be reviewed. Limiting specialities and identifying numbers to the Owner's direct requests and making use of standard modules. The checking of all contract documents for their accuracy and finally the required follow up to make sure all cost control suggestions have been implemented.

Recorded under their respective headings are specific savings for your review.

Architectural

Use precast staircases in stairwells.

Where feasible omit all soffitts. Substitute lay in grid acoustical suspension ceiling tiles 24" X 48" with exposed grid in place of concealed spline acoustical 12" X 12" tiles.

Substitute floor set partitions in lieu of ceiling mounted partitions.

Instead of plaster on cinder block for corridor walls use two ply gypsum on metal studs surfaced with a vinyl covering.

Restrict use of moveable partitions and use sheet rock and steel studs for non load bearing walls.

Pay all fees for permits directly.

Limit hand excavation and the number of paint applications.

Use metal decking in lieu of forming with wood each floor slab.

Cement lined water tanks in lieu of copper lined tanks.

Eliminate color coding of mechanical rooms.

Mechanical

Package boilers in lieu of field erected.

Aluminum fin coils in lieu of copper fin coils for chilled water coils.

Gate valves in lieu of plug valves.

Self contained drinking water coolers in lieu of a central system.

Ansul fire fighting systems in lieu of CO² system.

Piston type mixing valves in lieu of thermostatic valves.

Use galvanized steel pipe in lieu of galvanized wrought iron pipe for all water piping 4" and above.

Galvanized cooling towers in lieu of stainless steel towers.

Reduce flexible copper connections to pumps, compressor, etc.

Eliminate insulation to kitchen exhaust ductwork and to cold water piping except on long horizontal runs.

Use Class 150 cement lined AWWA piping for water service.

Electric

Electric operated doors in lieu of pneumatic operated.

Utilize the 480 Wye/277 volt system in lieu of the 208 Wye/120 volt system.

Use fluorescent lighting in lieu of incandescent.

Substitute either aluminum conduit or thinwall for rigid conduit.

Run low power wiring open in lieu of enclosed in thinwall.

Place all piping that encloses wiring in the slab instead of running overhead.

Engineers Section of HARI met on January 15, 1970 at Our Lady of Fatima Hospital.

A presentation and demonstration of detention screens and doors proved to be very informative.

ANNUAL MEETING
(Continued from page 1)

The ever increasing combination of engineering principles and medical technology in our rapid expanding environment and the involvement of the hospital engineer with the physician is a timely subject that Dr. Soutter will present and discuss with us.

Dr. Lamar Soutter, Dean of the Medical School, University of Massachusetts, will present "Engineering in Medicine", a most interesting title to a complex subject.

POSITION OPENINGS

There are a number of position openings in the New England area. Those interested in obtaining a position in Hospital Engineering should contact.

WILLIAM T. DOHERTY, President
Plant Superintendent
Saint Francis Hospital
Hartford, Connecticut 06105

WELCOME ABOARD
(Continued from page 1)

JOHN C. DEAMICO

Administrative Engineer
The Miriam Hospital
164 Summit Avenue
Providence, Rhode Island

JAMES F. MANNING

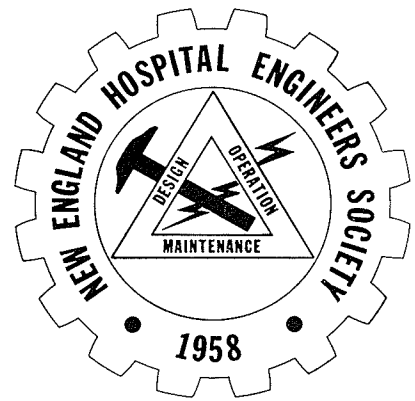
Manager, Plant Operations
Section
New Britain General
Hospital
100 Grand Street
New Britain, Connecticut

PAUL F. FLEMING

Assistant Director of
Physical Plant
McCook Hospital
2 Holcomb Street
Hartford, Connecticut

CHARLES D. BUCHANAN

Administrative Engineer
Middlesex Memorial
Hospital
23 Crescent Street
Middletown, Connecticut



NEWSLETTER

Published By

**NEW ENGLAND HOSPITAL
ENGINEERS' SOCIETY**

Printed By

WALTER WHITTUM, INC.

GRAPHIC ARTS CENTER
SPRINGFIELD, MASSACHUSETTS 01104

CONTRIBUTIONS TO THE NEWSLETTER

Support your organization by submitting your thoughts and ideas in the form of editorials and pictures to the newsletter. This is our best notification to other organizations of the efforts being made by New England Hospital Engineers. The invitation is open; any submittal is appreciated.

WILLIAM L. FAGAN, Editor
Plant Engineer
Springfield Hospital Medical Center
Springfield, Massachusetts 01107

IN MEMORIAM

CLIFFORD HARRISON

Plant Engineer
Danbury Hospital
Danbury, Connecticut

It is with great sorrow that we report the passing of Clifford Harrison of Danbury, Conn.