

# MONITORING THE FIELD

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## NUCLEAR POWER PLANTS SEISMIC TEST PROCEDURES AND COST ESTIMATES

The October issue of *Monitoring The Field* discussed seismic certification requirements (testing control instruments to prove their ability to withstand seismic or earthquake forces), and the extent to which they apply to equipment provided by a Johnson Service Company branch office for a nuclear power plant job. This month we will outline methods of obtaining seismic testing procedures and cost estimates.

When considering bidding on a nuclear power plant job, the limiting factor will generally be the feasibility and cost of seismic testing.

1. Upon reception of the contract bid package, immediately send copies of all quality assurance and seismic testing requirements to Field Engineering in Milwaukee.
2. After preliminary takeoff of the job, send a list of all "Class 1" equipment to be provided (equipment requiring seismic certification) and indicate their respective installation heights above floor level.

Based upon this information and the seismic specification, a proposed procedure for testing and the testing cost estimate will be provided for you by the Test Laboratory in Milwaukee. The **proposed** seismic testing procedure must then be forwarded to the consulting engineer for approval. No testing will be performed, nor can estimated testing costs be considered, without such approval.

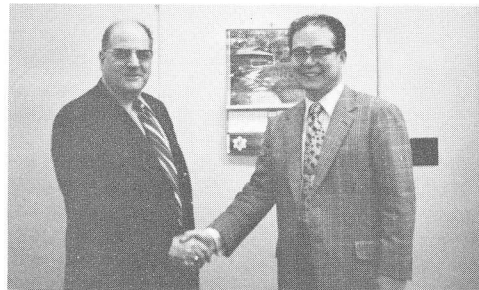
Upon completion of seismic testing by the Test Lab, a formal report detailing all testing data and results will be submitted to the branch office for submittal to the consulting engineer.

There are, of course, limitations to the equipment which can be tested. Air compressors, large valves, dampers, panels and other heavy and/or large instruments exceed the weight and size limitations of most testing facilities. However, outside sources are available for testing such items, and Field Engineering will provide directions when required.

Johnson Service has already provided seismic certification for much of our own equipment as well as outside manufacturers' equipment. Our testing procedures and results have been accepted by many of the leading engineering firms in the country. Seismically certified Johnson equipment has been installed in nuclear power plants at Calvert Cliffs (Maryland), Peachbottom (Pennsylvania), Kewaunee (Wisconsin), Fitzpatrick (New York) and Pilgrim Station (Massachusetts).

**Monitoring The Field** thanks Mr. D. E. Totzke, Field Engineer, for presenting the two-part series on nuclear power plants. Dennis has been coordinating field efforts regarding quality assurance and seismic testing in nuclear power plants. In future issues of M.T.F. he will be covering other nuclear power plant related subjects such as quality assurance, equipment radiation resistance and service contracts. If you would like to have a specific area of nuclear power plants discussed in a M.T.F. article, just let Dennis know. He'll carry on from there.

Nick Yerkes of the Norfolk Office was awarded \$20.00 for his design of an S-6100 input simulator. The simulator allows field personnel to drive and indicate S-6100 servo positions independently of the processor operation. The design will be incorporated into JC/80 field test equipment.



International Division Vice President A. C. Buffalano, left, welcomes Mr. Muneharu Maeda to Johnson Service Company in Milwaukee. Mr. Maeda is Director of Saginomiya Johnson Controls Co., Ltd. in Japan, which consists of headquarters in Tokyo and six branch offices. Mr. Maeda and two engineers from Saginomiya attended the five-week Application Engineers Training School in Milwaukee and are spending additional time in the United States to study applications and installations. When Mr. Maeda leaves Milwaukee he will visit our Georgetown Assembly Plant in Kentucky and the Electronics Division in Dallas before returning to Japan. Kiyohiko Nakayama is gaining experience in our Atlanta branch office where he will remain until next April. Takanori Tarumi will be with the Toronto branch office until the end of this year.

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## 2-1/2" THERMOMETERS (INACTIVE)

All 2-1/2" pneumatic thermometers listed on the "inactive" Standard Equipment Sheets (yellow) dated 1-3-72 have been sent to the Panel Division in Poteau for use. This includes H-5500, P-5500, T-5500 and T-5502 units. If you need any of these 2-1/2" gages to complete a job, contact Lee Clark at Poteau. Orders will be filled on a first come — first served basis, until the supply is depleted.

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## ISA DISTRICT OFFICER



The Instrument Society of America has announced officer nominees for the 1972-1973 term. Doug Decker, manager of our Salt Lake City branch, is vice president-elect for the ISA District 8. Doug has been with Johnson since 1963, when he joined the Salt Lake City office as a Sales Engineer. In 1970 he was appointed assistant manager and he became branch manager in 1971. An active ISA member, Doug was granted senior membership in 1970. He is affiliated with the Great Salt Lake Section and has served as its treasurer (1967-68), vice president (1968-69) and president (1969-70). He is an experienced pilot and was appointed to the Utah State Aeronautics Board in 1971. He is also a member of ASHRAE, and serves on the Salt Lake Airport Council. He is a graduate of the University of Denver.

## WHO'S WHO ON FACTORY ROW

This month we leave factory row in Milwaukee and travel to Springfield, Massachusetts, headquarters of Standard Electric Time Corporation, Division of Johnson Service Company.

Mr. G. R. Ranganath is Vice President and General Manager of S.E.T. "Bill" holds a M.S. degree in engineering from the Institute of Science in India. He received additional training in engineering and management in programs sponsored by the General Electric Co. in the U.S. Subsequently, Bill spent three years with Edwards of Canada (signaling devices) as an Application Engineer and later as Chief Engineer. In April, 1971, he was appointed Vice President - Engineering of Standard Electric Time, after having spent 15 years at Unelco, Ltd. (formerly Standard Electric Time of Canada) in various capacities which included Vice President of Engineering and Vice President of Operations. He was appointed to his present position in August, 1972.

Bill has long been active in the Canadian Standards Association. He is now the Chairman of the Fire Alarm System Control Unit Committee and a member of several other Standards groups. He is a member of the National Fire Protection Association Committee on Fire Protective Signaling Systems. He holds memberships in IEEE in the U.S. and in a number of professional associations in Canada.



**G. R. Ranganath**  
Vice President and General Manager  
Standard Electric Time Corp.

Among his writings are papers on Fractional Horsepower Motors and Fire Alarm Systems Practice. He has patents (granted and pending) in educational equipment and alarm systems.

One of Bill's immediate goals is a dynamic growth of S.E.T. within the Johnson family by expanding S.E.T.'s capabilities in design, sales and manufacturing.

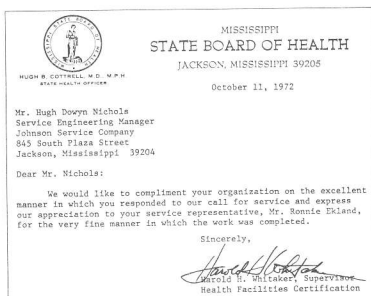
## "\$UCCESS\$ IS"

... by and for the Johnson SERVICE Organization.

### T O R I E S

#### JACKSON, MISSISSIPPI SERVICEMAN EXCELS: TOTAL MAINTENANCE PROGRAM:-

In a never-ending effort to obtain all related work in the mechanical system of a building, our Jackson, Mississippi branch reports their latest SUCCESS STORY - the acquisition of a revamping contract for existing Johnson controls (5000 series contract which led to a yearly 7000 series contract). While working on the job, Serviceman Ronnie Eklund discovered a sizeable dust deposit which had built up over the years and dust was being dumped into individual offices when the dampers operated. Although he had never attempted this type of work before, Ronnie expressed the desire to correct the problem. He proceeded in the true spirit of Johnson Service Company, accepted the challenge and cut holes in the duct and vacuum cleaned the system. The quality of his work is typified by the following letter of appreciation:



#### DES MOINES OFFICE REPLACES CONTROLS

Des Moines Resident Serviceman Joe Budeslich and Service Sales Manager Ron Gray combined their efforts to promote service work on existing Honeywell controls in the Franklin School at Ottumwa, Iowa. The job blossomed from renovating a few Honeywell controls into the complete replacement of all the Honeywell controls, including 24 thermostats and 40 valves. The branch was awarded a time and material contract to do this work which included the installation of the 40 valves as well as the control work. Also included was replacement of some miscellaneous controls on the gymnasium ventilating unit. SUCCESS IS...

#### DENVER OFFICE SCORES AGAIN:



**JOHNSON SERVICE COMPANY**

SUBJECT DENVER PUBLIC SCHOOLS SECURITY PROGRAM

FROM R. D. Pagliasotti - Denver

TO J. W. Braak - WRO/Denver

cc: C. E. Butcher - Denver  
Jim Wright - Denver  
Don Morgan - Denver  
G. D. Maxwell - Milwaukee



I thought I would pass along to you some information which I received from Chuck Rische this morning with regard to our first security installation for the Denver Public Schools which was Kepner Junior High School.

You will recall, this was the job that we invested a lot of Johnson dollars in, to say nothing of our blood, sweat and tears and was also the one which was responsible for us doing the nine additional security jobs for Denver Schools, with hopefully many more down the pike.

At any rate, Chuck just said he thought I would like to know that over this past week-end they got an alarm at Kepner. A patrol car was dispatched to the school and the officers arrested four individuals who had a couple of thousand dollars worth of typewriters, audio-visual equipment and so forth stacked by the back door ready to make their get-away.

This is bound to reflect favorably on our equipment, Bill, and I am sure we can look forward to considerable security business from the Denver School system in years to come.

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## FROZEN COILS

The heating season's here again and if you haven't already checked these potential causes for coils freezing, don't wait any longer!

1. Dampers not closing due to obstructions.
2. Low temperature sensing elements improperly located.
3. Low temperature thermostats improperly wired; i.e., by placing the unit control switch in the hand or manual position, the low temperature thermostat is bypassed, and therefore, ineffective.
4. Control lines mixed up in the installation, so that the thermostat operates the wrong valve or coil.
5. Controls not set up properly or incorrectly adjusted.

## IDEA OF THE MONTH A-421 Air Dryer Installation

Unfortunately, A-421's are often installed in dusty, dirty areas such as boiler rooms. Often on new construction sites the air system is put in use before the job is cleaned up. **Kevin Corcoran**, Apprentice Pipefitter with our **Madison Office**, hit on a great idea to combat this problem.

Kevin installed a filter frame big enough to cover the air intake to the condensing unit, and then mounted a replaceable filter pad in the frame. The first installation of this filter occurred on a system where a conversion was made from coal to gas burners. He recently checked the job and found that after six months the dryer was still as clean inside as when it was new.

*Construction News* is sending Kevin a check for \$20.00 for his idea.

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## POLYETHYLENE STANDARD CHANGED TO "FR"

The standard for polyethylene tubing used for all Johnson Service Company air piping has been officially changed from "P" tube to "FR" (FLAME RETARDANT) polyethylene. All tubing ordered from our two authorized suppliers (Samuel Moore and Extron) will be supplied with the "FR" rating.

### What Does "FR" Mean?

There is a great deal of confusion over the term "FR" and what it will and will not do. Many people have the mistaken notion that the "FR" stands for "Fire Resistant" and that the tubing will not burn at all.

Polyethylene is normally a flammable material. Chemicals can be added to polyethylene to make it nonflammable, but they alter the compound and we would lose strength and quality. However, "FR" tubing does contain an additive that makes it self-extinguishing while still maintaining the high quality that Johnson demands for air piping.

### What Is Self-Extinguishing?

The tubing will burn only when an outside source provides a flame. When that outside flaming material is removed the "FR" tubing stops burning within a few seconds. It is self-extinguishing! Try it yourself!

### Tell Others

When people such as job inspectors claim that our "FR" tubing burns, explain to them that it does not support flame and will only burn when an outside source of fire is provided. Take away that flame — the burning tubing extinguishes itself in a very short period of time.

## FIFTY GOLDEN YEARS



Mr. R. J. Kirkpatrick of the Wichita Office (left) received a plaque commemorating his 50 years with Johnson Service Company. The award was presented by Mr. Frank Sheperd (right), who originally hired Mr. Kirkpatrick in March of 1922. Mr. Sheperd was a surprise guest who traveled from Kansas City to attend the award presentation in Wichita.

Mr. R. J. Kirkpatrick of the Wichita Office has just accomplished a feat that will be nearly impossible to attain in the future — fifty years of loyal service! This grand occasion was highlighted with a dinner and award presentation attended by Wichita Office personnel and other long-time friends.

"Kirk" joined Johnson Service Company as a helper on the Senior High School in Arkansas City, Kansas in March of 1922. He continued employment through March of this year.

In the mid 1920's he covered Nebraska, Kansas, Missouri, Oklahoma, Arkansas, Texas and Louisiana via train. Kirk relates that in those days product testing in the field was handled rather simply. Material for jobs was shipped via train in "drop boxes." If the equipment survived the drops from a moving train — "no further testing was required."

In the 1930's, progress was really made; the men now traveled to job sites via automobile. Initially, this did not alleviate the problem of getting to a job on time since traveling across the state in those days was quite an adventure.

For many years now, Kirk has been a resident mechanic in central Kansas. Here he not only handled new construction, but serviced many of the jobs and took great pride in the close customer friends he acquired over the years.

It is difficult to express the deep respect and gratitude deserving of such a great Johnson diplomat. We all wish your retirement years to be as fulfilling and rewarding as your relationship with the Johnson Service Company has been throughout the years.

## SAFETY FIRST!

A serious industrial accident occurred in one of our branches recently. In order to avoid any similar injuries we are passing the word along.

The radial circular saw used for cutting filter frame material has a heavy spring in the base that holds the saw in an "up" position when it is not cutting. This spring broke and the spinning saw fell on the operator's hand as he was readjusting the material to be cut. The man's hand was severely cut, severing tendons and muscles and will require therapy after it heals.

Naturally not all saws will do this, but a little "preventive medicine" never hurts. Keep hands out from under the saw blade when it is running! Let this be a warning. Do what's necessary to avoid similar accidents in your branch!

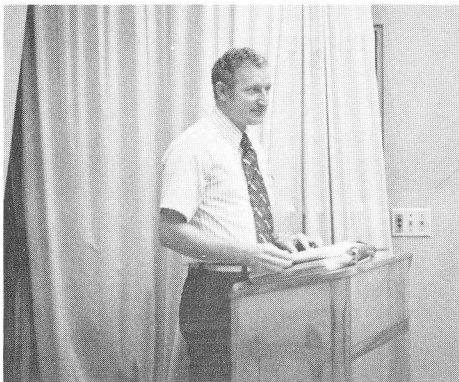
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### UNTIL FURTHER NOTICE DO NOT ORDER TUBING KIT F-1000-308

This kit is not available due to the inability of the manufacturer to supply 5/32" polyurethane tubing that meets our standards. In the meantime, use 1/4" (blue) polyurethane (F-1000-231) to make the air connections to room controllers. An eyelet (T-4000-121) is required to attach the 1/4" polyurethane to the newer room controllers with small connectors.

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## GUEST INSTRUCTOR



Ken House presented the new BEIMS Program to the Application Engineers attending the training school recently conducted in Milwaukee. Ken is Regional Construction and Test-Balance Coordinator for the Southeast Region, headquartered in Atlanta. He also served as chairman of the BEIMS team which worked on the "Engineering Forms" section of the BEIMS standards.

## EFFICIENCY IS . . .

### . . . VALVE BODIES WITH ACTUATORS

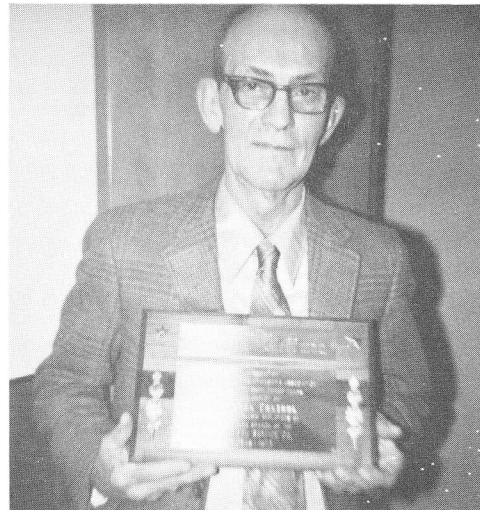
Are you ordering your valve bodies with actuators attached? This saves a great deal of time on the construction site in:

Material Shipment, Receiving and Recording  
Material Distribution  
Assembly Time

**REMEMBER  
WORK SMARTER – NOT JUST HARDER!**

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## ROBERT KLEFFMAN RETIRES



On the day of his retirement, **Robert J. Kleffman** received a plaque from his fellow employees in the **Omaha Office** in appreciation of outstanding cooperation and association throughout the years.

Mr. Kleffman was hired in 1949 on a temporary basis for one to two weeks, and after 23 years of service he retired in a blaze of glory, completing the temperature control installation in the new 21-story First National Bank and Office Building of Omaha.

Other accomplishments by Mr. Kleffman in the past years have included many temperature control installations on the world famous "Boys Town" Campus, the Omaha Municipal Auditorium and various projects at the Strategic Air Command underground facility.

The entire construction industry in the Omaha area will miss Bob's lunch hour stories and reiterations of previous experiences.

Mr. Kleffman has been a member in good standing of local 464 for 32 years.

Bob and his wife Elsie have resided in Omaha for the past 37 years and have two children who have families of their own. Retirement activities will include home improvements, travel, fishing and refining his golf game.