

# ANNUNCIATOR

November 1992



SARNIA



SECTION



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- 1.] ----- SURVEY AND COMPILE A DATABASE OF WHICH COMPANIES HAVE COPIES OF I.S.A. "STANDARDS & PRACTICES" TEXTBOOKS AND WHILE DOING SO, DETERMINE WHETHER THEY ARE CURRENT VOLUMES.
- 2.] ----- ESTABLISH AN ON-GOING SYSTEM, UTILIZING THE DATABASE, WHERE CLIENTS ARE MADE AWARE OF THE MOST RECENT ADDENDUM'S SO THEY MAY KEEP THEIR TEXTBOOKS UP TO DATE.
- 3.] ----- MARKET A QUESTIONNAIRE TO DETERMINE WHO UTILIZES THE I.S.A. SPECIFICATION SHEETS FOR ENGINEERING PURPOSES AND QUERY WHAT CHANGES SHOULD BE MADE IF ANY.
- 4.] ----- FORM A REVIEW COMMITTEE OF LOCAL INDUSTRY PERSONNEL WHOSE PURPOSE WOULD BE TO EXAMINE NEW STANDARDS AND RECOMMENDATIONS BASED ON THE QUESTIONNAIRE RESULTS.
- 5.] ----- SUGGEST THAT THE I.S.A. SARNIA SECTION PURCHASE "STANDARDS & PRACTICES" TEXTBOOKS FOR STUDENT USE AT LAMBTON COLLEGE'S RESOURCE CENTER..

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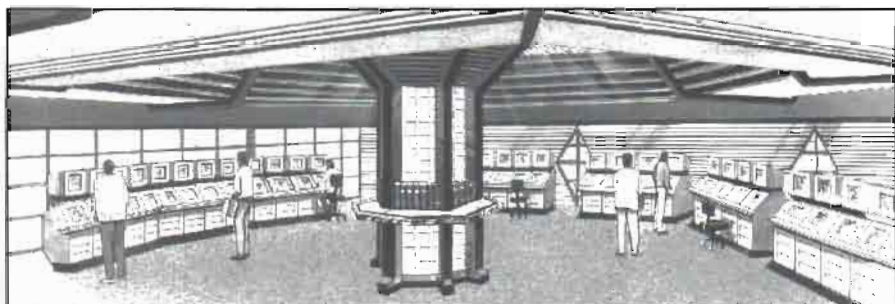
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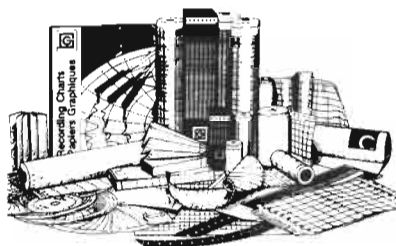
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# What is PMCD

PMCD is a division within the Automation and Technology department. There are over 8,500 members (18% of ISA total membership) who share a common interest in measurement and control. The following is a summary of the August, 1992 PMCD newsletter.

Interested members were asked to participate in a number of technical committees such as: Temperature, Process Improvement, Advanced Control Technology, Fuzzy Logic, I/O Technology, Pressure Technology, Variable Speed Controls, Viscosity Technology and Chapter/Division Liaison. Committee activities include: technical conference programming, paper review, standards and practices review, technology review, section liaison, user hot line and newsletter liaison. Reports of the various committees were included in the newsletter.

Newsletter editor Dr. Gene Norman usually includes some interesting editorials and quicky Basic program listings. This issues quicky calculates belt lengths around multiple pulleys.

The first Level Measurement and Control Symposium was held during the ISA Conference in Houston. Basic technology and application issues were covered.

ISA's new Certified Specialist program was described. Members were asked if there is interest in having a certification program in measurement technology.

An article titled "METRICATION NEWS" described the present status of the program in the USA.

Lists of new books, ISA Transactions, recent proceedings and PMCD papers were listed.

**For further information please contact . . . .  
Brian Smith - Novacor Chemicals at 862-2911**

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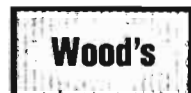
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## ISA CENTRE VISIT

The Lambton College Distribution Centre for ISA materials was recently visited by some of our local executives. This visit was also an opportunity for the Sarnia section to present a set of "Standards and Practices" for use at Lambton College.

Bob Kelly, Mike Spearman, Brian Smith, Dave Gooch, and Bill Arundell reviewed the resource and learning materials available. Sandra Morrison of Lambton College was their hostess.



*continued on .....page 17*

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Bob Kelly, President, and Sandra Morrison of Lambton College ISA Distribution Centre.

Mike Spearman, student section liason, presents set of "Standards and Practices" to Lambton College.



Brian Smith, Dave Gooch and Bill Arundell check out the training materials available.



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## Instrument Society of America

TO: ISA Members of District 13

November 6, 1992

FROM: Howie Whitton, District 13 Vice President

SUBJECT: News Items from the Houston Conference

I attended the October 23, 1992 Executive Board Meeting as your representative and have summarized the highlights for your information:

- The Houston Show Committee reported that 33,000 persons attended the 4 day ISA 1992 Exhibit and Conference. This was the highest number ever with 17,085 visiting the Exhibit only.
- ISA budgets for a 5% reserve as its fiscal goal. Income for the 1993 fiscal year will be somewhat below expectations, however, the Board has approved the following expenditures:
  - \$35,000 for Leadership Development in the production of a videotape to enable leadership training to occur at the section level.
  - \$50,000 for the evaluation and updating of the Society's electronic media products
  - \$66,900 for the update of the business computer at ISA Headquarters

(These expenses will reduce the reserve below 5%, however, it was the feeling of the Board that all were investments in ISA's future)

### Something of Special Interest to Student Members:

Student members shall be eligible at no cost, for two division memberships, one from Industries and Sciences Department and one from Automation and Technology Department. The divisions available for student membership shall be as determined annually by the respective department Vice Presidents.

**On Another Note:** Mr. Charles Albert, who was the DVP Elect for District 13 has announced that due to work obligations, he will be unable to assume the office of District Vice President on November 1, 1993. Nominations are being solicited at this time for the position of DVP Elect with a selection to take place at the January 1993 Council Meeting.

Regards,

Howie Whitton  
District 13 Vice President

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# Active Listening for Managers

by Janet J. Zerpa and Larry R. Smeltzer

Managers are responsible for developing employees so they can accept delegation of duties and improve job efficiency or productivity. To do so, managers must have, among other abilities, the ability to communicate effectively by listening intelligently and carefully to those with whom they work.

Managers could use the information provided in this article to improve their communication skills through active listening and consequently become more effective. By listening actively they can avoid conflicts, better manage problems, increase employee morale and improve productivity.

## What Is Active Listening?

Managers may need many listening skills. But the one that is most important is the one which helps employees adjust, cooperate and produce. With active listening, managers help employees gain a clearer understanding of their situations, take responsibilities and cooperate with each other.

In active listening, the listeners have a very definite responsibility. They do not passively absorb the words, but try to grasp the facts and feelings in what they hear. They try, by listening, to help the speaker work out his own problems.

Active listening does not necessarily mean long sessions spent listening to grievances, personal or otherwise. It is simply a way of approaching those problems which arise out of the usual day-to-day events of any job.

To be effective and active, listeners must *want* to listen. Managers cannot employ active listening as a technique if their fundamental attitudes are in conflict with its basic concepts. Their behavior will be empty and sterile, and associates will be quick to recognize this. Lack of sincerity can be easily perceived by the employee and can worsen the situation considerably. Until managers can demonstrate to employees or staff a spirit that genuinely respects their potential worth as individuals, and not just employees, which considers their rights and trusts and their capacity for self-direction, they cannot begin to be effective listeners nor effective managers.

Active listening is not an easy skill to acquire. It demands practice, results from a concentrated effort and often requires changes in basic attitudes. Some physical and psychological factors work against the process; and managers should be aware of such barriers to listening so they can develop the appropriate strategies to overcome them.

Some physical barriers to listening arise from our own limitations. We think faster than we speak. As a result, instead of listening carefully while another person is speaking, some people tend to think about other things and devote only a fraction of their capacity to thinking about what is said. Another physical barrier arises from internal distractions. Our autonomic nervous system involuntarily pays attention to certain internal events such as headache, sore feet or an empty stomach, rather than external events. Finally, any overpowering noise may compete with the main topic of interest. It is hard to listen to a subordinate who speaks softly in a noisy office.

Psychological barriers can be equally burdensome. A major psychological barrier to listening is the lack of motivation. Managers who should be listening may be day-dreaming, making private plans or even focusing on an emotional problem. Research has demonstrated that people score better on listening achievement tests when they know in advance they will be questioned on the information presented. Greater effort is exerted when the goal is known, and listeners can observe a positive outcome with such effort.

Another psychological barrier is "detouring." The listeners may become distracted by a mannerism, phrase or concept. This distraction then stimulates thought on another topic more interesting than the central topic of the message.

*continued on . . . . . page 31*



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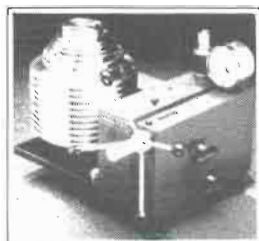
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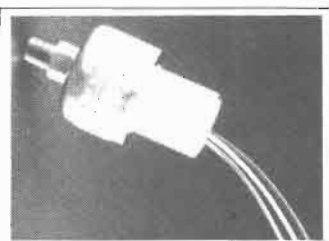
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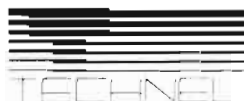
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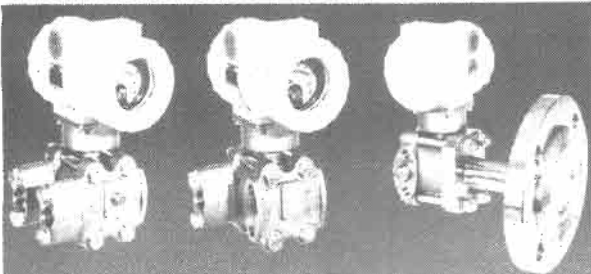


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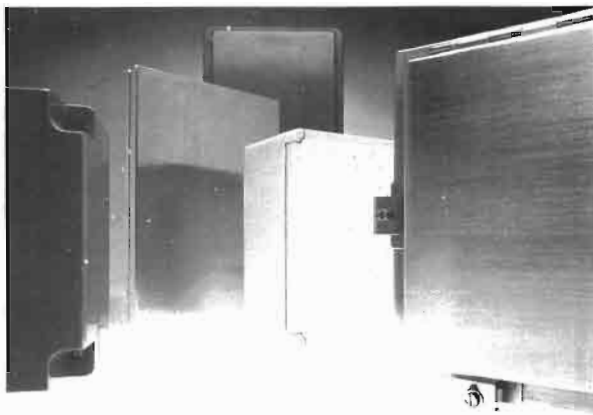
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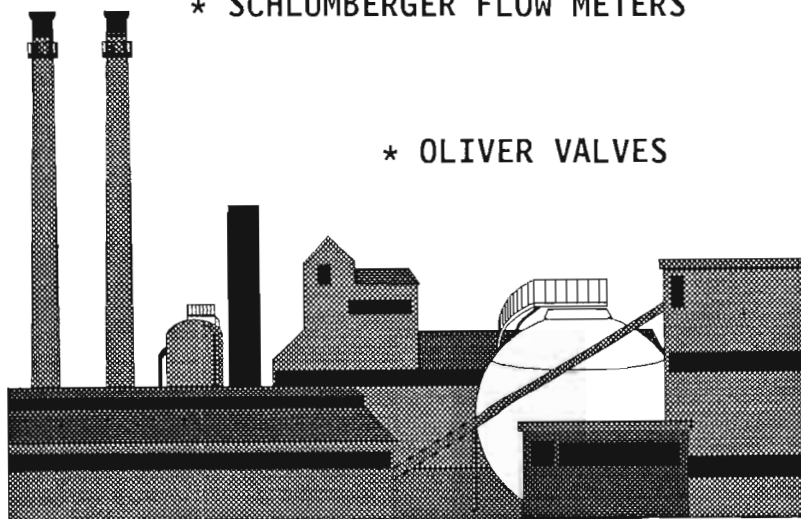
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Name \_\_\_\_\_ (Last) \_\_\_\_\_ (First) \_\_\_\_\_ (Middle) \_\_\_\_\_

ISA Member Number: \_\_\_\_\_ Day-time Phone Number: \_\_\_\_\_

Check all changes that you are requesting:

- ☐ Change my address, phone number and/or company (Complete Part 1)  
☐ Change my section affiliation (Complete Part 2)  
☐ Apply for Life Member/Life Fellow Status (Complete Part 3)  
☐ Apply for Senior Member Status (Complete Part 4, page 31)

### PART 1: MOVING?

PLEASE CHANGE MY ADDRESS, COMPANY NAME AND/OR PHONE NUMBER:

Preferred  
Mailing  
Address

☐ Home

☐ Company

Please provide your address exactly as you wish it to appear on our official records.

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PLEASE TRANSFER ME:

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### PART 3: APPLYING FOR LIFE MEMBER/LIFE FELLOW STATUS?

PLEASE CHANGE MY STATUS TO LIFE MEMBER/LIFE FELLOW: (You must meet both qualifications below.)

☐ I have retired from full-time employment.

☐ I have been a regular Member, Senior Member, Fellow or Honorary Member for twenty (20) or more years.  
(Years as an Associate or Student member do not count toward the 20-year requirement).

☐ Date joined ISA (Month & Year) \_\_\_\_\_

Signature \_\_\_\_\_

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## Instrument Society of America

SARNIA SECTION

### September Dinner Meeting Highlights

The first dinner meeting of the year was held on Monday, September 28th at the Sarnia Golf and Curling Club. The prime rib dinner was enjoyed by all. The guest speaker for the night was Carl Farnand from the Novacor Chemicals Styrene Plant. He gave an excellent presentation on ISO 9000, its purpose and reason for existence. It was an interesting presentation for the short notice given - and my thanks again. The meeting was attended by 92 full members and students; a good representation of a good presentation.

#### Program Committee:

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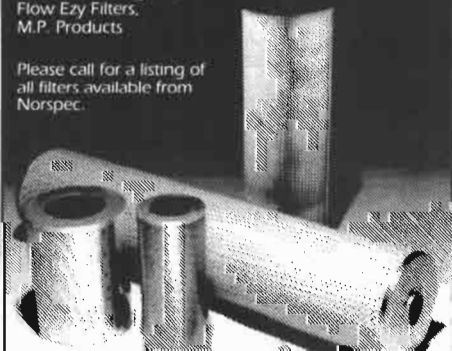


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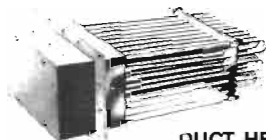
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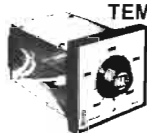
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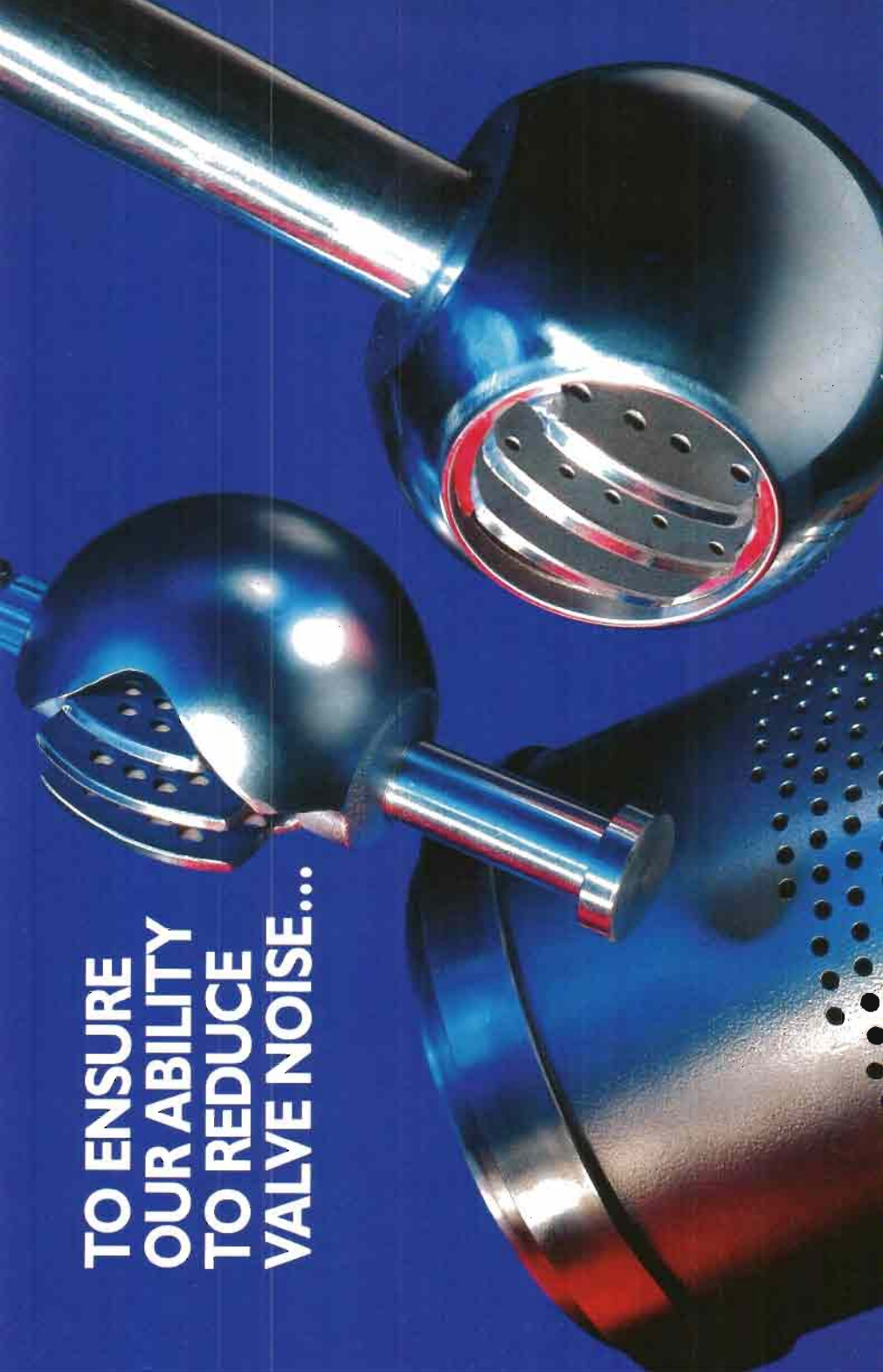
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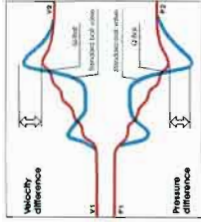
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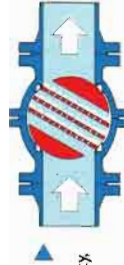
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 Mailing Address: Home ☐ Work ☐ NOTE: Student member applicant, please list permanent home address.  
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 City \_\_\_\_\_  
 State/Province \_\_\_\_\_ Postal Code \_\_\_\_\_ Country \_\_\_\_\_  
 Telephone (include area code or country code) \_\_\_\_\_ FAX \_\_\_\_\_ Telex \_\_\_\_\_  
 Have you ever been a member of ISA? Yes ☐ No ☐ Previous years of membership \_\_\_\_\_  
 Assign me to the \_\_\_\_\_ section or the section closest to my home address.  
 Highest Educational Degree Earned High School ☐ Associate ☐ Bachelor ☐ Master ☐ Doctorate ☐  
 Are you a registered professional engineer? Yes ☐ No ☐ State/Country Registered \_\_\_\_\_

**2** NOTE: Sections 2 and 3 must be completed for processing.  
 Check your primary job function:  
 A: General or Corporate Management  
 B: Product Design Engineering including applied R&D  
 C: Systems Design Engineering including applied R&D  
 D: Production Engineering—process or manufacturing  
 E: Evaluation, Quality Control, Standards, Reliability, Test Engineering  
 F: Basic Research  
 G: Operations or Maintenance  
 H: Purchasing or Procurement  
 I: Education  
 M: Sales—manufacturer's representative  
 N: Sales—other  
 O: Other, describe \_\_\_\_\_  
 What is the primary end product manufactured or service performed at your company location?  
☐ Check here if no manufacturing is done at this location.

**3** Signature \_\_\_\_\_  
 Date \_\_\_\_\_

**4** Division Enrollment — Also enroll me at \$3.00 each in the Divisions checked below. To join Divisions, you must also enroll in a regular or student member.

<b>Automation &amp; Technology Divisions</b> (A) Analysis (M) Automatic Control Systems (D) Computer Technology (P) Electro-optics (I) Maintenance (W) Management	(E) Open Systems Interconnection (H) Process Measurement & Control (C) Robotics & Expert Systems (S) Scientific Instrumentation & Research (N) Telemetry & Communications (J) Test Measurement	<b>Industries &amp; Sciences Divisions</b> (B) Aerospace Industries (G) Chemical & Petroleum Industries (K) Construction and Design (R) Food & Pharmaceutical Industries (Y) Glass & Ceramics Industries (Z) Marketing & Sales	(F) Metals Industries (V) Mining & Metallurgy Industries (O) Power Industry (L) Pulp & Paper Industry (T) Textile Industry (X) Water & Wastewater Industries
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 Ed. \_\_\_\_\_ Sec. \_\_\_\_\_ SIC \_\_\_\_\_ Gr. \_\_\_\_\_ Div. \_\_\_\_\_

**5** Dues Payment Information  
 Please select the level of membership for which applying:  
☐ Regular Member \$55 US (Tax Deductible) \$ \_\_\_\_\_  
☐ Student Member \$9 US (Limited Benefits) \$ \_\_\_\_\_  
☐ Division Membership: \$3 US (each) \$ \_\_\_\_\_  
 Total Amount Due \$ \_\_\_\_\_  
 Annual ISA dues include a subscription to **INTECH**, for which a non-deductible allocation of \$7.00 is made for regular members and \$3.50 for student members.  
 Note: The following are acceptable for remitting dues payment. Please indicate the method used. Make payable to Instrument-Society of America in US currency only. If paying with international funds, see special note below.  
☐ Check ☐ Money Order  
☐ American Express ☐ Eurocard ☐ MasterCard ☐ Visa  
 Acct # \_\_\_\_\_ Exp. Date \_\_\_\_\_  
**Special Note Regarding Transfer of International Funds**  
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☐ Wire Transfer — Add \$5.00 US for processing. Send to ISA Account #1126294, Central Carolina Bank, ABA053100455. Transfer must show applicant's name and address.  
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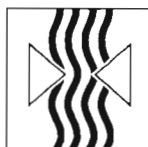
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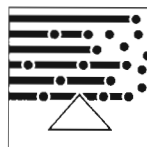
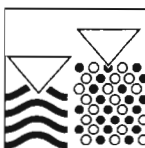
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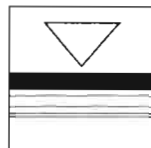


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# Meeting Dates

## MEMBERSHIP DINNER MEETINGS

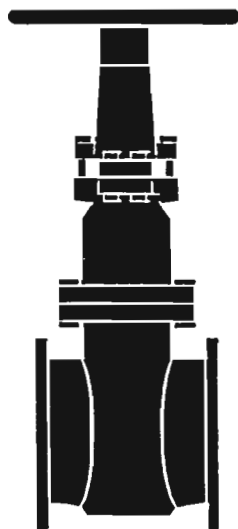
Date	Place
September 28, 1992	Sarnia Golf & Curling Club
November 30, 1992	Sarnia Golf & Curling Club
January 25, 1993	Sarnia Golf & Curling Club
March 29, 1993	Sarnia Golf & Curling Club
May 31, 1993	Sarnia Golf & Curling Club

**Time:** Cocktails @ 6:00 p.m. **Dinner:** @ 7:00 p.m.

## Executive Meetings

Date	Place
July 27, 1992	Drawbridge Inn
September 14, 1992	Drawbridge Inn
November 9, 1992	Drawbridge Inn
January 11, 1993	Drawbridge Inn
March 1, 1993	Drawbridge Inn
April 26, 1993	Drawbridge Inn

**Time:** 7:00 p.m.



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## Dinner Meeting Notice

The second ISA Dinner Meeting will be held on Monday, November 30, 1992 at the Sarnia Golf and Curling Club, 500 Errol Road West, Point Edward. The cocktail hour will begin at 6:00pm followed by dinner at 7:00pm.

The guest speaker for the evening will be Andy Owler, President of Expo Safety Systems Ltd. The topic for the evening will be "The Use of Purging To Protect Electrical Equipment In Hazardous Areas".

Please contact one of the following no later than Friday, November 27th, 1992, to make your reservation.

Gayle at Provincial Controls	(519) 336-7301
Maureen at Willer Engineering	(519) 336-3006

Members	\$8.00
Non-Members	\$13.00

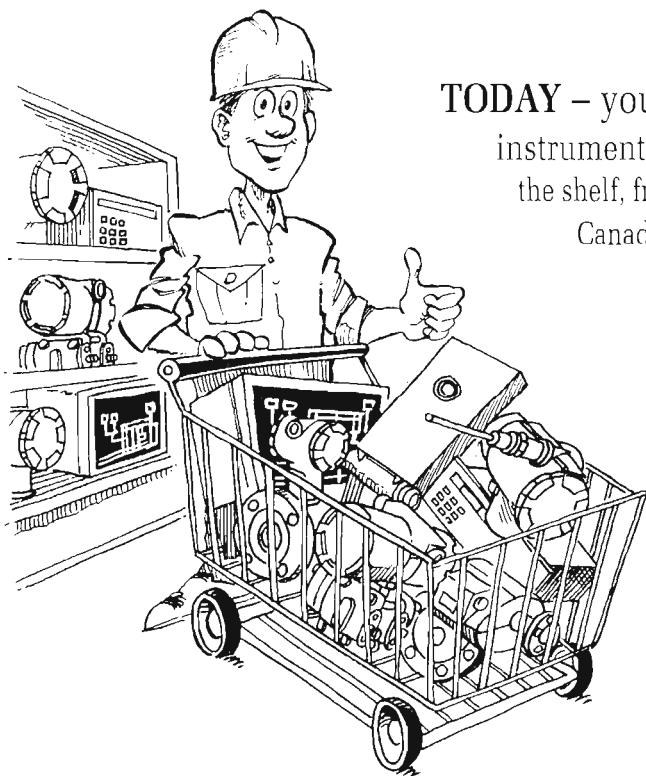
**Program Committee: Mike Murray, Irvin Hawkes**

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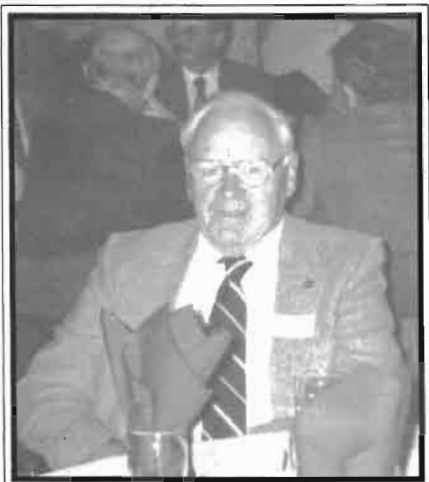
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## ***ISA PERSPECTIVES***



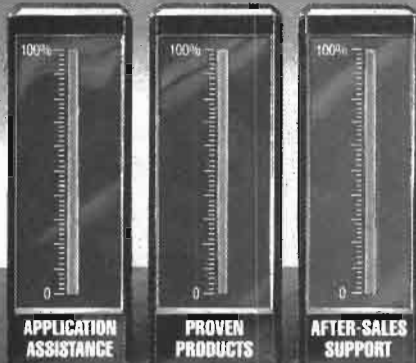
Irvin Hawkes thanks Carl Farnand of Novacor Chemicals for his excellent presentation of ISO 9000.

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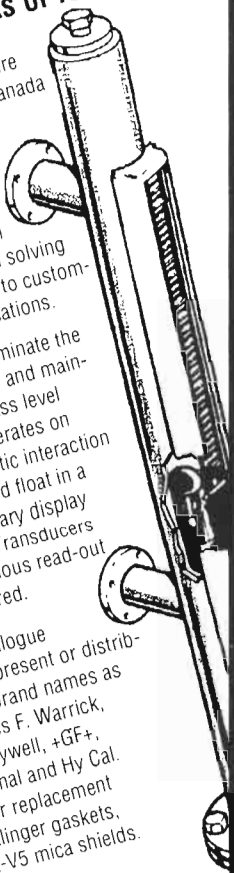
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For accurate, dependable and cost-effective field instrumentation it's hard to beat the SMARTLINE family of 'Smart' pressure, temperature and flow transmitters.

### Fact

- 13 of the top 15 North American pulp and paper manufacturers use the Honeywell ST 3000 pressure transmitter

For standalone applications, the LEADERLINE family of controllers and recorders is fast gaining a reputation for its impressive selection of cost/performance alternatives.

And of course, TDC's plant-wide automation architecture can connect all levels of information from the *sensor to the boardroom*. No other supplier can provide the broad range of truly integrated process-level and business-level system solutions.

## Total support programs

Honeywell offers a portfolio of services that optimize system performance, maximize the use of all system features and extend system life.

System support ranges from on-call services to fully-defined support packages that provide comprehensive hardware and software support. On-site and classroom training is also available for successful implementation of automation projects.

In addition to system and product support of Honeywell equipment our BLANKET SERVICE™ program offers third party system service support on other manufacturers' industrial-related computers, PCs, PLCs, printers, terminals...you name it.

Project support ranges from technical and budgetary feasibility studies to installation and commissioning.

### Fact

- Honeywell has over 70 years experience in the support of process control and factory automation systems.
- Over 99% of customer systems pass *all* tests the first time.
- 98% on-time delivery.

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- Thermocouple Assemblies
- Industrial Thermowell Assemblies
- RTD Assemblies
- Components
- Digital Temperature Controllers
- PH Recorders & Controllers
- Dewpoint Systems

- Thermocouple & RTD Elements
- High Temperature Assemblies
- M-System Temperature Transmitters
- Digital Temperature Indicators
- Relative Humidity Transmitters
- Conductivity Monitors/Controllers
- Moisture Content

### PRESSURE

- Low Cost Solid-State Pressure Sensors
- Precision Pressure Transmitters
- Aerospace/Military Pressure Transducers
- Low Cost P-to-I and I-to-P Converters
- Digital Manometers and Barometers
- Air Data Test Sets
- Pressure Calibration and Testing Services
- Low Pressure Transmitters

- Druck Industrial & Process Pressure Transducers
- Druck CSA Intrinsically Safe Pressure Transmitters
- Plastic Melt Pressure Transducers and Transmitters
- Digital Pressure Gauges
- Portable Pilot Static Testers
- Automatic Calibration for Aircraft Instruments
- High Pressure Down Hole Transducers

### SIGNAL CONDITIONERS LIGHTNING PROTECTION UNITS BARGRAPH INDICATORS DIGITAL PANEL METERS

- Field Mounted Two-wire Signal Conditioners
- M-System CSA Approved Isolators
- Transducer Signal Conditioning
- Power Transducers
- Computation Units
- Bargraph Indicators
- Instrumentation Amplifiers
- Programmable Transducer Amplifiers
- Low Cost Digital Process Meters

- Field Programmable Signal Conditioners
- Light Alarms
- Power Supplies
- M-System Lightning Protection Units
- Frequency Transmitters
- Pneumatic Transducers
- Programmable Filter/Amplifiers
- Smart Digital Panel Meters

### INTRINSIC SAFETY BARRIERS

- Plug-In Shunt Diode Safety Barriers
- Eicon Instruments, Isolators

- High Density Intrinsically Safe Isolated Barriers
- Transformer Isolated Barriers and Signal Conditioning

### TEST MEASUREMENT AND CALIBRATION INSTRUMENTS

- Deadweight Testers
- Druck CSA Intrinsically Safe Portable Digital Pressure Indicators and Calibrators
- Digital Pressure Gauges
- Druck Portable Digital High Pressure Hydraulic Calibration Systems
- Pocket Digital Pressure Gauges
- Unomat Smart Loop Calibrator for Milliamps
- A.S.L. Resistance Thermometry Bridge
- A.S.L. Temperature Calibration Baths
- A.S.L. Standards Psychrometer

- Unomat Frequency Tester & Calibrators
- Piston Gauges
- Druck Multichannel Portable Digital Pressure Indicator and Calibrator
- Druck Precision Pressure Controller/Calibrators
- Unomat Multi-Function Calibrators
- Pressure Calibration Services
- A.S.L. Automatic AC Resistance Bridge
- Precision Thermometer
- Low Pressure Calibrators

### LEVEL FLOW

- Depth/Level Pressure Transducers and Transmitters
- Liquid Level Control Systems
- Leak Detection Systems
- Overflow Prevention Control Systems
- Flow Meters

- Tank Level Gauging
- Precise Liquid Inventory Management
- Vehicle & Railcar Grounding Systems
- Bottom Loading Systems
- Flow/Level Switches

### POSITION DISPLACEMENT LOAD FORCE

- Rectilinear Position Transducers
- Linear Position and Velocity Transducers
- Linear Displacement Transducers
- Force Sensors

- Rotary Position Transducers
- Programmable Position Monitors
- Linear Position Indicators
- Load Cells

### VIBRATION

- Low Cost Piezoresistive Accelerometers
- Instrumentation

- Velocity Sensors
- Monitors

### RECORDERS

- Graphic Recording Systems
- Transient Data Recorders
- Instrumentation Recorders

- Digital Recording/Analysis Systems
- Transient Digitizers
- Waveform Digitizers

### DATA ACQUISITION AND CONTROL SYSTEMS

- Transient Acquisition & Analysis Systems
- Static & Dynamic Data Acquisition Systems
- Portable Battery-Powered Data Acquisition Systems

- Signal Capture & Analysis Systems
- Camac (ANSI/IEEE) Based Data Acquisition Systems

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# **PART 4: APPLYING FOR SENIOR MEMBER STATUS?**

PLEASE UPGRADE MY MEMBERSHIP TO SENIOR. (Requires Admissions Committee review.)

I believe I am eligible for ISA's Senior Member Grade. I have (please check the one item below which applies to you):

1. \_\_\_\_\_ a B.S. or engineering degree and at least 6 years employment in instrumentation—2 of which have been in a position of responsible charge. \* (an advanced degree counts as one of 6 years.)

OR

2. \_\_\_\_\_ 10 years of employment in instrumentation—2 of which have been in a position of responsible charge. \*

\* (Responsible charge includes: a) directing activities of others in instrumentation work; or b) individual responsibility for instrumentation development application or operation at a professional level; or c) teaching instrumentation or associated engineering and sciences at a professional level.)

Education:	Name	Years Attended	Date Graduated	Degree	Major
High School	_____	_____	_____	_____	_____
Technical Institute	_____	_____	_____	_____	_____
College or University	_____	_____	_____	_____	_____
Graduate School	_____	_____	_____	_____	_____

## **Professional Record:**

Date of each position.  
(month/year). Begin with  
most recent position.

1. Name & address of employer
2. Title
3. Duties-especially the extent  
of responsible charge

Number of Years in  
Responsible Charge

(From - To)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(From - To)

\_\_\_\_\_  
\_\_\_\_\_  
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(From - To)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(From - To)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Attach supplement if needed)

**References:** (Give two or more references familiar with your professional activities, preferably ISA members)

1. Name \_\_\_\_\_ Company \_\_\_\_\_ Title \_\_\_\_\_  
Address \_\_\_\_\_ ISA Member Yes \_\_\_\_\_ No \_\_\_\_\_
  2. Name \_\_\_\_\_ Company \_\_\_\_\_ Title \_\_\_\_\_  
Address \_\_\_\_\_ ISA Member Yes \_\_\_\_\_ No \_\_\_\_\_
- Signature \_\_\_\_\_ Date \_\_\_\_\_

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# **N e w s   R e l e a s e**

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## **Suppliers Form InterOperable Systems Project To Accelerate Single International Fieldbus Solution**

MINNEAPOLIS, (September 15, 1992) -- Fisher Controls International, Inc., Rosemount Inc., Siemens AG, and Yokogawa Electric Corporation have announced the formation of the Interoperable Systems Project (ISP). The newly formed, international project is committed to accelerating the availability of interoperable systems and products.

The project's primary objective is to develop a single international, interoperable fieldbus for integration into process automation solutions. Project members have targeted early 1994 for delivering fully open and interoperable fieldbus products. This project is based on the groundbreaking work of the International Electrotechnical Commission (IEC) and the Instrument Society of America, Standards and Practices Group 50 (ISA SP-50), and other proven international fieldbus technologies.

**NOTE:** To have your News Release or Career Opportunities published in the Annunciator, please forward the information to:

### **ISA Sarnia Section**

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Att: Newsletter

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# '92 Process Equipment & Instrumentation Show

Specifically For The Process Industries

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## EXHIBITORS LIST

### 1992 Process Equipment & Instrumentation Show

ABB Instrumentation	163	Line Process Controls	340
AMKO Systems Inc.	122	Lisle-Matrix Ltd.	169
Alpha Controls and Instrumentation	112	MTL Canada Safety Instrumentation	313
Anderson Controls	147	Magnetrol International, Ltd.	157
Aqua Tronix Inc.	139	Metcon Sales and Engineering Limited	243
Armatek Controls Limited	300	Milltronics	324
BTG Canada Inc.	150	Moore Instruments Ltd./Ltee	222/323
Baker Instruments Ltd.	111	Multitest Electronic Inc.	262
Bi-luk Canada	151	Novatech Controls, Inc.	143
Brews Inc.	106	Nupro	363
Bristol Babcock	209	Nutech Equipment	227
C.B. Engineering (Eastern) Ltd.	258/359	Ogden Manufacturing Co.	170
CMS Rotordisk Inc.	408	Ontor Limited	138
CTH Industrial Controls Ontario Ltd.	146	Patterson Industries (Canada) Limited	301
Cajon	363	Pribusin Inc.	310
Canadian Meter Company Inc.	118	Process Instruments and Components	130
Canadian Society for Chemical Engineering Toronto Section	327	Proquip International	338
Canadian Worcester Controls	134	Protech Instrumentation & Control Services Inc.	128
Cancoppas Limited	328	Richards Industries Valve Group, Inc.	275
Canron Inc.	108	Robertshaw Controls Canada Inc.	342
Chemline Plastics Limited	305	Romatec	355
Comdale Technologies (Canada) Inc.	306	Ronan Engineering Ltd.	320
Cyronix Inc.	104	Rotevs Inc.	312
Dulan Stainless Inc.	167	SRP control systems Ltd.	200
Endress & Hauser Canada Ltd.	242	SSCAN-Grodyn Controls	
Enercorp Instruments Ltd.	211	Safety Supply Canada Ltd.	219
Engineered Filter Systems, Inc.	126	Sarnia Piping Specialties Ltd. (SPS)	229
Farris Industries Canada	329	Scepter Manufacturing Co. Ltd.	108
Fike Canada Inc.	137	Spirax Sarco Canada Limited	166
Firing Industries Ltd.	100/201	Summa Engineering Limited	239
Fiolite Industries	141	Swagelok Canada Ltd.	363
Floval Equipment Limited	153	Syber Systems Inc.	213
Globaltech Process Controls Ltd.	263	Thermo-Kinetics Company Limited	162
Hayward Industrial Products Canada Inc.	108	Transduction Limited	356
Heath Consultants Ltd.	132	Versatile Measuring Instruments, Inc.	206
Holland Instrument Co. Ltd.	127	Wallace & Tiernan Canada	128
IC Controls Ltd./Ltee	228	Weighpoint Division Macro-Point Ltd.	346
IMO Industries (Canada) Inc.	406	Westech Industrial Ltd.	119
Industrial Technical Services	168	Westinghouse Automation Technology	154/158
Kambria Controls Limited	207	Whitey	363
R.A. Kirby Sales Inc.	109	Willer Engineering Limited	105
Leeds & Northrup	214/218	York Fluid Controls Ltd.	318



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**Inicon** - Heat Tracing Control

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Tuesday, May 11th - 12:00 noon - 6 p.m.

Wednesday, May 12th - 11:00 a.m. - 6 p.m.

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*This index lists manufacturers and trade-names alphabetically and enables users to determine the local representative for a particular manufacturer or product.*

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3-D	Alpha Controls & Instrumentation
3M Circuit Tracer Kit	Transcat
A.W. Sperry	Transcat
ABB Kent-Taylor - Recorders	Transcat
ABB Metrawatt	Transcat
Acopian	Transcat
ACR Systems	Alpha Controls & Instrumentation
Acrolab	Globaltech
Acromag	Willer Engineering
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Action Instruments	Norspec Controls
AEMC	Transcat
AERCO	Valley Process Specialties
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Alnor	Transcat
Altek	Alpha Controls & Instrumentation
Altek	Transcat
AMAL/Richards	Cantrols
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Ametek - PMT	Brian Controls
Ametek - U.S. Gauge	Brian Controls
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Amri Valves	Sharp Valve & Instrumentation
Analogic	Transcat
Anarad	Willer Engineering
Anderson Greenwood	Cantech Controls
Apollo	Romatec
Appalachian Controls	Cantrols
Applied Automation	Westech
ARi	Alpha Controls & Instrumentation
Arjay	TubeTech
Armatek	Armatek Controls
Armstrong	Willer Engineering
Armstrong Monitoring	Norspec Controls
ASCO	Conval Equipment
ASCO	Lakeside Controls
ASCO	TubeTech
ASCO	Westburne Lytle
Ashcroft	Transcat
Ashcroft-Dresser	Conval Equipment
Athena	Transcat
Atkins	Transcat
Azonix	Transcat
B & K	Transcat
B/W Controls	Cantrols
Bacharach	SSCAN-Grodyne
Bacharach - Hand Held Instruments	Transcat
Badger Meter	J & M Industrial Supply

**Manufacturer/Tradename**

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Barksdale  
Baumann Control Valves  
Beamex  
Bebco Industries  
Beckman  
Beckman - Cedar Grove  
BEHA  
BEI  
Bellofram  
Bellofram  
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Beta  
Beta Products  
Bi-Lok  
Biddle  
Bio-Tek  
Birkett/Richards  
Brandenberg  
Brandt  
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Brooks Inc.  
BS & B  
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Chart Pens Inc.  
Chemtrol  
Chessell  
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Collins Instrument Company  
Compressor Controls Corporation  
Conant Controls  
Conders  
Conoflow  
Consolidated  
Consolidated Controls  
Control Instruments Corp.  
Control Microsystems  
Cooper Instruments  
Cosense  
Crane Deming  
Crosby Safety Valves  
Crown  
Custom Control Sensors  
Daniel  
Data Industrial  
Data Instruments Inc. - USA  
Data Lynx  
Data Precision

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Sharp Valve & Instrumentation  
Conval Equipment  
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Cantrons  
Transcat  
Transcat  
Transcat  
Willer Engineering  
Conval Equipment  
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SSCAN-Grodyne  
Transcat  
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Transcat  
Transcat  
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Transcat  
Willer Engineering  
Brian Controls  
Transcat  
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Huron Valve & Fittings  
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PMP Instrumentation  
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Willer Engineering  
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Cambridge Controls  
Technel  
SSCAN-Grodyne  
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Degussa  
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Delta C Technologies  
Deltapilot  
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Detector Electronics  
Devar  
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Dianachart  
Dickson  
Dopak  
Dover Gas Technologies  
Dowty Electronics  
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Dresser  
Druck  
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DSP Technology  
Dwyer  
Dwyer  
Dynapar  
ECD  
ECG  
Eaton Consolidated Controls - USA  
Echotel  
El-O-Matic  
Elcon Instruments  
Electrodata  
Endustra  
Enertronic Shocks  
Environics  
Environment S.A.  
Eppley Labs  
ESKO Industries  
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Exac  
Exact  
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F.W. Murphy  
Facet  
Farr  
Fike Canada Inc.  
Finite  
Firerod Cartridge Heaters  
Fischer & Porter - Rotameters  
Fisher Controls  
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Fisons Instruments  
Fleetguard  
Flow Ezy Filters  
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Fluitek  
Fluke  
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Furon Unitherm  
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Endress & Hauser  
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Westech  
Norspec Industrial Filters  
Norspec Industrial Filters  
Foxboro Canada  
Provincial Controls  
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Armatek Controls

**Manufacturer/Tradename**

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 Gauging Systems Inc.  
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 General Resistance  
 GGOSCO Engineering  
 GGOSCO Needle Valves  
 GLA Elettronica  
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 GO  
 GP:50 New York Ltd.  
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 Haenni  
 Haenni Instruments  
 Hammel Dahl  
 Hampshire Controls  
 Hansen Quik Connects  
 Heise  
 Hengstler  
 Heraeus Sensors  
 Hewlett Packard  
 Hex Valve  
 Hitachi - Oscilloscopes  
 Honeywell  
 Honeywell - Controllers & Recorders  
 Honeywell - Recorders  
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 Industrial Control Services  
 Industrial Scientific Corporation  
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 Inor  
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 Intelligent Controls  
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 Interface  
 International Sensor Technology  
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 Intertec  
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 Willer Engineering  
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 SRP controls  
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 Valley Process Specialties  
 U & I Supply  
 Conval Equipment  
 Transcat  
 J & M Industrial Supply  
 Neles-Jamesbury  
 Transcat  
 Provincial Controls  
 Transcat  
 Globaltech  
 SRP controls  
 Transcat  
 Brian Controls  
 Transcat  
 Brian Controls  
 Cantech Controls  
 Provincial Controls  
 Transcat  
 SSCAN-Grodyne  
 Cantech Controls  
 Transcat  
 Cantech Controls  
 Endress & Hauser  
 Foxboro Canada  
 CB Engineering  
 SRP controls  
 Transcat  
 Veronics  
 Provincial Controls  
 Transcat  
 U & I Supply  
 Armatek Controls  
 SSCAN-Grodyne  
 Norspec Controls  
 Westech  
 Cantech Controls  
 Alpha Controls & Instrumentation  
 CB Engineering  
 SRP controls  
 Cantech Controls  
 CB Engineering  
 Willer Engineering  
 Industrial Projects  
 SSCAN-Grodyne  
 ATS-Alltemp  
 Sarnia Piping Specialties  
 Brian Controls  
 Veronics  
 Willer Engineering

**Manufacturer/Tradename**

ITT Barton Instruments  
 ITT Diaflow  
 ITT Neo-Dyn  
 J-Tec  
 Jacoby Tarbox  
 Jamesbury  
 JB Engineering  
 Jensen  
 Joffra Inc.  
 Jofra  
 Johnson Yokogawa  
 Jordan Controls  
 Jordan Valve  
 Joucomatic International  
 K-Flow  
 K-Tek  
 Kammer  
 Kane-May  
 Kanomax  
 Kates  
 Kay Ray/Sensal Inc.  
 Kaye  
 Kaye Instruments  
 KeddcO Mfg Ltd.  
 Kenco Plastics  
 Kenwood USA  
 Ketema - McCrometer  
 Ketema - Schutte & Koerting  
 Kinetic Systems Corporation - USA  
 Kinetrol  
 King Instrument  
 Klinger  
 KNF Neuberger  
 Kotron  
 Kurz  
 Kurz  
 L & J Technologies  
 Land Instruments  
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 Major  
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 Marpac  
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 Masoneilan  
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 Romatec  
 CB Engineering  
 Romatec  
 Romatec  
 Ncles-Jamesbury  
 Transcat  
 Transcat  
 Brian Controls  
 Transcat  
 CB Engineering  
 Cambridge Controls  
 Jenkinson & Company  
 Conval Equipment  
 Willer Engineering  
 J & M Industrial Supply  
 Bestobell  
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 Rosemount Instruments Ltd.  
 Transcat  
 CB Engineering  
 U & I Supply  
 Armatek Controls  
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 Provincial Controls  
 SSCAN-Grodyne  
 Transcat  
 Westburne Lytle  
 Norspec Controls  
 Transcat  
 Honeywell  
 Romatec  
 ATS-Alltemp  
 PMP Instrumentation  
 Transcat  
 ATS-Alltemp  
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 Transcat  
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 SRP controls  
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 Sarnia Piping Specialties  
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 Sharp Valve & Instrumentation  
 Norspec Industrial Filters  
 Willer Engineering

**Manufacturer/Tradename**

MCF Ball Valves  
Mead  
MECI  
Mercer Electronics  
Meriam Instruments  
Mescon Technologies  
Metricor  
Metrix  
Micon  
Micro Motion Inc.  
Micro Movements  
Micronics Limited  
Mid-West Instrument  
Mikron  
Milton Roy - Liquid Metronics Division  
Modulevel  
Molytek  
Monarch  
Monitek  
Monitor  
Monitor Labs  
Moore Industries  
MTL IS Barriers  
Multi-Volt  
Myron L  
Nassau Instrument  
Neles  
Neles-Jamesbury  
Neotronics  
Nester  
Nicholson  
Nilcor  
Nivosonic  
NLS  
Norman  
Nugent  
Numatics  
Nupro  
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O'Brien  
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Ohmart  
Oklahoma Safety Equipment  
Oliver Valves  
Omron  
Orange Research  
Orbecco-Hellige  
Orion  
Pacer Industries  
Pacific Instruments  
Panalarm  
Panametrics PCI Division  
Parker  
Penberthy  
Penberthy Canada  
Permacal  
Philips ECG  
Phipps & Bird  
PMC  
PMV  
Polytronics  
Posiseal

**Local Sales Representative**

Lakeside Controls  
Transcat  
Globaltech  
Transcat  
Transcat  
Norspec Controls  
Willer Engineering  
Transcat  
Cantech Controls  
Rosemount Instruments Ltd.  
SRP controls  
Veronics  
Brian Controls  
Transcat  
U & I Supply  
Provincial Controls  
Transcat  
Transcat  
Willer Engineering  
Romatec  
Brian Controls  
Armatek Controls  
Provincial Controls  
Transcat  
Transcat  
Transcat  
Neles-Jamesbury  
Atlas Alloys  
Transcat  
Transcat  
Romatec  
Sharp Valve & Instrumentation  
Endress & Hauser  
Transcat  
Norspec Industrial Filters  
Norspec Industrial Filters  
Provincial Controls  
Huron Valve & Fittings  
Armatek Controls  
Armatek Controls  
Cantech Controls  
G.L. Stebbins  
ATS-Alltemp  
Sarnia Piping Specialties  
ATS-Alltemp  
Provincial Controls  
Transcat  
Transcat  
Transcat  
SRP controls  
Cambridge Controls  
Veronics  
TubeTech  
Westburne Lytle  
Brian Controls  
Provincial Controls  
Transcat  
Transcat  
Transcat  
Romatec  
Transcat  
Lakeside Controls

**Manufacturer/Tradename**

Powers Process Control  
 Preso  
 Presto-Tek  
 Pribusin  
 Princo Instruments  
 Promac  
 Promac  
 Prominent Fluid Controls  
 Proquip  
 Provincial Instrument Housings  
 Provovox  
 Proximity Control  
 PTC  
 Pulsafeeder  
 Purolator  
 Pyramid  
 QEL  
 QSDM  
 QSDM  
 Qualimetrix  
 Quantek  
 Quantum  
 Quest  
 Ralston  
 Ramsay Canada  
 Raytek  
 RdF  
 Refilco  
 Reotemp  
 Reotemp Instruments  
 Research Control Valves  
 RIS  
 RMS Instruments Corporation - USA  
 Robbins Myers  
 Robertshaw  
 Rochester Instrument Systems  
 Rohrback Cosasco  
 Ronan  
 Rosemount - Combustion Controls  
 Rosemount Analytical Inc.

**Local Sales Representative**

Conval Equipment  
 Willer Engineering  
 SRP controls  
 Provincial Controls  
 Armatek Controls  
 Globaltech  
 Transcat  
 Norspec Controls  
 PMP Instrumentation  
 Provincial Controls  
 Lakeside Controls  
 Provincial Controls  
 Transcat  
 Romatec  
 Norspec Industrial Filters  
 Romatec  
 TubeTech  
 Alpha Controls & Instrumentation  
 Willer Engineering  
 Transcat  
 Norspec Industrial Filters  
 Transcat  
 Transcat  
 Transcat  
 Canrols  
 Transcat  
 Willer Engineering  
 Norspec Industrial Filters  
 Valley Process Specialties  
 ATS-Alltemp  
 Lakeside Controls  
 Transcat  
 Technel  
 U & I Supply  
 Sharp Valve & Instrumentation  
 Controls  
 Armatek Controls  
 Industrial Projects  
 Romatec  
 Rosemount Instruments Ltd.

**Manufacturer/Tradename**

U.S. Gauge  
 Unimeasure  
 United Electric  
 United Electric  
 United Sciences Inc.  
 Universal  
 Universal Enterprises  
 Unomat  
 Unomat  
 V.P.S.  
 Valhalla  
 Valtek  
 Valve Assemblers & Mfrs. Inc.  
 Vanessa  
 Vanzetti Systems  
 Varec  
 Variomag  
 Veeder-Root  
 Velan  
 Versatile Measuring Instruments

**Local Sales Representative**

Transcat  
 SRP controls  
 Brian Controls  
 Cambridge Controls  
 Willer Engineering  
 Alpha Controls & Instrumentation  
 Transcat  
 SRP controls  
 Transcat  
 Valley Process Specialties  
 Transcat  
 Conval Equipment  
 Controls  
 Westburne Lytle  
 Norspec Controls  
 Westech  
 Endress & Hauser  
 Transcat  
 Westburne Lytle  
 SRP controls



## Past-Presidents of the Sarnia Section of I.S.A.

1946/47	Bill Graeb	1969/70	Ray Wechselberger
1947/48	Amby Upfold	1970/71	Bill Glendon
1948/49	Ron Chamberlane	1971/72	Curt McDonald
1949/50	Don Livingstone	1972/73	Everett Maness
1950/51		1973/74	Stan Thrift
1951/52	Ken Goldring	1974/75	E.A. Comello
1952/53	Amby UpFold	1975/76	Bernard West
1953/54	Warren McKay	1976/77	Jim Henrikson
1954/55	Jack Heatley	1977/78	Jim Johnson
1955/56	Larry Hall	1978/79	Ron Thurier
1956/57	Harold Kohlmeier	1979/80	Dave Braedley
1957/58	Ron Asselstine	1980/81	John Stassen
1958/59	Mike Hicks	1981/82	Wayne Jamieson
1959/60	Mike Hicks	1982/83	Frank Bandura
1960/61	Mike Hicks	1983/84	John Tranter
1961/62	George Mills	1984/85	Robb Sharp
1962/63	Robert Brayne	1985/86	Ron Kells
1963/64	Robert Newman	1986/87	Howie Whitton
1964/65	Robert Newman	1987/88	Joe Lobo
1965/66	Ted Stock	1988/89	Irvin Hawkes
1966/67	Ted Stock	1989/90	Rich Paterson
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