

Contents

Presidents Address...	1
Evolution of Level Measurement...	3
District 13 Reports...	2
Board of Directors...	4
Membership Application...	4

ANNOUNCEMENT

Vendors are invited to display their products at the Dinner Meetings. 2 tables are available.

Contact Program Committee Don Murch or Glen Fournier. Cost \$50 per table.

NOW AVAILABLE!

The 2000 Sarnia ISA Directory is now available.

Call...
(519) 332-2300
for details.



DINNER MEETING NOTICE



MONDAY
September 25, 2000



SARNIA GOLF & CURLING CLUB
500 Errol Road West, Sarnia • Phone: (519) 336-2201

Cocktails 6:00 p.m. • Dinner 7:00 p.m. • All Guests are Welcome!

GUEST SPEAKERS...

NED ESPY, Documenting Calibrator of BEAMEX Inc.

TOPIC: Establishing an Instrument Calibration Management Systems (ICMS)

M • E • N • U

Mixed Greens with Italian Dressing
Chicken Cordon Bleu • Glazed Baby Carrots • Roasted Sweet Potato
Cherry Cheesecake

** For special dietary needs contact Hilda White at the Sarnia Golf and Curling Club 48 hours prior to meeting date.*

NOTE: KINDLY BOOK BEFORE DEADLINE INDICATION.

Please phone in or E-Mail your reservation by...

Thursday, September 21st, 2000 to... MAUREEN LYNAS

Phone: (519) 336-3006 • Fax: 344-0607 • E-Mail: cookets@novachem.com

MEMBERS \$10 • GUESTS \$15

NOTE: ALL Members and guest are requested to reserve in advance. Please oblige... we need your support to plan your evening!



President's Address

It only seems like we had our annual dinner and now we are beginning a new year's program. I hope that everyone had an enjoyable summer and we are all prepared to face a new and challenging year. Our executive has been active in preparing the program for the coming year and we hope that you all meet the challenge that will be before you. We have new technologies being presented to us, we are experiencing amalgamations of companies, ones that we expected would be stable and strong. Times are changing and so is the ISA organization. We have a new name change "International Society for Measurement and Control" and our logo has also changed. It comprises of three arcs each in a different blue color, forming a circle with the modern lettering ISA inside the circle. Our by-laws will change as well as the executive board organization, which is structured more from the rank and file rather than high profile executive member positions.

This year our Section will be busy adapting to these changes as well as our active programs. Our Table Top show will take some of our time and I am pleased as well as confident that we have a strong committee working on this event. We will continue to participate with the Engineering week and with the Science Fair, support our Student Section and attempt to provide our members some educational programs. Of course our golf committee will continue to provide us a good social day in June.

The executive has accepted the challenge and it will not let you down, we are all prepared to work for your behalf but we also need your support. If any one has any questions or wish to work on a committee or executive position please give me a call at 337-8251 ext.5871 or e-mail me at rjdenn@xcelco.on.ca.

Looking forward in seeing you at the dinner meeting on Monday September 25 at the Sarnia Golf and Curling Club at 6:00 p.m.

Regards, Randy Dennie. President

PS don't forget to register for the dinner.



Upcoming Dinner Meetings

- ▶ November 27th, 2000
- ▶ January 29th, 2001
- ▶ March 26th, 2001
- ▶ May 28th, 2001



"ISA" Name Change!

The acronym ISA now stands for...

ISA - The Instrumentation, Systems
and Automation Society



Employment Opportunity

INSTRUMENT TECHNOLOGIST / ENGINEER

CEM Specialties Inc. is a leading Canadian systems integrator of air pollution monitoring systems for industrial sources. We are an ISO 9001 registered company located just outside of London, Ontario. The work environment is typically "fast paced" and multi-tasking is often necessary. Our clients are primarily located in Canada, US, Mexico, South America, India, Jordan and other overseas countries. CEM Specialties Inc. has two (2) immediate openings for "INSTRUMENT TECHNOLOGIST / ENGINEERS" to join our expanding company.

For more information or to apply...

22423 Jefferies Road
Komoka, ON N0L 1R0
Tel: (519) 641-6431
Fax: (519) 641-6536
www.cemsi.on.ca



The Sarnia Section has a domain on the internet.
Next time you're on the net give us a look at:
www.isasarnia.com



District 13 Delegates Report

August, 2000

On Sunday August 20th I attended the District 13 council meeting where we registered the delegates and reviewed the major issues.

On Monday August 21st I attended the annual members meeting and delegates forum. Here the delegates receive reports from the Society president, Treasurer and President-elect Secretary and then followed up by presentations by Delegates organized by the District Vice Presidents.

Parliamentary procedures were reviewed and then we moved to the Council Of Society Delegates meeting. There were 120 sections (26,726 members) represented of which 81 sections (15,520 members) were needed to meet a quorum.

The following changes were voted on and passed by a majority:

- *The name becomes "ISA-The Instrumentation, Systems and Automation Society."*
- *Relocate the state of incorporation of ISA from Pennsylvania to North Carolina.*
- *Approved the bylaw changes required to implement the recommendations of the Society Structure Task Force.*
- *Approved a motion to amend the bylaws to clarify the composition of the Executive Board.*
- *Approved a motion to change the terms of office to a calendar year basis.*
- *Approved a motion that the European Region be recognized as District 12 and the India Region of District 12 be reassigned to District 11.*

Then there was a nominating committee report; followed by an election of officers (all voted in unanimously). Pierguiseppe Zani (Aero Products International) Italy section to be the next President-elect Secretary.

The District Vice Presidents were introduced and the retiring officers were recognized. The gavel was transferred and the meeting was adjourned.

Respectfully submitted

Mike Murray



District 13 Council Meeting Report

August, 2000

There were 16 District 13 members in attendance with 7 sections represented and 1 section inactive. All delegates were recognized and given their ribbons.

The major issues were discussed with representations by Diana Bouchard and Ken Hamilton. President-elect Secretary Bob Balliet entered the room and participated in the discussion answering any questions.

The dates and location for the District 13 Leadership Conference (workshop) were discussed. Location is to be in Moncton N.B. either on April 27-28-29 or May 4-5-6.

There were no requests for funding the first year of the D.V.P.'s travel but will happen in the second year.

Only one section made a report at this meeting which was Montreal. Reporting some financial difficulty and that they would not be running a section show this year - No volunteers.

Finally under other business was the request from ISA for regional shows but we still voted it down at this time.

Respectfully yours

Mike Murray

District 13 D.V.P. Elect.

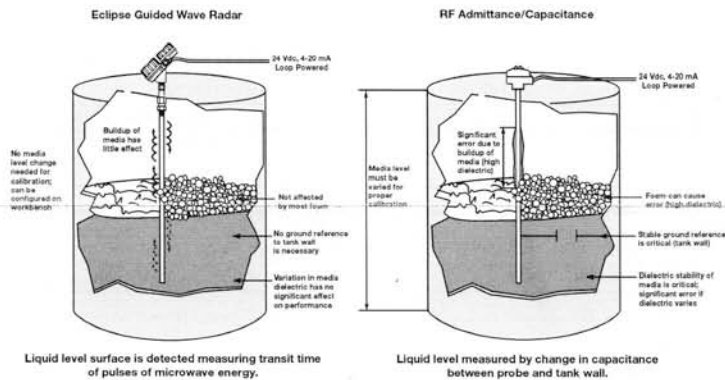
ISA The Evolution of Level Measurement: The Next Step in Radar

Continued from the May 2000 Annunciator

Written for the Sarnia ISA by Kevin Martyn Magnetrol Canada
(email kmartyn@magnetrol.com)

As the focus of this article is more on the process side, let's compare the guided wave approach with some other common level technologies, used in these applications.

Below is a diagram and chart comparing GWR with RF capacitance.



Technology> Process Conditions	Eclipse Guided Wave Radar	RF Admittance / Capacitance
>750F	Yes	Yes
5000psi	Yes	Yes
$\epsilon_r < 1.4^*$	Yes	Marginal - Limited Span
Changing ϵ_r^*	Yes	NO
Changing SG	Yes	Yes
Vapors	Yes	Yes
Foam	Most	NO
Turbulence	Yes	Yes
Buildup	Most	NO (high ϵ_r)
Obstructions	Yes	Yes
Grounding to fluid required	No	Yes
Insulated coating required on probe	No	Yes (high ϵ_r)
Leak Sources (pollution)	1	1
Accuracy: +/- % of Span	<0.25%	1 - 3%
Installation \$	Low	Low
Calibration \$	Low - No level movement required	High (must vary & verify level)
Hardware \$	Low - Medium	Low

* ϵ_r = electrical dielectric

Capacitance has been used for many years, as it is very flexible, however it is also very application sensitive, and there are some challenging calibration issues. As a manufacturer of both radar and capacitance level, we have to admit, that now may be the time to replace some of those troublesome capacitance applications.

For more information on RF Capacitance vs GWR request technical bulletin 7-202.0

And lastly is the popular D.P. transmitter, originally developed for pressure and flow (differential pressure), but can also be used for level. The biggest concern here, is the fact that it connects to the tank below the fluid level (leak hazard) and is affected by changing Specific Gravity. They infer the level by measuring hydrostatic head pressure or weight.

If you are a D.P. level transmitter user who would like to eliminate

- drift due to Specific Gravity changes
- calibration issues
- plumbing problems
- expensive seals

and also have the ability to work in dirty liquids, then read on.

First look at the diagram below, so you can understand some of the issues with the DP approach.

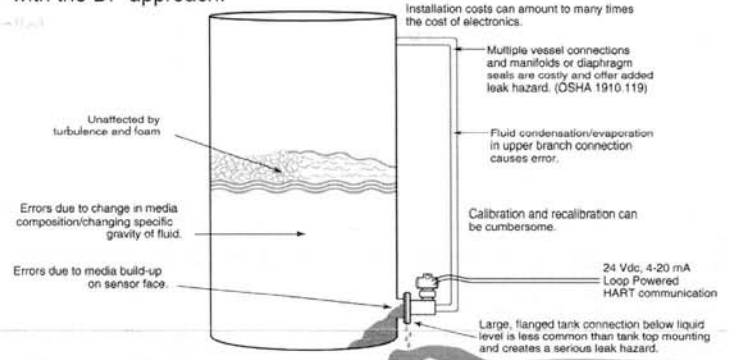


Figure 3
Liquid Level Measurement: Pressure/DP

Technology> Process Conditions	Eclipse Guided Wave Radar	Differential Pressure
-230 to 750F	Yes	NO, typically only 250F, but may be increased to 650F with use of inexpensive diaphragm seals and filled systems.
Calibration required	No, just simple configuration	Yes, calibration / re-calibration can be cumbersome and costly.
Connection above fluid level	Yes, easily removed from top of tank - little leak risk, single high integrity seal.	Need to drain tank, multiple connections for pressurized vessels. Leak risk.
Unaffected by changing specific gravity	Yes	NO, S.G. changes will cause significant error.
Sensor coating has minimal effect	Yes	NO, dirty media may require seals, and flushing to clean.
Cost	Inexpensive to purchase, install, and maintain. Invasive design simplifies installation on heated vessels.	Inexpensive to purchase but installation cost of the hardware. Cumbersome installation on heated vessels often requires heat tracing and insulation.

I hope you found this brief over view informative. Let me summarize the advantages of Eclipse Guided Wave Radar:

Requires no calibration, built in dynamic reference.
Not affected by changes in process media, such as S.G. or dielectric.
Temperatures: -230F to 750F.
Pressures: full Vac. to 5000 PSI.
Dielectrics down to 1.4.
Enters vessel above fluid level.
Connections as small as 3/4"
High Integrity fugitive emission seal.
Direct entry or bypass installation.

All this for about \$2600 CDN, and it's proven in thousands of applications around the world.

Please feel free to e-mail the author with any questions or comments you might have.

Below is a list of web sites of manufacturers of radar type level transmitters:

www.endress.com	Endress+Hauser	www.krohne.com	Krohne
www.ktekcorp.com/	K-Tek	www.magnetrol.com	Magnetrol
www.milltronics.com	Milltronics	www.ohmartvega.com	Ohmart-Vega
www.rosemount.com	Rosemount	www.tnksi.com/	TN-KSI



Executive 2000-2001

Position

President	Randy Dennie	337-8252 ext. 5871	339-7723 (W) 542-0179 (H)	rjdenn@xcelco.on.ca
Vice-President	Kalpen Vachharajani	332-1717 ext.237	332-8715	vachharajani@paton.org
Science Fair, Engineering Week, Donations				
Executive Assistant	Mike Spearman	344-1339	344-3824	m.spearman@wika.ca
Treasurer	Brian Patterson	337-7591	336-0997	bpatterson@peacock.ca
Assistant Treasurer	Andy Tucker	383-3704	383-8285	andy.tucker@ontario.honeywell.com
Directory	Randy Dennie	337-8252 ext. 5871	339-7723 (W) 542-0179 (H)	rjden@xcelco.on.ca
Newsletter Chairperson, Advertising	Bob Devine	332-2300	332-6640	bob.devine@frco.com
Newsletter Editor, Users Directory	Rob Thrift	339-2272	339-5729	rthrift@xcelco.on.ca
Web Master, Internet/Electronic Communications	Brian Smith	332-1212 ext.7920	339-7301	smithb@novachem.com
Program Chairman	Don Murch	431-1916	431-1108	murchfam@mnsi.net
Program Assistant	Glen Fournier	331-0433	336-8975	glen.fournier@ca.endress.com
Honours & Awards Chairman	Aldo DeSantis	344-4300	344-0042	aldo@controvalve.com
Honours & Awards Assistant	T.B.A.			
Membership Chairman	James Callery	337-2301	383-1736	jcallery@suncor.com
Membership Assistant	Glen Williamson	481-3202	481-3336	williaga@novachem.com
Student Section Liaison	Mike Grey	542-7751 ext.3308	542-6667	mike.grey@lambton.on.ca
Standards and Practices Chairman	Robert Thibault	464-6400		thibault@mooreproduct.com
Standards and Practices Assistant	T.B.A.			
Education Chairman, Courses & Seminars	T.B.A.			
Past President, Society Delegate	Mike Murray	383-1709	339-0481	mmurray@suncor.com
ISA Show Committee Chairman	Wayne Wilkins	383-0922	383-0534	wwilkins@samsconcontrols.com
ISA Show Committee Assistant	Marc Bouffard	336-8820 ext. 229	336-2033	bouffard@tct.net
Golf Tournament Chairman	Gary Coles	337-0777	337-4445	mvfsar@xcelco.on.ca
Golf Tournament Assistant	Gerry McKone	332-2300	332-6640	gerry.mckone@frco.com
DVP	Hank Rasanen	905-877-8786	905-877-0429	
DVP Elect	Mike Murray	383-1709	339-0481	mmurray@suncor.com
Dist 13 Admin. at RTP	Bill Palmer	919-549-8411	919-549-8288	wpalmer@isa.org

MEMBERSHIP FORM



INSTRUMENT SOCIETY OF AMERICA

This form may be used by any interested person wanting to join ISA or ISA International, including students. For assistance contact ISA Member & Customer Service at (919) 549-8411.

Please type or use block letters. Sign and date below, in Section 3.

1 Name ☐ Male ☐ Female Birthdate _____

Company Name _____ Division/Works _____

Position/Title _____

☐ Check here if you are a full-time student and complete the following. School _____ Year of Graduation _____

Mailing Address: ☐ Home ☐ Work NOTE: Student member applicant, please list permanent home address.

Street Address / P.O. Box _____ Mail Stop _____

City _____ State _____ Country _____

State / Province _____ Postal Code _____ Fax _____

Telephone (include area code or country/city code) _____

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 Education Degree Earned ☐ High School ☐ Associate ☐ Bachelor ☐ Master ☐ Doctorate

Are you a registered professional engineer? ☐ Yes ☐ No State / Country Registered _____

☐ From time to time we may make our mailing list available to companies whose products or services may interest you, please check this box. We will respect your wishes.

2 NOTE: Sections 2, 3 and 5 must be completed for processing.

Check your primary job function:

☐ A: General or Corporate Management
☐ B: Control Systems Engineering
☐ C: Design Engineering
☐ D: Production Engineering
☐ E: Plant Engineering or Maintenance
☐ F: Software Engineering
☐ G: Plant Information Systems
☐ H: Systems Integration
☐ I: Measurement, Testing, Quality or Standards
☐ J: Research and Development
☐ K: Technical or Engineering Support
☐ L: Operations
☐ M: Purchasing or Procurement
☐ N: Education or Training
☐ O: Marketing or Sales
☐ P: 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.

Signature _____

Date _____

5 Dues Payment Information

Please select the level of membership for which applying:

☐ Regular Member \$65 US (Tax Deductible) \$ _____

☐ Student Member \$9 US (Limited Benefits) \$ _____

☐ Division Membership \$5 US each \$ _____

☐ Industrial Computing Society Membership (reg. \$55) \$30 - must be an ISA Member \$ _____

TOTAL AMOUNT DUE \$ _____

Annual ISA dues include a subscription to **INTECH**, for which a non-deductible allocation of \$8.00 is made for regular members and \$3.50 for student members.

NOTE: The following are acceptable for remitting dues payment. Please indicate the method of payment by marking the appropriate box. If you are a member of ISA in US Currency only, if paying with international funds, see special note below.

☐ Check ☐ Money Order ☐ American Express ☐ Eurocard ☐ MasterCard ☐ Visa

Account# _____ Expiry Date _____

Special Note Regarding Transfer of International Funds

Credit Card Payment is preferred; checks with proper MICR bank encoding must be drawn on your bank's correspondent NY or other US bank. Amount payable to ISA must include any bank or other processing charges.

☐ Wire Transfer - Add \$5.00 US for processing. Send to ISA Account #1126294, Central Carolina Bank, ABA 35310465. Transfer must show applicant's name and address.

☐ UNESCO Coupons ☐ Money Order - Add \$5.00 US for processing.

☐ Instrument Society of America Instrument Society of America P.O. Box 580, Durham, North Carolina 27702 USA

If paying by credit card, fax to: (919) 549-8288

3 Check here if no manufacturing is done at this location.

Signature _____

Date _____

4 DIVISION ENROLLMENT - Also enroll me at \$5.00 each in the Divisions checked below. To join Divisions you must also enroll as a regular or student member.

Automation & Technology Divisions

☐ (A) Aerospace Industries*
☐ (B) Aerospace Industries*
☐ (C) Aerospace Industries*
☐ (D) Aerospace Industries*
☐ (E) Aerospace Industries*
☐ (F) Aerospace Industries*
☐ (G) Aerospace Industries*
☐ (H) Aerospace Industries*
☐ (I) Aerospace Industries*
☐ (J) Aerospace Industries*
☐ (K) Aerospace Industries*
☐ (L) Aerospace Industries*
☐ (M) Aerospace Industries*
☐ (N) Aerospace Industries*
☐ (O) Aerospace Industries*
☐ (P) Aerospace Industries*
☐ (Q) Aerospace Industries*
☐ (R) Aerospace Industries*
☐ (S) Aerospace Industries*
☐ (T) Aerospace Industries*
☐ (U) Aerospace Industries*
☐ (V) Aerospace Industries*
☐ (W) Aerospace Industries*
☐ (X) Aerospace Industries*
☐ (Y) Aerospace Industries*
☐ (Z) Aerospace Industries*

Industries & Sciences Divisions

☐ (A) Aerospace Industries*
☐ (B) Aerospace Industries*
☐ (C) Aerospace Industries*
☐ (D) Aerospace Industries*
☐ (E) Aerospace Industries*
☐ (F) Aerospace Industries*
☐ (G) Aerospace Industries*
☐ (H) Aerospace Industries*
☐ (I) Aerospace Industries*
☐ (J) Aerospace Industries*
☐ (K) Aerospace Industries*
☐ (L) Aerospace Industries*
☐ (M) Aerospace Industries*
☐ (N) Aerospace Industries*
☐ (O) Aerospace Industries*
☐ (P) Aerospace Industries*
☐ (Q) Aerospace Industries*
☐ (R) Aerospace Industries*
☐ (S) Aerospace Industries*
☐ (T) Aerospace Industries*
☐ (U) Aerospace Industries*
☐ (V) Aerospace Industries*
☐ (W) Aerospace Industries*
☐ (X) Aerospace Industries*
☐ (Y) Aerospace Industries*
☐ (Z) Aerospace Industries*

*Students are entitled to one free membership each in the Automation & Technology and Industries & Sciences Divisions. Please choose and mark in the asterisked selections.