

ANNUNCIATOR

January 1996



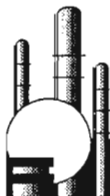
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Editor's Notes

Watch for the continuing saga... **"WRITTEN ON A ROLL CHART"**

These are the collective writings of HOWARD HOBBS, with commentary by Bob Connell.

ADVERTISERS: Please note that the deadline for the MARCH ANNUNCIATOR is February 15, 1996. Please forward information to the editor by that date in order to have items updated.

ANNOUNCEMENTS:

- Volunteers are required for Engineering Week and ISA Golf Tournament. See Page 43 for Details.
- Please read the notice regarding the Annual Awards Dinner on Page 41.
- Take note of the Lambton College Student Abstracts on page 34.

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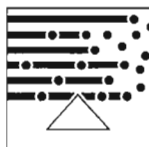
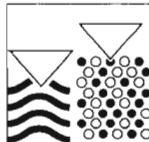
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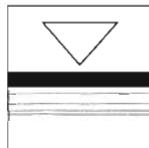
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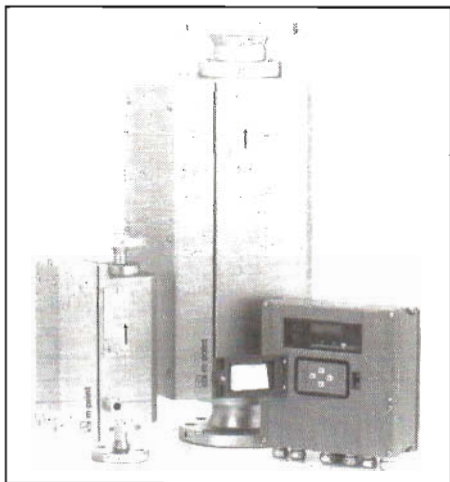
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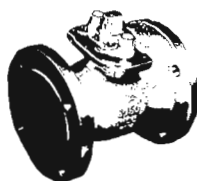
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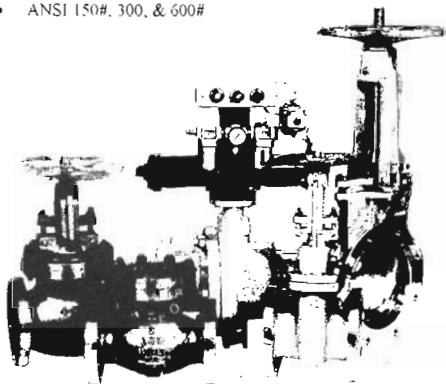
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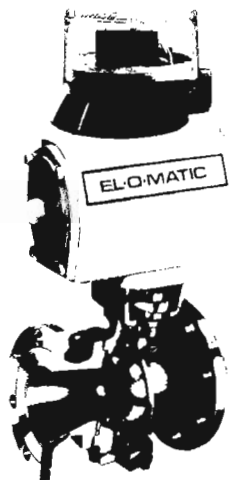
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President's Corner

As I write this the Christmas Season is upon us and another year slips past. ISA is still heavily promoting the "Grow For The Gold" membership drive. Most of all though, it's trying to maintain a substantial membership base as is the Sarnia Section. We have a lot of work to do with the new format for the section Performance Award that is in our Past President's (Larry Corbett) hands.

The new year will be definitely a challenge as we try to acquire a Show Chairperson and new members for our executive positions. We need a fresh outlook, new blood. So give it a thought. Approach the present executive and discuss their duties. It really is a good experience.

Fred Sheane from CAPT has agreed to be our Education Executive. Looking forward to a good relationship with CAPT. Fred has indicated there should be room in the ISA Book Centre for the Sarnia Section to display some important memorabilia (ie) Kates Awards etc.

Also, ISA is running a contest for sections to name new Performance Based Section Award. I will have entries for the next meeting. Entries must be in by February 9, 1996.

I hope you had a great Christmas and an excellent start to the new year.

Come out to our next meeting and do not forget to phone.



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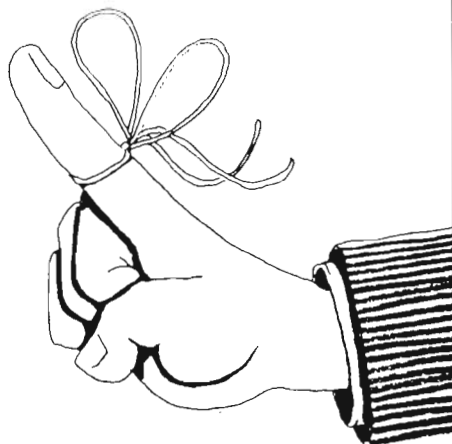


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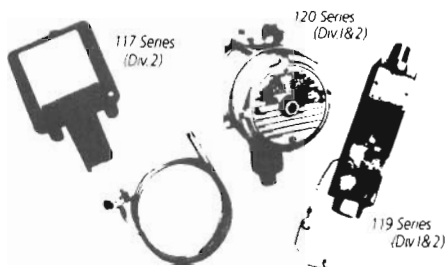
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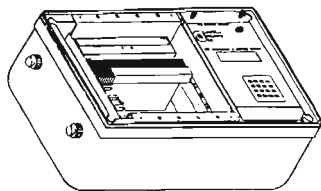
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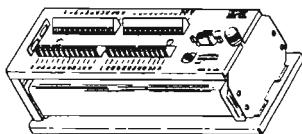


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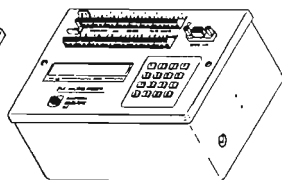
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Capacitive Level Detection

Level detection means the detection of a level at one fixed point, and consists of the following components:

- measuring probe
- HF oscillator unit
- amplifier with relay output

One of the methods of capacitive level detection is to convert the change in capacitance ΔC into a voltage variation ΔU .

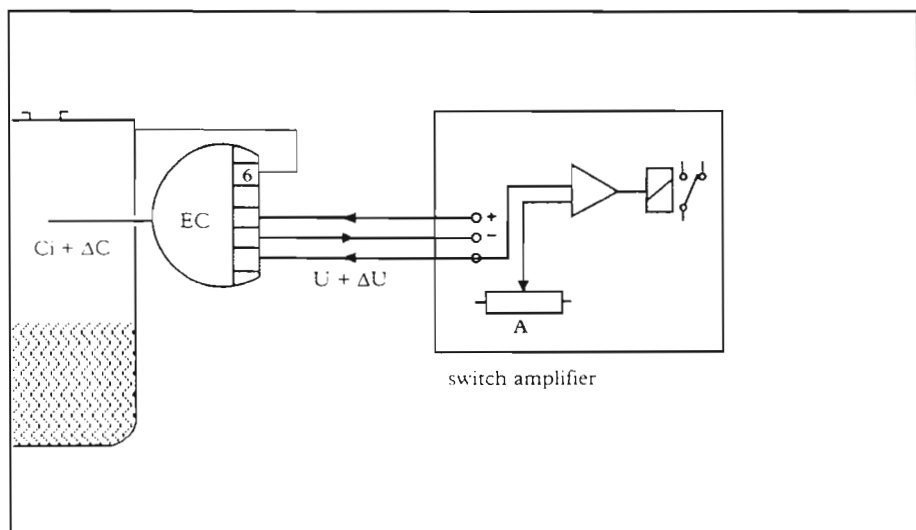


Fig. 3.4

The principle of level detection is illustrated in fig. 3.4. The oscillator unit is connected to the amplifier by a three-core cable. Two conductors supply the oscillator whilst the third conductor is used for the signal, i.e. the change in potential difference ΔU which is then converted by the amplifier into a relay operation. The negative conductor is common to the supply and signal.

The initial capacitances of the different measuring devices are never the same. When the probe is uncovered the oscillator unit produces a signal U , the value of which will depend on the empty or initial capacitance C_i . Potentiometer A is then used to adjust the amplifier so that the relay is not quite energized.

When the probe is covered, the capacitance will be $C_i + \Delta C$ and the potential difference $U + \Delta U$. This change in potential difference drives the amplifier and energizes the relay.

(Continued on Page 25)

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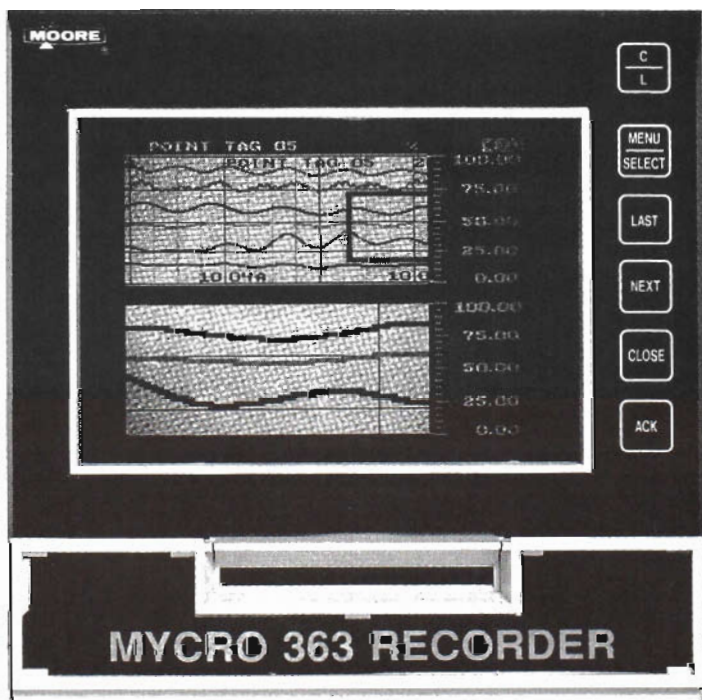
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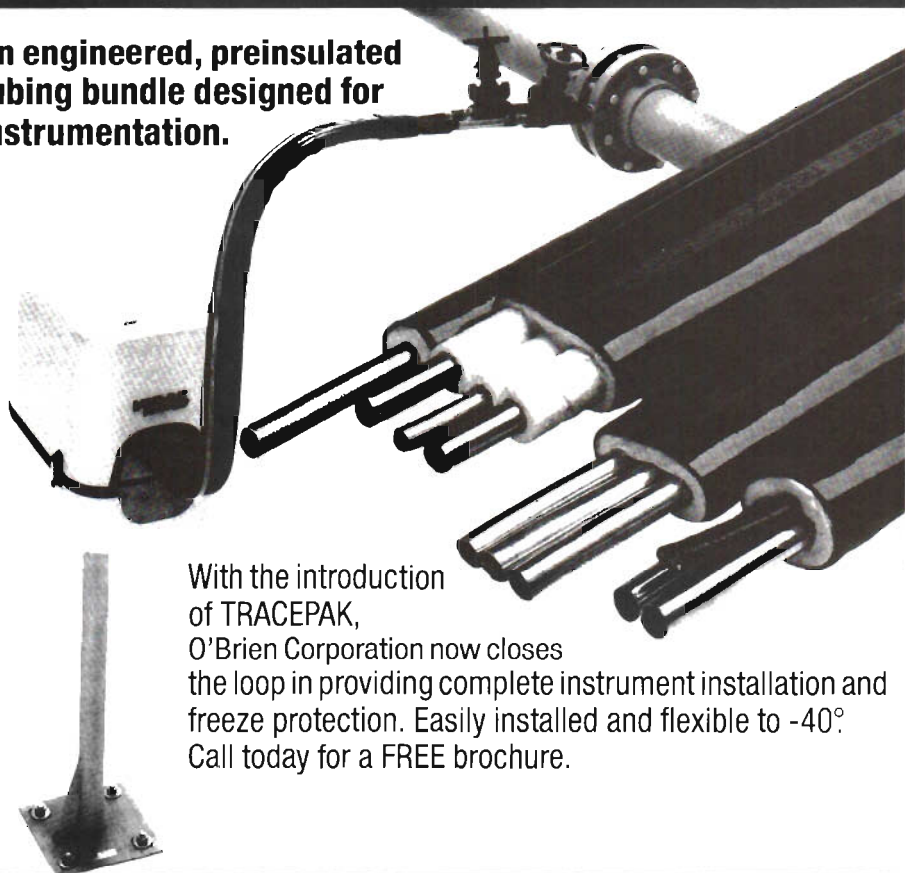


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Capacitive Level Measurement

Capacitive level measurement refers to the continuous measurement of product levels in a tank or silo. The measurement system comprises the following:

- probe
- HF oscillator unit
- amplifier with analogue current and / or voltage output.

As with capacitive level detection, the change in capacitance ΔC is converted in the oscillator into a change in potential difference ΔU (fig. 3.5)

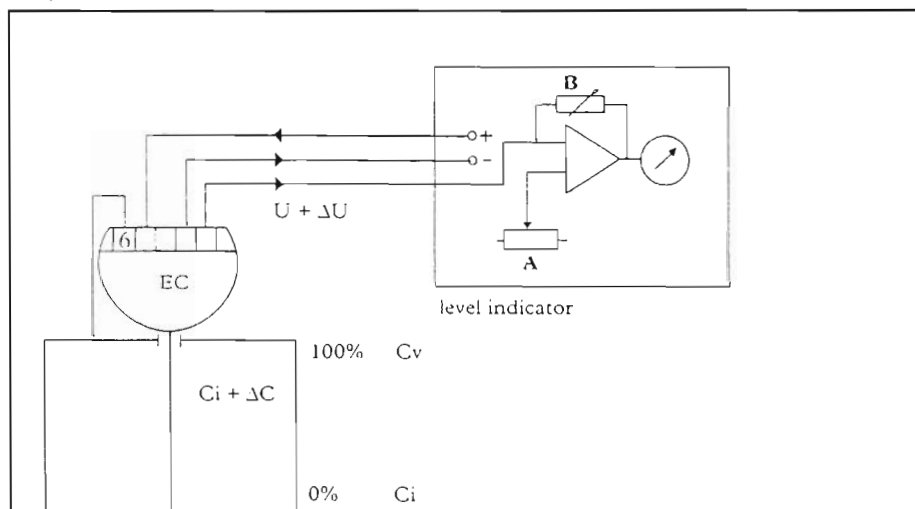


fig. 3.5

The value of the voltage U will depend on the empty or initial capacitance C_i of the measuring system. The initial or "empty" value is set by using potentiometer A and adjust the amplifier to 0% for a given C_i .

When the tank or silo is filled, the new voltage will be $U + \Delta U$. This change in voltage ΔU is amplified and converted into a standard 4-20 mA signal to which an output instrument can be connected. Potentiometer B is used to set the range or 100% value.

Note: Both the previous examples involve the use of a three core cable between the oscillator unit and the amplifier. However, current trends are towards the increasing use of transmission by pulse-frequency modulation using two-core cable. As well as its economic aspects, this method also offers a significant degree of safety.

Note: This article was supplied by Endress & Hauser from the book "The Theory and Practice of Level Measurement" by Wim Van DeKamp.



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LAMBTON COLLEGE STUDENT SECTION

Welcome once again to an ISA Sarnia Student Section newsletter. It is again that time of year to award four Lambton College ICET students ISA scholarships. These scholarships of \$500.00, are awarded to the top student in each the 1st, 2nd and 3rd years of the program, as well as for the most improved student. The award winners for this year were: 1st year, Ken Polack; 2nd year, Janice Haskell; 3rd year, Randy Henderson and most improved went to Robert Bailey. Congratulations to all recipients and keep up the good work.

On December 5th, the second year students made a somewhat attempt to beat the third year students in a "friendly" game of floor hockey. The pace was fast and furious but the third year students pulled it out winning by at least 10, thanks to a great effort from "the kid".

Although the official graduating ceremony is not until June / 96, there are 15 potential graduates finished the course on December 13. A photograph of the graduating class can be seen in this issue, along with their individual employment request profiles. If you are looking to hire someone soon, make sure you take a look. Below is a list of the potential graduates for this year:

Mario Anusiewicz
Brad Haley
Kevin Hicks
Jeff McKegan
Dennis Poort
Harold Robson
Marc Wright

Glen Curts
Janice Haskell
Steve Jackson
Dave Nywening
Franco Pitaro
Jay Rookes
Paul Zavitz

The student section would like to take this opportunity to wish all potential graduates the best of luck with their careers in measurement and control, and look forward to seeing everyone as full-time members in the upcoming new year. Thanks again.

Steve Jackson
Newsletter Editor

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“Lambton College ICET Grads 1996”



Back Row (left to right)
Franco Pitaro, Dennis Poort,
Glen Curtis, Marc Wright,
Mario Anusiewicz, Jim Smith

Middle Row (left to right)
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David Nywening,
Jeff McKegan, Paul Zavitz

Front Row (left to right)
Jay Rookes, Janice Haskell,
Steve Jackson, Kevin Hickey

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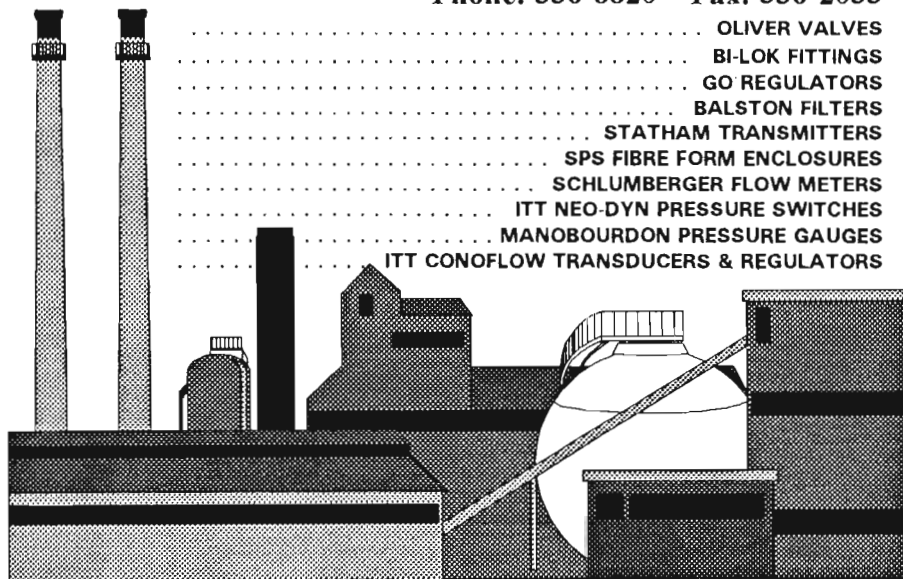
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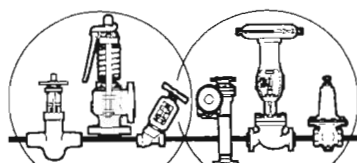
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Dave Nywening

Seeking employment in instrumentation / process control. Dec/95 graduate of Instrumentation and Control Engineering Technology at Lambton College. Experience in Windows, Lotus, Word, Autocad, C programming, DCS, computer control, and PLC programming. Co-op work experience in instrument maintenance, DCS troubleshooting, and analyzer operation / maintenance. Dave Nywening, 708 London St., Wyoming, ON N0N 1T0; (519) 845-3129.

Marc Wright

DEC/95 Graduate in Instrumentation and Control Engineering Technology. Experienced in installation and calibration of various field equipment. Worked with Schematics, PID's, PLC's, Autocad 12 (Instrumentation Applications) and Honeywell DCS. Experience in petrochemical plant environment. Marc Wright, Sarnia, Ontario N7T 3N3; (519) 336-9499.

Dennis Poort

12/95 Graduate, Instrumentation and Control Technology, Lambton College. Studied advanced control theory, design procedures, instrumentation applications and process simulations. Worked with various applications of electronic and pneumatic instrumentation. Interested in maintenance, configuration and implementation of I/C systems. Dennis Poort (519) 845-0145.

Franco Pitaro

DEC 12-1995 Graduate of Instrumentation Program from Lambton College. Training consists of the TDC-3000, MAX-1, Distributed Control System, pneumatic and electronic xmters for measurement of pressure, level, temperature and flow troubleshooting. Computer skills are autocad 12, Excel, Windows, Lotus 1-2-3. Experienced has been in the petrochemical field and in the EMR for the Canadian Explosives Branch. Franco Pitaro, 1337 Ascot Circle, Sarnia, Ont. N7S 4B2; (519) 336-8667.

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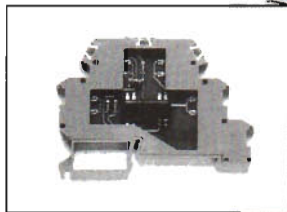
These DIN-rail mounted, modular blocks feature dead-front construction and captive screw-clamp termination for safe, reliable installation — in a snap. Phoenix Contact has the broadest line of multi-function wiring devices and feed-thru terminal blocks in the industry.

The grouping at right is only a sampling of the many application solutions available.

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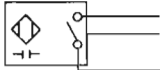


SMD technology allows relay isolation and contact ratings up to 3A in a terminal block only 1/4 inch (6.2 mm) wide.

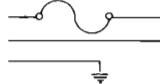
Better space utilization for fused circuits.



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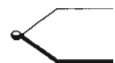
Fuse protection on analog signals.



Circuit testing or troubleshooting.



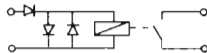
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And trust it be short lived. In brief,
The lines are plugged, and everything
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That they are frozen on your property.
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And pass 'neath miles of bleak and windswept plain,
Where dwell the clever, wealthy, Chippewa,
Emerging in that far off foreign land
From whence we hear you speak.

Our instruments stand eager to record
Well wrapped against the bitter Arctic air.
But lately, they have stood in idleness,
Or worse than that, they ever and anon
Have felt that bane of all who ply our trade,
The backward flow. Thus do they lose
Their zero, and the smirking process men
Exchanging many a knowing wink and nod
Consider this the feeblest alibi.

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But should you earlier thaw the pipelines through,
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(We'd gladly try to do the same for you).
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Supplied by our own pumphouse. Water makes
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ISA Sarnia Section

“Dinner Meeting”

JANUARY 29, 1996

Cocktails 6:00 p.m.

Dinner 7:00 p.m.

GUEST SPEAKER

Dr. Elliott Whitby
Elsag Bailey
Toronto, Ontario

TOPIC

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MENU

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MEMBERS \$10.00

NON-MEMBERS \$15.00



ISA Sarnia Section “Annual Awards Dinner Meeting”

On Monday, May 27, 1996 we will be holding our Annual Awards Dinner to round out the 1995-1996 season. This year we are presenting a murder mystery production during the evening, and invite everyone to come out and enjoy the intrigue. The cost will be \$15.00 / member and \$20.00 / non-member.

Some planning is involved and we need to generate a ball park figure for attendance that evening. Without any commitment, would you be interested in attending this function on May 27, 1996? This is in no way a reservation for you but will help us plan the evening more appropriately. It will be your responsibility to phone in your reservations as usual when May rolls around.

If you believe you might be interested, please phone me or fax me by January 31, 1996 and indicate the number of people you might bring with you. Thank You.

Jennifer Southcombe
1995-1996 Program Chairman

Phone: 337-2301 ext. 480
Fax: 332-3309 attn: J. Southcombe

Upcoming Meetings:

- | | |
|-----------------------|--|
| March 25, 1996 | Speaker: Mr. Malcolm Boyd, <i>Director of Planning & Development, County of Lambton</i>
Topic: Enhanced 9-1-1 Emergency Service |
| May 27, 1996 | Awards Dinner
Murder Mystery Evening
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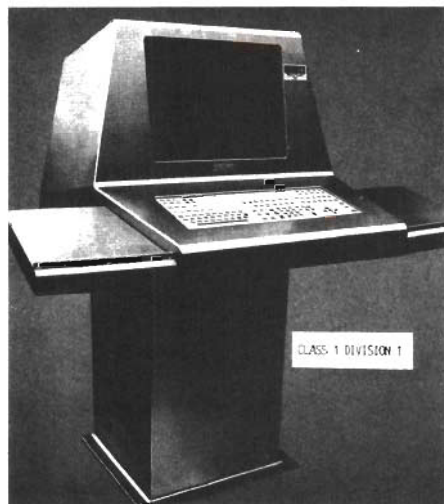
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USING THE SARNIA SECTION BBS - Part 7

The BBS has received over 970 calls. There have been 390 messages in the Main Board conference. File downloads are over 774 and uploads are 27. There have been eight new callers since the last issue. This level of activity is good but I hope you use the BBS more. Please leave a (C)omment to the sysop, if you have any suggestions about how to make the BBS more useful.

A letter has been sent to all of our supporters, telling of our accomplishments which would not have been possible without their generous support. Thank you to Mike Spearman for preparing and delivering the letters. Mike also has a list of all of our callers. He plans on contacting some of you to obtain feedback and ideas for improvement. You can also leave a message to Mike Spearman on the BBS.

The BBS is open to all callers. It's purpose is to promote the mission and goals of ISA. Particularly the area of member benefits. The BBS can be used as a "training board" for callers learning how to use modems and communications software. I often advise new callers not to worry about making mistakes. We do not have strict rules about online procedures. I understand how frustrating it can be when you are first starting to set up a modem and software to call a BBS. If you need some advice or help let me know. Anyone who may be interested in the field of Measurement and Control is welcome to call.

If you have any questions about Windows 95, MS Word, MS Excel and Autocad issues there are FIDO conferences for these subjects. Messages entered into these conferences are echoed across North America to all BBS's that choose to make them available. There can be a lot of mail flowing in these conferences. The Windows 95 conference has had over 25,000 messages since we started monitoring it in September.

When you want to monitor or read a lot of mail there are some tools to make it easier. No one wants to read a lot of mail, one message at a time, while connected to a BBS. There is a method of specifying what mail you want to read, gathering and compressing that mail and reading only the messages you are interested in. Using the Select command, you select, by number, which conferences you want to read. To request a compressed packet of the selected mail, type QWK at the main menu. Then specify (D)ownload, to send the file to your computer. (U)pload is for sending files to the BBS. A file called ISASARNI.QWK will be transferred to your computer. You must specify the same file transfer protocol for both the BBS and your communications software, or the transfer will fail. To read the messages in ISASARNI.QWK you will need to install an Offline Mail Reader (OLM) such as 1st Reader, Robomail or CMPQwk for Windows which can be downloaded from file area 11. There are other OLM programs available from other BBS's.

If you read a lot of mail the OLM programs can save time. First, the message list can be reviewed, which saves reading all of the messages. The messages you wish to read can be selected, replied to and saved in a database for future reference. Some OLM's have phone books so you do not have to remember and retype addresses. This is especially helpful for Internet addresses which tend to be long and hard to remember. Another feature which is quite helpful is collecting all the messages together that have the same subject. Usually they are posted at different times and are not consecutive in the conference.

The BBS phone number is (519) 541-0427.

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Internet: bsmith@ebtech.net

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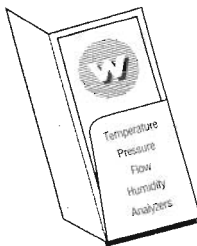
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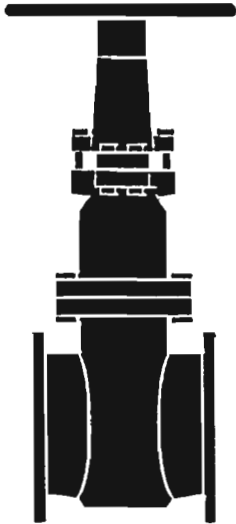
Meeting Dates

MEMBERSHIP DINNER MEETINGS

Date	Place
September 25, 1995	Lambton Shrine Club
November 27, 1995	"
January 29, 1996	"
March 25, 1996	"
May 27, 1996	"

EXECUTIVE MEETINGS

Date	Time	Place
July 17, 1995	7:00 p.m.	Fisher-Rosemount
September 11, 1995	"	"
November 6, 1995	"	"
January 8, 1996	"	"
March 4, 1996	"	"
May 6, 1996	"	"
June 17, 1996	TURNOVER MEETING	



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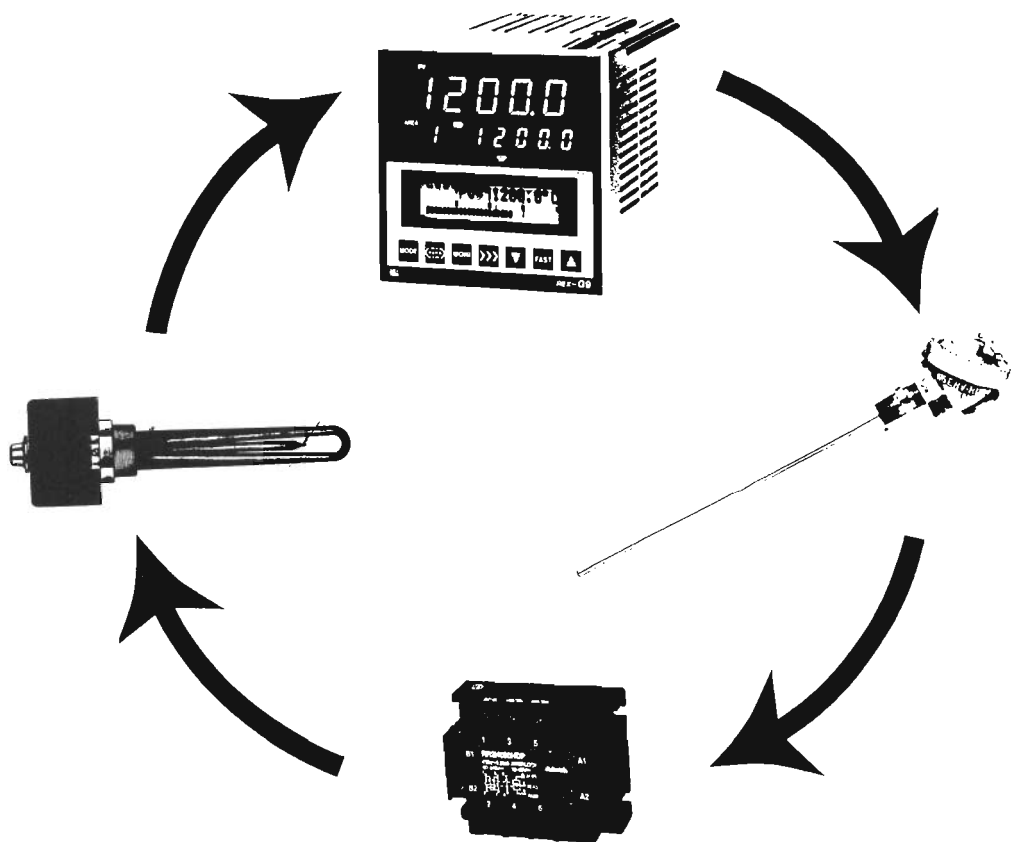
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November Dinner Meeting Highlights

On Monday, November 27, 1995 the ISA Sarnia Section hosted its second dinner meeting for the 1995-1996 season. We had a good turn out, but as always, would like to remind everyone to actively get involved in increasing our membership. The bi-monthly dinner meetings are a great opportunity to introduce new people to the ISA Sarnia Section.

Executive Assistant, Dave Gooch, highlighted the activities of the November Executive Meeting. Don Murch, Chairman of the Standards and Practices Committee, briefly explained the benefits and requirements of becoming part of the Standards and Practices Committee, and would welcome anyone interested in becoming part of this effort.

Our speaker was Mr. Bill Ormerod of Technel Engineering from Woodbridge, Ontario. Bill gave an excellent presentation on Issues around Pressure, Calibration and Accuracy, and we thank him again for his participation in the evening.

Mike Grey also made a presentation as Student Section Liaison to the Lambton College Student Section Team Members, presenting them with cheques and congratulating them on their third place finish in the Student Team competition at the ISA 1995 International Show in New Orleans. Mike also recognized the efforts of Student Member Janice Haskell for her winning submission of the Student's Kates report.

ISA GROUP INTERNET RATES

All Sarnia Section and Student Section members, are eligible for reduced rates with Sarnia's full service Internet provider: Electro-Byte Technologies, 559B Exmouth St., Sarnia, 332-8235.

If you go there to sign up, just mention that you are an ISA member. They have a member list to verify your membership. You can also show your member card if you are not on the list.

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Once you have Internet access, leave me a message at: bsmith@ebtech.net and check out my home page under Customer Pages or: <http://www2.ebtech.net/~bsmith>

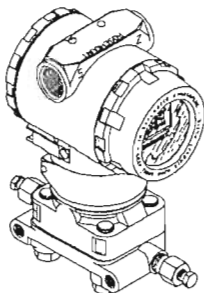
There are links to other measurement and control Web sites plus a list of Manufacturer / Supplier Web sites, that I know of. Please let me know of any others that are not listed.

The Sarnia Section Home Page can be found at: <http://www2.ebtech.net/~bsmith/isasarni.html>

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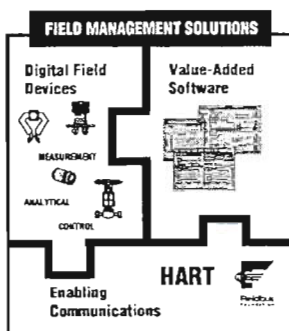


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"Did You Know?"

This column normally contains a review of some of the things that have happened in the executive meetings over the last month. This time round, with it being Christmas and all, I thought that I would break with tradition.

The other night, my wife asked me what I wanted for Christmas. I started lamenting how I had no real needs and the only wants that I had were too expensive. How poorly off I thought I was because I couldn't justify spending the kind of money I wanted to spend!

As I was moaning and complaining about how badly life was treating me, I had this sudden thought. How lucky I am to be able to complain that I cannot afford the things that I want. I have no pressing needs, I have a roof over my head, a good job, my family gets 3 square meals a day, we are all healthy and free from any major problems, and so on. Even in my wants, I have no need of simple things. Why not, because I already have them, and probably more than one of each!

Sure I don't have a wide screen TV and I'm not sure where the money is going to come from to replace the old car when it finally dies, but I have many things for which to be thankful. I have never had to watch a child slowly starve or pray that we will be able to survive yet another night of violence. I know where my next mortgage payment is coming from. I know that my children will be able to walk safely in the streets, that they will be able to get a good education, and prepare themselves for a future which has been denied to so many others.

All in all, we've got it pretty darn good! Take a moment and think about it. I'm willing to bet that you see your life in a whole new light!

I would like to take this opportunity to wish everyone a Merry Christmas (or the appropriate greeting for whatever holiday you care to celebrate!). I hope that the New Year will find you and yours, happy and healthy and ready to face challenges yet to come. (And come they will!)

Let there be peace and goodwill to all men!

David Gooch
Executive Assistant
December 12, 1995.

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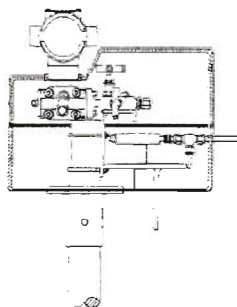
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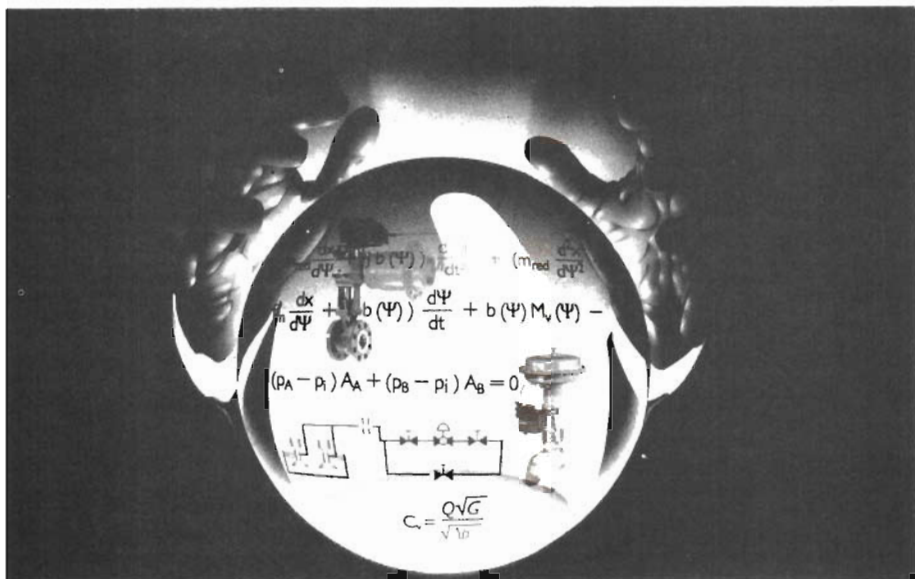


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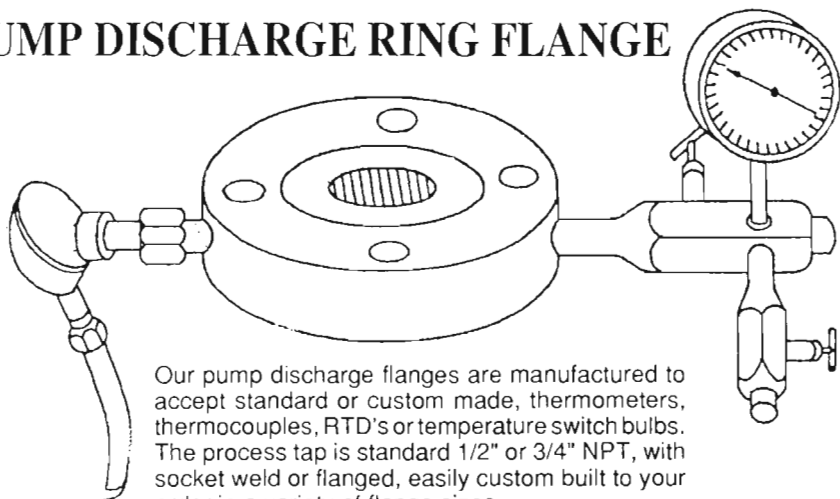
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Axiom Technologies Ltd.
U & I Supply
Provincial Controls
Mentec Sarnia Ltd.
SSCAN Technologies
Heaters Controls & Sensors Ltd.
Westech Industrial Ltd.
Alpha Controls & Instrumentation
SRP Controls Systems Ltd.
CB Engineering
Cantech Controls
Vermeer Engineering
Brian Controls
SSCAN Technologies
Northern Abcor
TubeTech
Bestobell Canada
Veronics
Northern Abcor
Willer Engineering
Heaters Controls & Sensors Ltd.
SRP Controls Systems Ltd.
SSCAN Technologies
Armatek Controls
Sarnia Piping Specialties
Romatec
Sarnia Piping Specialties
Northern Abcor
Lisle-Matrix Ltd.
Cambridge Controls
Romatec
Summit Controls Ltd.
Transcat
Transcat
Romatec
Brian Controls
Transcat
CB Engineering
Cambridge Controls
Conval Equipment
Lisle-Matrix Ltd.
Floval Equipment Ltd.
CB Engineering
Controls
Westburne Lytle
Transcat
Westech Industrial Ltd.
SRP Controls Systems Ltd.
Rosemount Instruments
Transcat
CB Engineering
Bestobell Canada
U & I Supply
Campbell Scientific (Canada) Corp.
G.L. Stebbins
Transcat
Brian Controls
Brian Controls
Brian Controls
Mentec Sarnia Ltd.
Provincial Controls
Hardie Industrial Services Inc.
Brian Controls
Ovantum Sales
Davis Controls

Manufacturer / Tradename

Papailias
Parker
Partlow

Local Sales Representative

Mentec Sarnia Ltd.
TubeTech
Northern Abcor

Manufacturer / Tradename

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Systematix
T.B. Woods
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Tapecoat Canada
Tate-Andale
Taylor Hand Actuated Pressure Calibrator
TBI-Bailey
TBV
TDC-3000
Techmation
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Tel-Tru
Tel-Tru Thermometers
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Telegan
Tempco
Tenor Industrial Control
Testo Inc.
Testoterm
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Texas Sampling Inc.
The Optikon Corp.
Theben
Thermax
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Thermo Electric - Calibrators
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Thermo Kinetics
Thermon
Thermox
Thunder
TIF
Time Electronics
TLV
Tomoe Valves
Tour & Anderson
Tower-Gard
Trademark Manufacturing Inc.
Transmation
Transmation
Transtector Systems
Trerice
Tricentric
Tripp-Lite
Triton
TSI
Turbo Instruments
Tytronics Inc.
U.S. Gauge
U.S. Gauge
Unimeasure Inc.
United Electric
United Electric Controls (Canada) Ltd.
United Sciences Inc.
Unitherm
Unival
Universal
Universal Analyzers
Universal Enterprises

Local Sales Representative

Heaters Controls & Sensors Ltd.
Willer Engineering
Axiom Technologies Ltd.
Westech Industrial Ltd.
Sarnia Piping Specialties
Mentec Sarnia Ltd.
Transcat
Elsag Bailey
Romatec
Honeywell
Lakeside Process Control
Transcat
Transcat
Brian Controls
Transcat
Transcat
Brian Controls
Transcat
Hardie Industrial Services Inc.
Armatek Controls
Transcat
Bestobell Canada
Heaters Controls & Sensors Ltd.
Heaters Controls & Sensors Ltd.
Baker Instruments Ltd.
Transcat
Campbell Scientific (Canada) Corp.
Bestobell Canada
SSCAN Technologies
Davis Controls
Brian Controls
Armatek Controls
Transcat
SSCAN Technologies
Provincial Controls
Spec Sarnia Limited
Willer Engineering
Scientific Corp. SSCAN Technologies
Transcat
Transcat
TubeTech
Bestobell Canada
Floval Equipment Ltd.
Lisle-Matrix Ltd.
G.L. Stebbins
Controls
Transcat
Cantech Controls
Mentec Sarnia Ltd.
Westburne Lytle
Transcat
Mentec Sarnia Ltd.
Willer Engineering
Northern Abcor
Novatech
Brian Controls
Transcat
SRP Controls Systems Ltd.
Brian Controls
Cambridge Controls
Willer Engineering
Northern Abcor
Floval Equipment Ltd.
Alpha Controls & Instrumentation
Willer Engineering
Transcat

Manufacturer / Tradename

Valtek Controls
Valvtech
Varec
Vector-Vid
Veeder-Root
Veeder-Root
Velan
Veriflo
Veris
Versa
Versatile Instruments
Versatile Measuring Instruments Inc.
Viatran
Vista Scientific
Vitec
Viz
Vortisand
Wabco
Wahl
Walchem Corp.
Walker Scientific
Wallace & Tiernan
Wallace & Tiernan - Pressure Calibrators
Warren Jones Engineering - England
Warrick
Waterman Industries - USA
Watson McDaniel
Watts
Watts
Weed
Weed Instrument
Weksler Instruments
Westech
Westinghouse Enotec
Westlock Controls
Wey Valve
Whesso Varec
Whipps Inc. - USA
Whitey Valves
Whitman
Whittaker Electronics
Wika
Wika Instruments
Wilkerson
Wilkerson Instrument Co. Ltd.
Williams Instrument Co.
Williamson
Winters
Winters Gauges
Wood's
Woodhead
Worcester
Worcester Controls
WSA
Xebec
Xomox
Y-Z Industries
Yarway
Yokogawa
Young Environmental
Zook
Zullig

Local Sales Representative

Controls
Regional Process Equipment
Westech Industrial Ltd.
Transcat
Davis Controls
J & M Engineering & Sales Ltd.
Westburne Lytle
Armatek Controls
Alpha Controls & Instrumentation
Summit Controls Ltd.
Sharp Valve & Instrumentation
SRP Controls Systems Ltd.
Willer Engineering
Transcat
Transcat
Transcat
Mentec Sarnia Ltd.
Mentec Sarnia Ltd.
Bestobell Canada
Controls
Transcat
J & M Engineering & Sales Ltd.
Transcat
Lisle-Metrix Ltd.
Davis Controls
Lisle-Metrix Ltd.
G.L. Stebbins
Floval Equipment Ltd.
Mentec Sarnia Ltd.
Cantech Controls
Controls
Baker Instruments Ltd.
Westech Industrial Ltd.
Controls
Summit Controls Ltd.
Mentec Sarnia Ltd.
Westech Industrial Ltd.
Lisle-Metrix Ltd.
Huron Valve & Fittings
Davis Controls
Controls
Sharp Valve & Instrumentation
Northern Abcor
Transcat
J & M Engineering & Sales Ltd.
Willer Engineering
Brian Controls
Floval Equipment Ltd.
Provincial Controls
U & I Supply
Axiom Technologies Ltd.
Floval Equipment Ltd.
U & I Supply
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Westech Industrial Ltd.
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