# ANNUNCIATOR

SEPTEMBER 1995



SARNIA



SECTION

The International Society for Measurement and Control









### ATTRIBUTES:

- Precision manufactured from sold block on CNC machines with polished finish.
- Adapts flat face pump discharge flange to raised face flange piping.

## ENVIRONMENTALLY FRIENDLY

Reduces Potential Fugitive Emissions.

- Solves pump discharge temperature and pressure instrument requirements.
- Measures pump fluid temperature closer than was possible before.
- Eliminates costly piping fabrication.
- Eliminates multiple pipe connections reducing potential fugitive emissions points.

## SPECIFICATIONS

- Manufactured in accordance with ASME, ASTM and ANSI
- Canadian registration number
- Material A182 316/L. Monel, Alloy 20, Carbon Steel, A350/LE2 A105
- ISO 9000 Certified

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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 NOVEMBER ANNUNCIATOR is October 15, 1995. Please forward information to the editor by that date in order to have items updated.

THE DINNER MEETINGS FOR THE 1995/96 SEASON WILL BE HELD AT THE LAMBTON SHRINE CLUB, 940 CONFEDERATION ST., SARNIA

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# From Your President...

I would like to welcome all the members back from their Summer vacations and hope all of you had a relaxing time and that things went well.

As your President, I have asked myself what inspiration or vision can I put into this, the first Literary Presentation? Well, there are no magical words. We are in a continuously changing world, far more rapid than a lot of us would like, but impossible to slow down. We can't hide nor lay back and hope that we get passed by this time. Stability has become a very precarious word.

We have seen plant closures, we have seen our fellow workers between the ages of 45 - 55 suddenly, without employment, caught in strategic planning and downsizing, straight layoffs, repositioning all different ways of saying you're no longer needed. We see vendors who have represented products for years now have products changed monthly where is it all to end? I don't think any of us have that vision. We can

empathize and sympathize but we all know we may be next.

As your President, my main goal is to bring our section into a stable business unit with representation from all areas of industry. I want our membership base to increase. I want more participation for and with the Executive. If you have questions - ask them, or new ideas - present them, we are always open. We have a basic nucleus of members that carry all the decision making and ideas for the future. We want to hear from you - better yet join us. Become a participating member not a whispering member.

I still need volunteers for this terms Executive, come forward and be a doer - get involved.

My main goal is to establish our business base and direction. We must be able to weather the industrial storms.

Another goal is to keep our members informed and I intend to do this with a short synopsis from our Executive Meeting and yes you can comment. Our Dinner Meeting is the only time we have a large representation from our membership.

The Executive this year will also clear up our charter.

Lastly, I want to challenge every Sarnia Section Member to approach at least one potential member and encourage he or she to sign up.

Finally, we have to take a good look at our Executive positions. We need people to change roles and fill roles. Volunteer today, put your name in for next year. Be an active participant.

Thanks, Your President MIKE MURRAY



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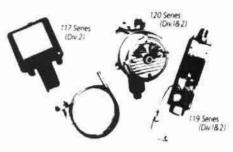
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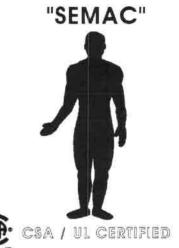
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Leo discovered how power circuits work. He says smoke is the real thing that makes power circuits work because every time you let smoke out of something electrical, it quits working. He claims to have verified this with thorough testing.

Of course! Smoke makes all things that are electrical work. Remember the last time smoke escaped from a transformer? Didn't it quit working? I sat and smiled like an idiot as more of the truth dawned. I remembered when I'd witnessed the awful destruction of a four-kilovolt breaker and bus at Sunnyvale. The breaker and bus had leaked out so much smoke that they actually melted and quit working.

See, it's the conductor that carries the smoke from one device to another. It starts at a power plant where stuff is burned to produce smoke. The smoke we see coming from the stacks is excess that the system doesn't need. The smoke is then sent down the conductors to transformers. Transformers are big and require lots of smoke to work properly. That's why the conductors are so big. If these conductors spring a leak it lets the smoke out of everything, and then nothing works. Forget about electron theory.

I plan to spend more time with Leo on some of his other theories.

This unattributed explanation comes via the December issue of the ISA Northern Indiana section's newsletter, Data Highway, Brian Margis, editor.

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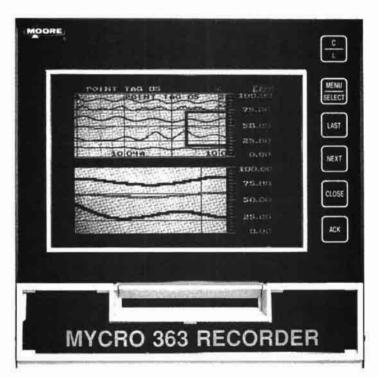
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# "Written on a Roll Chart"

I certainly enjoyed the demonstration of the radioactive level instrument at November's meeting. It was very impressive and should find numerous applications. We have a few places where it should be very useful, where our conventional instruments with their torque tubes and pressure tight bearings leave a net force of about one flea power for actual measurement.

It appears to me that control systems on domestic furnaces often have better thinking behind them than in many, far more costly industrial jobs. I have just installed on that is simple and rugged, gives good protection against temperatures and flame failure, and will even carry on during hydro shutdowns. I know of some furnaces that don't have these admirable qualities, and if I am out trying to start them some winter evening one of their electronic parts has a liver complaint, I shall be even more convinced that the cost of a system is not always a guide to its value.

Larry Hall (SECTION SECRÉTARY) is always after me for more material, but I am hard pressed to produce as much as this, especially as I usually put off the whole thing until the night before our deadline.

If, however, inflation is his true desire, he cannot fail to publish the following inflated report of an incident which he said I might mention in passing.

# **Hail Vesuvius**

Observe our busy southern neighbours Carrying on their noisome labours, 'Round the clock they toil and trouble Bringing crude oil to a bubble, And when it bubbles with might and main They forthwith cool it off again.

A pointless task you might assume But they'll be at it 'til the crack of doom. Yes, they'll be at it night and day, 'Cause you can't get started any other way. And hark! Put your shell like ears to work. There's plenty of din to make them perk.

All day long the relief valves roar,
Tonight, tomorrow, and then encore.
And what new clamour contorts our faces?
Perhaps the compressors are leaving their bases?
The furnaces aren't so hokey-doke,
They sometimes burn and they always smoke.

An overload of the audible waves The flare continually rants and raves. A bestial sound, a ghastly sight, A pillar by day, a fire by night. And fumes of the very, very densest Assail our few remaining senses.

Continued on Page 28.



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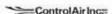
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Continued from page 25.

So courage my friends, and go right to it.
Startups are bad but we've all been through it.
I know you crave a warmer clime
But they always start up in the winter time.
But now, what cloud obscures the view?
We can't see them, and they can't see too.

It's composition we soon shall know, For a vigorous wind has begun to blow, Yes a wind is blowing (no use to cuss), And wouldn't you know, it's from them to us. The wind is blowing so strong and fair That we are in line for the lion's share.

So hasten not to depart, young fella, Or if you must, then take an umbrella, For the stuff that drops on unwary skin Contains no oil of lanolin. Everywhere it leaves its traces, We now are equipped with freckled faces.

Speckled hair and speckled noses Speckled everyday working clotheses. Spots on doors and spots on windows, Everywhere is where they're into, Grimy, oily, greasy spots, Please don't hurry, we can have lots.

And Housewives, we hadn't had time to warnya, The rest of the cloud is heading for Sarnia. Alas, for washings on the line Soon to receive this rain sublime. Pray bid your children hide like weasels Or they'll surely come down with synthetic measles.

And hark - another siren blew -Here comes the city fire crew. A little late, (and more's the pity) They came down the road out to Oil City. The reason they took the long way 'round Is not a mystery profound, You don't see much of the world at all Cooped up all day in the fire hall.

All this shows we hadn't oughter Mix hot oil and frigid water. It does strange things to the boiling point, And usually upsets the joint. It makes tanks leave and flutter amain. It makes them wilt like a paper fan.

It makes them wilt like ancient lettuce,
But enough of this. Where do similes get us?
Sufficient to say that all ended well,
There's really nothing else to tell.
We wish our friends a happy fate,
May your clay continue to circulate.

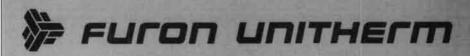
From the ISA Sarnia Section Bulletin - December 1953

# Instrument Society of America MEMBER RECORD CHANGE

This form is designed to facilitate your request for changes in your member record. In order to stay in touch with you, ISA needs to know when you move or change jobs. Also, ISA would like to upgrade your member status if you qualify. Name (Middle) (First) (Last) Day-time Phone Number: ISA Member 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 PART 1: MOVING? PLEASE CHANGE MY ADDRESS COMPANY NAME AND/OR PHONE NUMBER: Preferred Mailing Address Please provide your address exactly as you wish it to appear on our official records. Home Company Preferred Mailing Address: Also provide the following information: Street Address: Company Name: P.O. Box: City: Company Telex: State/Province: Country: Postal Code: PART 2: CHANGING SECTIONS? PLEASE TRANSFER ME. From To\_ Section Section 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 Date

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# GROUNDING

By Neal Baum

# A topic of revelation

The subject in the field of instrumentation that causes the most debate always seems to be grounding and shielding. It seems to be a topic dominated by revelation rather than physics. There are many ways of approaching grounding and shielding and the truth of the matter is that many of them are right. In the area of grounding there are floating systems, single point grounds, multipoint balanced grounds, and continuous grounds. Each of these at times has uses. I will discuss two of these: first; the most common single point ground and second; the continuous ground. The other two systems can become very system specific.

### Mother Nature

First, let's discuss why, especially in large instrumentation systems, we use a ground. The simple reason is that we can't fool mother nature. She always wants her electrons back. If we try to fool her, she will often introduce noise into our instrumentation system. Figure 1 is an illustration of what I mean. It shows two types of single point grounds. One close to the source of noise and one well away from the source of noise. This makes the invalid assumption that there is only a single noise source but illustrates the point.

# Where to ground?

The further away one is from the source of the noise and its complex impedance, the greater the distance that the current travels along the shield. Consequently, the greater the noise induced into the conductors, inside the shield. It is for this reason that the experimenter **usually** puts the single point ground near what he considers to be his greatest noise source. In high-explosive testing I consider the test bed to be the greatest source of noise and ground there. For safety reasons my recording system may be miles away. In other systems the main source of noise may be near the recorders.

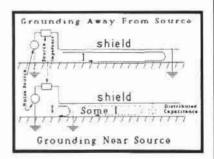


Figure 1 Two different single point grounds

There may be other reasons for you not to put your single point ground near the source of the noise. One may be code. Another may be safety. An example of the latter is the case of large instrumentation systems where the ground potential is significantly different at different parts of the system. I have run into cases where the recording van was as much as forty volts off of local ground. This leads to a shock hazard.

(Continued on Page 43)

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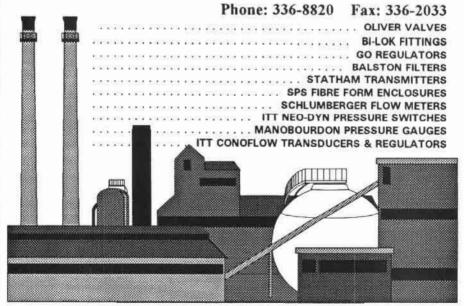
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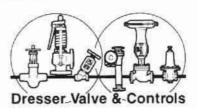
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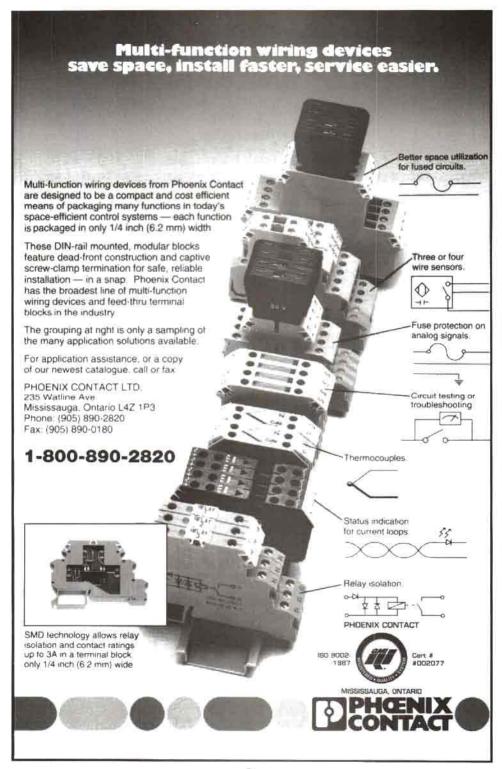
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## "Pid You Know?"

The new executive met for the first time on July 17th. Although we are continuing with the same core group of people, it is nice to have some new faces (and some old faces back in new positions)

#### Travel Policy:

In the 94/95 season, the executive spent a lot of time reviewing and rewriting the section travel policy. If you are considering travelling on section business, make sure you have seen the new policy and have done what needs to be done. If the appropriate approvals are not received before you go, you may find that some of your expenses will not be reimbursed.

On the lighter side, do you realize that the section will help defer the cost of members who wish to attend ISA Workshops and the like. You do not have to be a member of the Executive to qualify! We would like to see more of you out

there! Talk to an Executive member if you want more information.

#### **Executive Members:**

As always, we are looking for additional help for the Section Executive. If you are interested in helping out, give us a call. You do not have to take over the responsibility for a "Chair" immediately. We have a system of Chairs and Assistant Chairs that will allow you to get a feel for a position, without being thrown to the wolves, so to speak.

#### Dinner Meetings:

Last year we seemed to have as many different meetings sites as we did meetings. This year we will be trying out yet another location! We will meet at the Lambton Shrine Club on Confederation Street. We hope that this will offer us better quality meals in a relaxing atmosphere. In addition, The Shrine Club is a charitable organization that is active in our community. We can eat well and do good at the same time. What a Plan!!!

This year, we are going to attempt to make the meetings more informative, not only with interesting speakers, but also with more information on how the section is running and the projects that we have underway. We are hoping that by being more informed, our members will take more of an interest and be more

involved in what is going on with ISA.

#### Summer Vacation:

Lastly, we hope that everyone had a safe and enjoyable (but too darn short!) summer vacation. Welcome Back!

#### Budget:

You will be asked to review and approve our section budget at the next Dinner Meeting. Please take the time to review the document and ask questions. After all, it is your money that we are spending.



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# ISA Sarnia Section "Dinner Meeting"

**SEPTEMBER 25, 1995** 

Join us at our first dinner meeting of the 1995 - 1996 season. This year we will be taking the opportunity to support our local Shrine Club by holding our dinner meetings in their facility on Confederation Street (between Indian Road and Murphy Road, across from the Beer Store) The Lambton Shrine Club continues to be a source of hope and support for the community and we are pleased to be a contributing factor in their community efforts.

Cocktails 6:00 p.m.

Dinner 7:00 p.m.

#### **GUEST SPEAKER**

TOPIC

Geoff Ireland Phoenix Contact Surge Voltage Protection and Application

#### **MENU**

Traditional Roast Beef Dinner with salad, potatoes, vegetables, dessert

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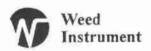






















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#### Continuous ground

Single point grounds are good as long as they stay single point. This is the major difficulty with them. A technician with a wrench can screw you up very time. One way to overcome this difficulty is to use a continuous ground as shown in Figure 2.

In the case of a continuous ground, the ground can be literally continuous or it can be a series of discrete grounds that are spaced at distances that are small compared to the shortest wavelength of inter-

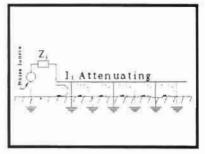


Figure 2 Continuous ground

est. This grounding system has the advantage of decreasing the noise currents on the shield in an exponential manner with the distance from the source. It also doesn't matter where the source of the noise is located. A technician can put his wrench at any location and it won't effect it. However, as with all good things, there is a catch. The shield that one uses has to be competent enough to carry all the local ground currents. It must have an extremely low resistance. It in effect becomes a ground buss. This is why these are often not used in large systems. They tend to become costly. Often so precious that one begins to see the merits associated with fiber optics.

## SARNIA ISA MEMBER TRAVEL RESPONSIBILITY

#### 5.0 RESPONSIBILITIES

- 5.1 Each individual of Sarnia ISA travelling on company business is reponsible for adherence to this procedure.
- 5.2 The Section President and Executive are responsible for approval; of the trip requests in advance. The member should ensure timely submission of expense reports on the member's return. (Normally within 30 days) Expense details should be reviewed and approved by the treasurer before reimbursement is made. Any disagreements should be taken to the section executive.
- 5.3 Review of this procedure is the joint responsibility of the Executive and the President. The procedure will be reviewed in September of every year.



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## **USING THE SARNIA SECTION BBS - Part 5**

#### ISA GROUP INTERNET RATES

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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. The regular three month contract cost is \$20/month minimum for 20 hours plus one time \$20 connect fee, which is \$80. Most people I surveyed did not wish to commit the \$20/month. They felt that 10 hours a month would suffice. ISA Members ONLY pay \$10/month minimum for 10 hours plus one time \$10 connect fee, for a total of \$40. Additional 3 months cost \$30. Additional hours cost \$1 as used. Bulk hours can be purchased at \$0.50/hour (minimum 25 hours). The bulk hours carry foreword from month to month. Call Brian Smith (332-1212 x7920) if you have any questions or are interested in an Internet seminar. There is also a Sarnia Internet Users Group, which meets the second Thursday of each month at the McLean Centre. You should call Electro-Byte about Internet questions or drop in for a demonstration.

#### USING THE SARNIA SECTION BBS - FIDONet

This article will continue to address Fido netmail. The BBS is now part of a worldwide amateur BBS network called FidoNet. Our FidoNet address is 1:246/132. North America is Zone 1, Great Lakes Central Region (Essex, Kent & Lambton Counties) is Network 246 and our specific Node number is 132. ISA members can send messages to all other FidoNet BBSÆs and Internet E-mail via the NETMAIL conference, #101. Netmail is to a specific person. The person you send a message to must have a valid BBS login on a Fido Node BBS or Internet E-mail address. The Hamilton ISA section BBS is Fido Network 259, Node 113. If you know someone on that BBS, you could send a netmail message. Address the message To: First Lastname@1:259/113. Enter the message just like any other message and save it. The BBS automatically checks for outgoing mail, around 2 am, and calls our mail hub Insomnia BBS here in Sarnia. Incomming and outgoing mail is exchanged and sorted into the proper conferences. Netmail is sent by Insomnia BBS to Infomotion BBS in Windsor, our regional coordinator and mail hub. FidoNet also includes Echo mail which is classified by subject areas and is echoed across many BBS systems. Some Echo mail conferences only echo to systems in Net 246. Examples are 246 User, 246 Sysop, Tech Chat and Superhighway. Our BBS can select from a list and does not have to pick up all Echo conferences. There are also over 800 Echo mail conferences that are echoed across all of North America. Some of these will be setup in the near future. An example would be the Windows 95 conference. The complete list can be found by joining any Fido conference and selecting Bulletins. It is not on the Main Board Bulletin list. If you wish to enter or reply to an Echo conference message, Join the conference and press "E" to enter a new message or "RE" to reply to an existing message, just like any other conference (except Netmail). Save the message, and it will be echoed to the 246 network or the entire Fido backbone system. To send a message to an Internet E-mail address, via Netmail conference #101, is a slightly different procedure again. Fido Bulletin #3 explains the details. The procedure must be followed exactly or your message will be bounced

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

Brian Smith

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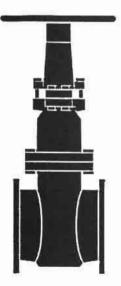
## **Meeting Dates**

#### MEMBERSHIP DINNER MEETINGS

Date	Place	
September 25, 1995	Lambton Shrine Club	
November 27, 1995	11	
January 29, 1996	n	
March 25, 1996	"	
May 27, 1996	10	

#### EXECUTIVE MEETINGS

EMBCCIT E MEDITION				
Time	Place			
7:00 p.m.	Fisher-Rosemount			
ж <sup>23</sup>	'n			
<u>*</u>	20			
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TURNOVER	MEETING			
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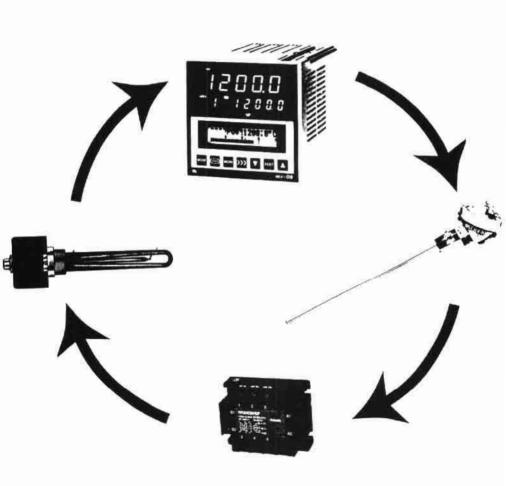
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#### MOORE PRODUCTS CO.

Moore Products Co. has introduced a program called **One-to-One Signature Service™** to provide users of the company's process control instruments and systems with a central point of contact for Technical Information Center (TIC). Via the TIC numbers below, a customer can speak with a TIC representative, use a faxback service, hear product announcements, or access a bulletin-board service.

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#### ROSEMOUNT

Rosemount Instruments Ltd. has introduced the new Model 396 TUpH Sensor from Rosemount Analytical, specifically designed for longer life in dirty, harsh application with a high solids content typically found in Pulp and Paper, Chemical, and Wastewater applications.

(Continued on Page 55.)

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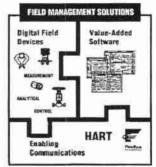




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A new brochure entitled "Process Measurement Instrumentation" is now available from Rosemount. This four-colour short form catalogue illustrates over thirty products and applications that can be used across a variety of process industries. This brochure is ideal as an overview of the Rosemount Measurement Division product line.

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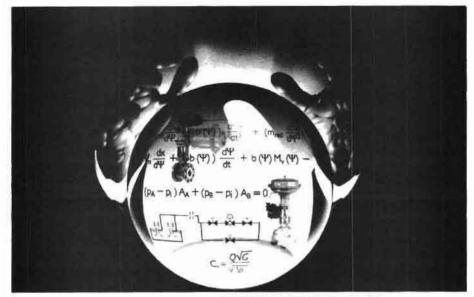
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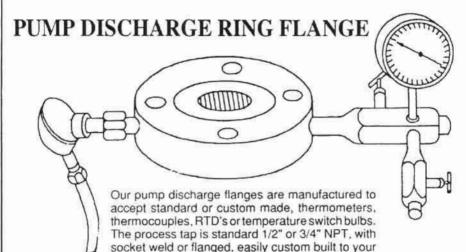
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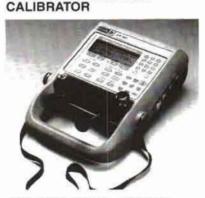


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