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Dear Marketing Manager:

I am very pleased to let you know about our new study, *The Market for Temperature Sensors in the Americas, Second Edition*. The many replies we received to our initial inquiries were instrumental in creating the study's final scope and structure. Overall, the response was very strongly in favor of the project, and hence we are even more excited about its completion.

We've seen an emerging need for this study from several points of view. Our original study of the subject was published in 2000, and it has been several years since either Flow Research or any other research firm has taken a serious look at the subject. Our own clientele and others have been asking us when we will do the next edition. The time seems right.

The original study found a shift from thermocouples to RTDs, and a shift within RTDs from wirewound to thin-film. Other trends were also identified at the time. Now, there is a set of questions surrounding the issues of whether these trends have continued, and what new trends may have commenced within the sensors market during the last several years. One question of particular interest is the impact that new Asian suppliers may be having on the Americas market. We have seen their influence within other technology sectors, and we expect to see it here as well.

For these and other reasons we see a real demand for the *Second Edition*. Our plan is to begin the actual research phase of the project this month and to publish in October, 2005. Again, your input has been of genuine assistance in creating the study's final research scope.

On your response form you had expressed interest in purchasing the study. For this reason, we want to make you aware of both the precise objective and final outline of the study. We also want to make you aware of the purchase options we are making available.

We have enclosed material which covers the rationale for the study, the study's research scope and segments, key issues to be addressed, as well as an abbreviated Table of Contents. All of this is to give you ample descriptions of the final version of the report.

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The study's text will be clear and concise. Following our established format, statistical analyses, market segmentations, and other numerical data will be richly illustrated in high-quality graphical representations for ease of review and later reference. The study will be delivered in two basic ways: 1) as a full color, bound, hardcopy text; and 2) in PDF format in either electronic or CD-ROM versions (choice determined by client preference).

We believe the available purchase options offer flexibility, value, and reward early commitment. Our practice has always been to offer a significant discount from the retail price for those who purchase prior to publication. We continue that practice here. In addition, and for the first time, we are bundling the CD-ROM version of the study with the bound text for pre-subscribers. The CD-ROM version has a retail value of \$450 - our usual price - but is offered at no additional cost to those who make the early decision. Please refer to the enclosed pricing sheet for details.

In closing, we thank you again for your expression of interest in this study. We believe it is needed research at the right time. It appears that you may agree.

Best regards,

Dr. Jesse Yoder,
President
Flow Research, Inc.

The Market for Temperature Sensors in the Americas, Second Edition

Rationale for Study

The temperature sensors market is quite diverse, with many suppliers, and with a number of different technologies. In the 2000 study, we found a shift from thermocouples to Resistance Temperature Detectors (RTDs), and a shift within RTDs from wirewound to thin-film. At the same time, thermistors are still widely used in the food, pharmaceutical, and HVAC industries. Other members of the temperature sensors market include infrared and fiber optic.

It has been several years since anyone has taken a serious look at the temperature sensor market. During this time, supplier consolidation has occurred, and temperature sensor technology has continued to evolve. Flow Research intends to take a new look at the temperature sensor market. We plan to determine market size by type of temperature sensor, determine market shares, and identify growth trends. With the background of the earlier study available as a baseline, we expect to accurately describe how the market has changed over the past five years, and to realistically describe what the market will look like in the next several years to come.

The objectives of the study will be achieved by providing a comprehensive view of the temperature sensors market from the perspectives of supply, distribution, and product utilization. Key findings will be realized through the use of structured in-depth supplier interviews, internet surveys and reviews, and secondary research of technical resources. An end-user survey will supplement the core study.

Scope

The data developed in this study will include total revenues and unit sales by temperature sensor, and average selling prices. Other data will include the following:

- Market shares for the suppliers of each temperature sensor type
- Detailed product descriptions by supplier
- Growth forecasts for each type of temperature sensor (extending through 2010)
- Growth forecasts for all temperature sensors for each industry
- Market shares for each type of temperature sensor in the Americas
- Temperature sensor sales by distribution channel
- Temperature sensor sales by customer type
- Profiles of all supplier companies
- Strategies for success

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Study Segments

Technology Types

- Thermocouples
- Resistance Temperature Detectors (RTDs)
- Thermistors
- Infrared
- Fiber Optic

Note: Thermowells will also be included

Sensors by Type

- Thermocouples: Type J, K, T, E, and Others
- RTD Probes and Assemblies: Thin-Film, Wirewound
- Infrared: Portable, Fixed

Market Sizes

- Breakdowns by technology type
- Breakdowns by geographic region

Market Shares

- By technology type by supplier
- By supplier by geography
- By sensor type by industry

Market Forecasts

- Total for all technologies included in study (in US Dollars)
- By geographic region (in US Dollars and number of units)
- By technology (in US Dollars and number of units)

Geographic Regions

- United States
- Canada
- Latin America (Central & South America)

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Study Segments (continued)

Industries and Vertical Markets

- Oil & Gas Exploration, Production, and Transportation
- Oil & Gas Refining
- Chemical
- Pharmaceutical
- Food Processing
- Pulp & Paper
- Metals & Mining
- Power
- Water & Wastewater
- Automotive
- Aerospace
- Heat Treating
- Plastics
- Food Transportation
- HVAC
- Textiles
- Electronics / Semiconductor
- Other

Total Sensor Sales by Distribution Channel

- Direct Sales
- Independent Representatives
- Distributors
- E-Business

Total Sensor Sales by Customer Type

- End-Users
- OEMs
- Systems Integrators
- Engineering and Consulting Firms

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Study Segments (continued)

Company Profiles

- Profiles of all identified manufacturers (50+) including contact information, product line(s), and other essential information

Strategies for Success

- Discussions of market forces at work
- Strategic action perspectives
- Real world success strategies

Key Issues in this Study

- Is the move from wirewound to thin-film RTDs continuing?
- Is the broader switch from thermocouples to RTDs continuing, and at what pace?
- How are thermocouples segmented by type?
- To what extent are low cost suppliers from China, India, and other countries penetrating the temperature sensor market in the Americas and influencing prices?
- What consolidation has occurred in the industry? Will this continue?
- What trends are occurring with thermistors? With infrared sensors? With fiber optic temperature sensors? With thermowells?
- What technology changes are occurring among temperature sensor products?
- How quickly is e-business growing as a distribution channel?
- What features are end-users looking for in temperature sensors?
- Are end-users switching from one type of temperature sensor to another, and why?

*The Market for Temperature Sensors in the Americas,
Second Edition*

TABLE OF CONTENTS (abbreviated)

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- Overview
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- Methods for Industrial Temperature Measurement
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- Temperature Sensor Market Size and Forecast
- Market Shares for Temperature Sensors in the Americas
- A Strategic Perspective

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- End-User Industries
- Temperature Sensor Industry Structure

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- Temperature Scales
- Methods of Industrial Temperature Measurement
- Other Temperature Measurement Technologies
- Technology of Industrial Temperature Sensors
- Thermocouple Technology
- Thermocouple Types
- RTD Technology
- Thermistor Technology
- Fiber Optic Technology
- Infrared Technology
- Relative Advantages of Different Temperature Sensors

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CHAPTER SUBJECT (continued)

- Temperature Sensor Product Analysis
- Thermocouples
- RTDs
- Thermistors
- Fiber Optic Sensors
- Infrared Thermometers
- Thermowells

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- Growth Factors for the Temperature Sensor Market
- Market Size and Growth Forecasts
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- Shipments of Infrared Thermometers by Geographic Region
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- Shipments of RTDs by Type
- Shipments of Fiber Optic Sensors
- Shipments of Infrared Thermometers by Type
- Shipments of Temperature Sensors by Industry
- Shipments of Temperature Sensors by End-User, OEM & SI
- Shipments of Temperature Sensors by Distribution Channel

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CHAPTER SUBJECT (continued)

5 Temperature Sensor Supplier Market Shares

- Market Shares for Temperature Sensors in the Americas
- Market Shares for Temperature Sensors by Geographic Region
- Market Shares for Thermocouples by Region
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- Market Shares by Industry

6 Strategies for Success

- Overview
- *(Study findings will determine strategy elements)*
- Guidelines for Applying the Strategies

7 Company Profiles

- Supplier Contact Information
- Supplier Product Lines

8 Exhibits



User Perspectives Survey

The purpose of the Survey is to capture the views of the market's end-users as another means of informing suppliers to the markets. Purchase decisions and application requirements and changes are best understood – and most easily anticipated – from the perspective of end-users. The Survey is offered as a supplement to the core sensor and transmitter studies, yet it is also an indispensable learning tool.

The industries sampled in the Survey will be drawn from those covered in the core studies. The pertinent questions regarding applications, product preferences, buying criteria, accuracy and safety considerations, purchase plans, sales channels, service levels, and supplier sources will all be asked and included in the results.

Below is a brief outline of the ***User Perspectives Survey*** for your review:

Survey Segments

- Industry
- Company Size/Employee Totals
- Primary Applications
- Temperature Sensors in Use (by quantities and by types)
- Purchase Factors and Supporting Rationales (with priority ratings)
- Unmet Needs from Products and Suppliers
- Descriptions of Ideal Sensors
- Anticipated Changes in Applications
- Industry Growth Estimates (through 2008)
- Purchase Plans (through 2008)
- Size of Installed Base of Sensors
- Requirements for Integrated Temperature Sensors
- Redundancy Requirements
- Safety and Other Approvals
- Retrofit/Replacement/New Purchase Prospects
- Decision Maker (who specifies equipment purchases)
- Satisfaction Levels (re manuals, training, service, and technical support)
- Purchase Sources (direct sales, independent representative, stocking distributor, systems integrator, Internet)

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