

April 9, 2010

Mr. Tony Radoszewski
Executive Director
PLASTICS PIPE INSTITUTE
105 Decker Court, Suite 825
Irving, TX 75062

**THE
ALLEGHENY
MARKETING
GROUP**

*Planning & research
to achieve marketplace advantage*

Dear Tony:

The Allegheny Marketing Group (AMG) is pleased to provide this proposal to assist the Plastics Pipe Institute (PPI) in conducting a thorough investigation of the pipe market to assess the share of plastic (polyethylene) piping in the following markets:

- Water systems – potable water and sewage
- Drainage – highway and subsurface drainage
- Fuel Gas – transmission and distribution
- Conduit – electrical and telecom
- Plumbing and heating – commercial and residential applications

As the leading organization representing all segments of the plastics piping industry, PPI would use this information to create opportunities for its members and expand market shares of plastics pipe.

BACKGROUND

The Plastics Pipe Institute serves as a channel for information sharing, issues resolution, idea exploration and successful implementation guidance. PPI is dedicated to advocacy and outreach efforts in support of these goals and works to broadcast the many benefits of polyethylene pipe. The Institute is comprised of approximately 300 members and associates – including manufacturers of plastic pipe, resin and equipment manufacturers, and distributors.

The applications listed above are served by five divisions within PPI. Within each application there are a number of competing materials that could replace High Density Polyethylene (HDPE) pipe and include:

PPI Division	Competing Materials
Water systems	ductile iron, PVC
Drainage	concrete, corrugated steel, PVC
Fuel gas	dominated by HDPE
Conduit	dominated by HDPE
Plumbing and heating	copper, ductile iron

While PPI has anecdotal information pertaining to the market share of plastic pipe in each of these markets, there has been no concerted effort to provide reliable data of the market share of plastic pipe in each of these markets.

The following pages will outline our process for gathering and presenting this information to PPI.

OBJECTIVES

The objectives, as we currently see them, include

1. Identify the types of projects in each of the five markets where the respondent is involved (i.e., storm drainage, water systems, fuel gas, conduit, plumbing/heating).
2. Identify the types (e.g., HDPE, PVC, corrugated steel, ductile iron, concrete, etc.) and sizes (i.e., pipe diameter) of piping materials specified/used in these applications.
3. Determine the percent of piping materials specified/used in these applications, by:
 - a. Type of material
 - b. Size (pipe diameter)/size ranges
4. Identify reasons for using/specifying these piping materials.
5. Determine if respondents have preferences for specific materials. If so, identify reasons for these preferences.
6. Identify the trends in types of materials used/specified.
 - a. Do respondents expect the mix of materials used/specified to change over the next 3-5 years?
 - b. If so, identify the materials to be used more extensively, by how much, and which will be reduced.

METHODOLOGY/WORK PLAN

AMG recommends using a combination of secondary research and telephone interviews to collect market usage information. AMG recommends the following approach:

1. Hold an initial planning meeting between PPI and AMG via conference call. The purpose of this meeting is to:
 - a. Introduce AMG's project manager
 - b. Confirm market segments to be interviewed
 - c. Create a piping material matrix by application – identifying piping materials (and sizes) by application
 - d. Discuss the key questions to be included in the telephone questionnaire
 - e. Confirm project objectives, approach, and schedule
2. Obtain questionnaire approval and conduct 8-10 "pilot" interviews. The purpose of these interviews is to test the length and content of the questionnaire. Results of these interviews will be reviewed with PPI to determine if additional changes are required.

Mr. Tony Radoszewski
April 9, 2010

3. Conduct secondary research. AMG will conduct internet research over 2-3 days to uncover information available in the public domain regarding piping material usage. In addition, the research will help to identify specifiers and end users for each of the targeted segments.

Resources to be investigated include:

- Trade associations for each of the piping materials (e.g., American Concrete Pipe Institute, National Corrugated Steel Piping Association, etc.)
 - Federal government statistics (e.g., Department of Commerce, Federal Highway Administration, Economic Stimulus Plan, etc.)
 - State government agencies
 - Industry analyst reports
 - Database resources
4. Conduct telephone interviews. Depending on the level of accuracy desired by PPI, different sample plans can be developed. Sample plan development is generally a trade-off between the accuracy level of the data and the required budget and schedule.

AMG would recommend two options for the study.

Option 1 – “Full” Approach

- Interviews will be conducted with a combination of specifiers/contractors/builders and end users (depending on the industry segment).
- A more “robust” number of interviews will be conducted with specifiers so that regional differences can be segmented out.

The targeted audiences and number of interviews are detailed in the following charts.

Option 1 – “Full” Approach

Division/Segment	Water Systems	Drainage	Fuel Gas	Conduit	Heating/ Plumbing
EPCM Firms	✓	✓	✓	✓	
Design/Build Architects	✓	✓	✓	✓	✓
State DOTs/FHA	✓	✓			
Natural Gas Utilities			✓		
Electric Utilities				✓	
Telecom				✓	
Residential/Commercial Builders					✓

Mr. Tony Radoszewski
April 9, 2010

Option 1 – “Full” Approach

<u>PPI Division</u>	<u>Number of Interviews</u>
Water Systems	70-75
Drainage	70-75
Fuel Gas	70-75
Conduit	70-75
Plumbing/Heating	<u>100</u>
	380-400

Option 2 – “Light” Approach

- Interviews will be conducted with specifiers only in most segments
- Specifiers include regional offices of EPCM (Engineering, Procurement, Construction, Maintenance) and Design/Build firms
- For the Plumbing & Heating segment, interviews will be conducted with large Residential and Commercial builders (since these products are not likely specified)
- The number of interviews per PPI Division would be reduced
- Break-outs by region will not be accurate due to the reduced number of interviews

The targeted audiences and number of interviews are highlighted below:

Option 2 – “Light” Approach

Division/Segment	Water Systems	Drainage	Fuel Gas	Conduit	Heating/ Plumbing
EPCM Firms	✓	✓	✓	✓	
Design/Build Architects	✓	✓	✓	✓	✓
State DOTs/FHA					
Natural Gas Utilities					
Electric Utilities					
Telecom					
Residential/Commercial Builders					✓

Sample Plan 2

<u>PPI Division</u>	<u>Number of Interviews</u>
Water Systems	30-40
Drainage	30-40
Fuel Gas	30-40
Conduit	30-40
Plumbing/Heating	<u>100</u>
	220-260

Mr. Tony Radoszewski
April 9, 2010

5. AMG will provide project updates every two weeks with the number of interviews completed by segment.
6. Prepare a final report summarizing the information in a presentation-quality format. The final report will include the following sections:
 - a. Executive Summary – highlights of the key findings of the research
 - b. Objectives/Methodology – details of the information desired and approach used to gather the data
 - c. Exhibits Section – results of interviews by market segment
 - d. Conclusions/Observations – details our findings and provides market share projections for each type of piping material
7. Review research results with PPI management team.

PROJECT SCHEDULE/BUDGET

Sample Plan 1 – Robust Approach		Schedule*	Budget
Includes:	<ul style="list-style-type: none">▪ Secondary research▪ 380-400 telephone interviews with specifiers, contractor/builders, and end users▪ Final Report and Presentation	10-12 weeks	\$46,200
<hr/>			
Sample Plan 2 – Specifiers Only		8-10 weeks	\$31,500
Includes:	<ul style="list-style-type: none">▪ Secondary research▪ 220-260 telephone interviews with specifiers, and residential/commercial builders (heating/plumbing segments only)▪ Final Report and Presentation		

*Note: The schedules would begin after the project kick-off meeting and assumes no delay in questionnaire approval.

The budgets include the following items:

- One planning meeting between PPI and AMG via conference call
- All time, labor, and materials required to develop the telephone questionnaire and to conduct all telephone interviews
- Three bound copies and an electronic version of the final report
- Conference call with PPI management to review the findings of the research

AMG will invoice one-third of the budget at the start of the project with the remainder due upon completion of the final report.

Our terms are Net 30 days. This proposal is valid for 60 days from the date of delivery.

Mr. Tony Radoszewski
April 9, 2010

BACKGROUND OF ALLEGHENY MARKETING

The Allegheny Marketing Group (AMG) is a market research firm specializing in trade and professional organizations and in business-to-business research. With more than 20 years of market research experience, AMG combines practical business experience with tested market research techniques to apply research findings to solve our clients' marketing and business issues.

In addition to conducting this type of research for both trade associations and B2B clients, we have conducted research with each of the audiences in this proposal. A short list of customers for whom this type of work has been completed includes:

- Water Systems/Drainage
 - American Public Works Association
 - Contech Bridge Solutions
 - L. B. Foster
 - Victaulic
- Fuel Gas
 - Dresser Industries
 - Kerotest
 - Mine Safety Appliances (MSA)
- Conduit
 - Carlon Electric (Thomas & Betts)
- Plumbing/Heating
 - Dormont Manufacturing
 - Erico
 - Ridgid Tool

This combination of experience ensures AMG has the capabilities in place to ask the right questions of the right audience to deliver the information our customers need to make better business decisions.

IN SUMMARY

The Allegheny Marketing Group appreciates the opportunity to provide this proposal and looks forward to working with you on this project.

I will be in contact later next week to discuss the next steps for the proposal. In the meantime, please feel free to call me at the office at (412) 787-4166 if you have any questions or comments.

Sincerely,



Rich Carlson
Director, Association Research

New PE Pipe Material Designation Codes

Pipe Material Designation Code		First Digit (Density)	Second Digit (Min. PENT, hrs)	Third & Fourth Digits (Max. HDS, psi)	Pressure Ratings, psig @73°F, SDR 11 Pipe Water / Gas
Historical	Current ^a				
PE 2406	PE 2406	>0.925 - 0.940	10	625	125 / 80
	PE 2606	"	100	625	125 / 80
	PE 2708	"	500	800 ^b	160 ^c / 100 ^d
PE 3408	PE 3408	>0.940 - 0.947 ^e	10	800	160 / 102
	PE 3608	"	100	800	160 / 102
	PE 3708	"	500	800	160 / 102
	PE 3710	"	500	1000 ^b	200 ^c / 128 ^d
	PE 4608	>0.947 - 0.955 ^e	100	800	160 / 102
	PE 4708	"	500	800	160 / 102
	PE 4710	"	500	1000 ^b	200 ^c / 128 ^d

PE **4710** Example:

4 - first digit, density = >0.947 - 0.955;
7 - second digit, SCG, PENT = >500 hr;
10 - third and fourth digits, maximum HDS/100,
 (1600 psi x 0.63 DF) / 100 = 10

^a Current PE pipe material designation codes based on new design factor, DF, for high-performance PE materials. (The 0.63 DF is approved for the high-performance PE materials in water piping applications)

^b Using 0.63 DF for high-performance PE materials, the HDS is 1250 x 0.63 = 800 psi for a 1250 psi HDB and 1600 x 0.63 = 1000 psi for a 1600 psi HDB.
 Using 0.50 DF for standard-performance materials, the HDS is 1250 x 0.50 = 625 psi for a 1250 psi HDB and 1600 x 0.50 = 800 psi for a 1600 psi HDB.

High-performance PE materials are defined by PPI TR-3 as a material having a 50 year substantiation according to Part F.5, a minimum PENT value of 500 hours, and an LCL/LTHS ratio of at least 90% as per ASTM D 2837.

^c Using the 0.63 DF for high-performance PE materials in PE water pipes.

^d Assuming 0.40 DF is adopted into US CFR Title 49, Part 192 for these high-performance PE materials in PE gas pipes. (Canada has adopted the 0.40 DF for all PE materials.)

^e Revisions in ASTM D 3350-02a resulted in the former cell class 3 density being split into two cell classifications, 3 and 4 as shown in the table.