



Hard Facts

N e w s l e t t e r

Fall 2006 - November

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President's Letter



Hank Gottschalk
PCAV President

Every traveler I talk with these days has a story about their recent adventure flying our friendly skies. Although the locations, names and specifics change, every one of them seems to have a consistent underlying theme. Life is seldom played out exactly as you would have planned, is it? This is true in our travel plans and also in our everyday lives.

Sometimes life appears to be a sadistic baseball pitcher, just waiting to catch us with an unexpected curve ball or that cruel knuckle ball. The successful seem to take this challenge in stride. Their skill is evident because they know when to swing away, when to hold back, and when to step out of the batter's box to avoid getting hit with the ball.

Our association is up against this very same challenge. No matter how detailed we set our course, things don't always play out exactly as planned. We, too, need to know when to swing away, and when hold back. The final outcome is directly dependent on our ability to make that decision when the pitch is thrown, and the ability to execute the decision at the correct time. And these decisions do not belong solely to your Board of Directors.

The challenges faced by PCAV can be met with dedicated members. I would like everyone to consider this question: How

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Vacuum Testing: Why?

We live at the bottom of a deep sea of air. Just as submarines can be crushed by deep water, the air exerts a crushing pressure on everything around us. When we draw the air out of a structure, the difference in pressure between inside and outside exerts a force on the structure that tries to crush it. At sea level, the air presses us with 15 pounds of pressure per square inch (actually about 14.7 psi). Air pressure varies with changes in the weather and changes in altitude. On beautiful, dry, sunny days the air pressure is high. Weathermen report this as inches of mercury (Hg). A good day may show a



10 inches of Hg applies a load of 720 psf to Winchester Building Supply septic tank.

pressure of over 30 inches of Hg. A hurricane may show a very low pressure around 29 inches of Hg. For our purposes, we use 30 inches of Hg as one atmosphere which is about 15 psi of pressure. Since 30 inches Hg equals 15 psi, one inch of Hg equals 0.5 psi.

Further, since a square foot is 144 square inches, one inch of Hg equals 72 pounds per square foot (psf). Using a vacuum pump, we draw air out of a structure and measure the effect in terms of inches

of Hg pressure difference. Total vacuum would read 30 inches of Hg on a gauge. It never happens. Septic tanks are usually tested for water tightness at 4 inches of Hg and perhaps 7-12 inches to demonstrate structural integrity.

Soil weights vary by type, and water content. Obviously wet soil weighs more than dry soil. Again, let us take a rule of thumb weight of 120 pounds per cubic foot. Three feet down this soil exerts 360 psf. Ten feet deep it is 1,200 psf. Knowing these facts, we can test structures to simulate various loads. For example, most septic tanks are never buried more than three feet deep, so an anticipated load on the top of the tank would be 360 psf. To test whether the tank will withstand this load, we use the formula $5 \times 72 \text{ psf} = 360 \text{ psf}$. 5 inches Hg is exactly the right load.

ASTM C-1227 is the standard applied to septic tanks and it tells how to test for water tightness and structural soundness. To test for water tightness, ASTM C-1227 allows either a water test, where the tank is filled with water (to what level is vague) and let stand for 24 hours. When checked,

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PCAV Happenings



Mark Singer
PCAV Exec.
Director

As this newsletter goes to press, the PCAV is coming off another successful annual conference. A large crowd of members attended the Wintergreen convention, and participated in numerous business and social events designed to enhance the value of membership in the PCAV.

Conference Details

Attendees heard reports from the association's standing committees, and presentations by nationally known speakers. The PCAV Board of Directors met and discussed a broad range of issues affecting the membership. President Hank Gottschalk (Hanson), Alex Mason (Americast), and Carissa Alexander (Hanson) were unanimously re-elected to second-year terms as the officers of the PCAV. Congrats to all three!

Sandwiched in between these meetings were numerous networking opportunities including a golf outing, reception, dinner and a concluding luncheon. It was a great meeting for learning, both in the meeting room and over a meal. PCAV would like to thank Conference Chair Marie Derby for once again making this event a very successful and informative gathering of the precast concrete industry in Virginia.

Committee Doings

The association's committees continue to work hard and productively. The **Education Committee** is planning two training sessions for this fall, aimed as specifiers and contractors which will probably be held in the Northern Virginia and Tidewater areas of the state.

The **Marketing Committee** continues to ensure that the PCAV has a strong

presence at industry-related events throughout the state, and just finished attending and providing a sponsorship at the Virginia Engineer's Conference in Williamsburg.

The **Pipe Committee** is working on a PowerPoint presentation for local governments designed to provide them with guidance on both when, and how, to initiate and conduct a video pipe inspection.

The **Drainage and Sanitary Structures Committee** continues to work with VDOT on that VDOT's intention to move to a 30-inch clear opening on drainage system access points, and a meeting will be held on this important subject before year's end. In addition, work continues with our VDOT partners to establish a Precast Concrete and Concrete Pipe Certification School to be up and functioning before 2007.

The **Box Culvert and Bridges Committee** is working with VDOT on a precast certification for the procurement of materials and is seeking agreement on a common program for LRFD designs.

New Directory/Marketing Support

Aside from all of this committee activity, members were also pleased to recently receive newly printed copies of the 2006 PCAV Directory. And both the association's immediate Past President (Steve Rodgers – Contractors Precast Corp.) and current President (Hank Gottschalk – Hanson Pipe and Products, Inc.) drove to BWI Airport in August to meet with representatives of NECSA (the Northeast Cement Shippers Assoc.) to make a presentation on behalf of the PCAV for continued NECSA support of the association's ongoing promotional efforts. The membership thanks both gentlemen for their time on this important matter.

In order to assist in maximizing our relationship with NECSA, your Board of Directors is requesting that individual member firms endeavor to route their purchasing of promotional materials through the PCAV office. For more

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PCAV Happenings

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information on why this is important, and how it can be easily accomplished, give me a call.

Legislative Non-action

Finally, our industry continues to be disappointed by state legislators' continued failure to enact a program that ensures a long-term, adequate and sustainable funding stream for Virginia's transportation infrastructure. State Delegates and Senators failed to accomplish this goal during the regular winter session of the General Assembly, and failed again in a special legislative

session called by the Governor specifically for this purpose. Another special session may be called this fall as legislators try one last time to reach agreement on ways to provide sufficient funding to meet Virginia's ever-growing transportation needs. PCAV members will be supporting that effort.

As you can see, PCAV members continue to work hard on a broad range of activities that support greater usage and acceptance of precast concrete products. If you are not already actively engaged in this process, call the PCAV office and find out how you can assist.

~Mark Singer

President's Letter

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deep in the bench can play be successful? Are you willing to step up to the plate and help your PCAV be successful?

Every producer, manufacturer, design firm and municipality is faced with the need to accomplish more with less—less time, less money and less resources. This is a given, and a requirement, if one is to be successful. It is the single element common to every business; the dilemma is that this objective can directly affect whether we are successful.

As an association, can we deepen our benches with more involvement in our committees? Perhaps we can share the burden that is often placed on the shoulders of our teammates—to hit us that home run—by adding a few strategically placed base hitters in our line up.

As a designer, can you deepen your benches by enlisting the help of the PCAV? Perhaps a few well-placed pinch hitters can help your lineup. The PCAV is always ready, willing and able to help designers with their needs.

As a contractor, can you deepen up your benches by ordering precast, instead of on-site construction? The speed, agility and dependability of using precast concrete could give that much-needed competitive edge.

As an owner, can you deepen your benches by demanding dependable precast concrete? Precast is ready to serve as a structure the very day that it arrives on site.

I challenge you to consider how you can help promote precast concrete and contribute to the PCAV.

~Hank Gottschalk

“Some men dream of worthy accomplishments, while others stay awake and do them.”

~Anonymous

5 Steps to Targeting Your Marketing Message

To win at the game of business, a company needs a good plan. This can be done in-house, with a marketing consultant, or with a marketing firm. Here are five steps to developing and implementing a good marketing message:

1. Determine your company's strengths and weaknesses.

Before you can tell others who you are and what you do, you need to know about yourself. Gather your employees together and brainstorm a list of your company's strengths and weaknesses. Write everything down that is said and wait to evaluate it until you have exhausted all of the ideas.

Next, review each item on the list and decide if this is appropriate to be on the list, or if it can be eliminated. It's likely you will find several that can be combined so you end up with a relatively short list of strengths and weaknesses. You can also develop a short survey and ask your customers and vendors what they think your strengths and weaknesses are. Their answers may surprise you!

2. Research your target market/customer.

Next, analyze your sales from the past three years. What products or services are most profitable for you? Who are your customers? What can you conclude about your customers? What is similar about them? Based on your profitability evaluation, should you be targeting a certain type of customer, or changing your current strategies? How do these customers make their buying decisions? How can you influence those decisions?

Consider such things as:

- Location
- Size business (either sales dollars or number of employees)
- Industries/types of businesses
- Type of ownership (sole proprietor, corporation, etc.)
- Who are the decision makers, influencers and gatekeepers?

3. Investigate your competitors.

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Vacuum Testing

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if there is no water loss, the tank is declared water tight; if the water has dropped, it is refilled and checked an hour later, if it still holds the water without loss it passes. Or

tank is not dangerous until vacuums of over 7 inches Hg occur. Mid-seam tanks are stronger. Still, care should be taken to stay away from any tank under vacuum loading.



Diehl Vault, Orangeville, Pa., loads septic tank with 77,500 lbs. on top. A 22-inch vacuum could load the top just as much, but it would also load the sides.

the tank can be subjected to 4 inches Hg and if it holds the vacuum with less than a 10 percent loss over two minutes it passes. Vacuum testing is faster and easier to complete. Total test time may be less than ten minutes, instead of the 24-hour water test.

What are the dangers?

Concrete tanks can fly into a pieces as the air crushes a heavily loaded tank. Plastic tanks crush and collapse, fiberglass tanks can fly into pieces too. There's not much warning. The typical top-seam concrete

No matter what the load. It is a good idea to place the test tank in among other tanks, so that flying chunks of concrete are contained. I personally have tested hundreds of tanks and never had any chunks fly off, but I know it can happen and I am careful.

To begin

1. Select tanks that have sufficient age for testing.
2. Examine the tanks before testing to look for flaws that may indicate a problem



ConSeal CS-367 Seals openings air- and water-tight. Later, the cover is easily removed.

3. Seal all entries except the one through which the equipment draws a vacuum
4. If the top of the tank is rough, use CS-367 sealant under the test plate
5. It is good to have two gauges, one verifies the other.
6. Gauges with large displays are easier to read, a range of 0–10 inches is ideal.

During the test

1. Do not rush the process. It is better to slowly raise the vacuum load. If the tank is leaking, decide how to fix it.
7. Most often, the leak is where the equipment seals at entries.
8. If you cannot hear the leak, spray soapy water all over the inside and repeat the test 10. Staying inside to look for bubbles while the test is run will probably kill you!
11. To test for structural loading gradually increase the load.
12. Stop when the ultimate load is achieved. There is no need to hold the pressure.
13. Achieving the high load without cracks or fracture is sufficient.

Keep records

1. Take pictures to document your process.

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Where Do You Put The Butyl?

There are more wrong answers to this question floating around than there should be. So, if anyone tells you where to put the butyl, ask how he knows. Before extensive testing ConSeal had it wrong too. Not now.

Here's the Key

In order for ConSeal to work, you need compression. How much? It's never been fully tested, but experience shows that at least 50 percent compression always works. Will 30 percent compression work? Maybe. Probably.

Can you put too much in the joint? No. It's just that simple: No. If there is excess sealant, it will squeeze out of the joint. In very cold conditions it will take awhile to compress, but eventually it will settle to the ideal amount of sealant versus the weight of the structures and the shape of the joint. You cannot squeeze it all out. When you see the ConSeal squeezing out of the joint, think "full" not empty.

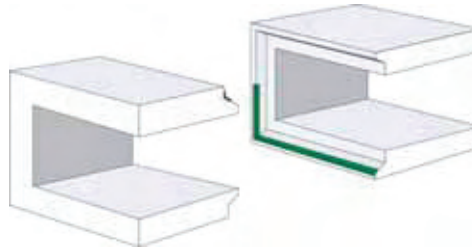
I actually had an engineer say that the sealant had all squeezed out. This is easily disproved. Take two pieces of steel, a wad of ConSeal, and a vice. Assemble and squeeze. When you try to take the steel pieces apart you will understand the concept.

Getting the Right Compression

Determining how much to use to get the 50 percent compression is a matter of measuring. If there is a 3/4-inch gap between structures then 1 1/2-inch sealant is called for. If you cannot easily measure the gap, perform a "bitewing" test. Put some butyl strips across the joints at strategic locations and assemble the structures. To prevent sticking, wet the area or use talcum powder. Let the structure rest for a few minutes and disassemble. The compression pattern will tell what you need to know.

Put the sealant where the fit is tightest, use a sufficient amount, and watertight structures are assured. **Knead the ends together** to make a continuous bead of sealant. Cut the ends on a 45-degree angle, or overlap, or overlay, it doesn't matter; so long as the butyl is kneaded together to make a continuous gasket.

Box culverts and pipes present their own challenges. It has been the custom to

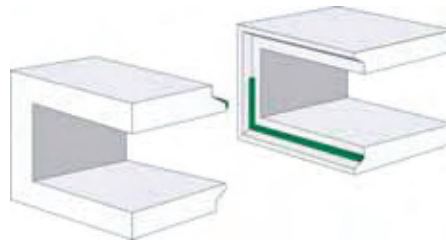


Sealant placed "outside" will show when you look in the joint from outside the structure. Note that the ConSeal is placed on the leading edge of the bell and the back shoulder of the spigot.

put half of the sealant on one piece and half on the other. Because without primer it is often difficult to make the sealant "hang" on the face of the concrete while it is being handled. Unfortunately, this has led to mistakes. If the ConSeal is placed at the back of the female (bell) and at the back of the male (spigot), the gasket is not continuous.

Where to Place the Sealant

It is perfectly alright to place sealant



Sealant placed "inside" will show when you lookdown into the joints from the insides of the pipe or culvert. For a continuous gasket this is where to put the butyl.

at either "inside" or "outside" locations on pipe and culvert. Just do not mix the two. No matter where you put it, select the right size and quality of sealant. Be careful

if it is not ConSeal, because **there are several sizes of the "same size" sealant** on the market! This is because ASTM has remained silent on the subject of sealant sizes. The opportunity to cheat is too much for some to resist. Measure the sealant to see if you got what you paid for. The chart below illustrates the point. These undersizes have been found at precaster's across the Northeast. "One inch" refers to the equivalent of a round one-inch cross section. So, a round cross section will measure .79 square inches in area. ConSeal's full size computes to The compression pattern will tell what you need to know.

Focus on Details

Precast is a very technical business. Attention to detail makes the difference between high and low quality. So what do you do when you find a joint that is tight some places and not so good in other places?

First, this indicates that the pallets are off. Something slipped; there may be a stone under one corner of the form; hardened concrete has built up and warped the pallet, etc.; for sure something is wrong. You will fix it, but just now you have to deliver a box with an uneven joint and it can't leak! Double up the ConSeal in the bad area. Stack sealant upon itself until you have room to achieve the 40 percent compression. If stacking is not practical, twist several pieces of sealant upon themselves to form a rope the size you need.

~Ed Pennypacker, Jepco Sales

Ø size	πr^2	Full Size	Undersize	Ratio
1/2"	.19 in ²	.44 x .44 = .19	.375 x .375 = .14	.74
3/4"	.44	.6 x .75 = .45	.5 x .75 = .38	.86
7/8"	.60	.75 x .75 = .56	.6 x .75 = .45	.80
1"	.79	.95 x .925 = .78	.625 x 1 = .625	.80
1 1/4"	1.26	.98 x 1.20 = 1.23	.88 x 1.25 = 1.1	.89
1 1/2"	1.76	1.25 x 1.5 = 1.80	1.0 x 1.75 = 1.75	.97
2"	3.14	1.4 x 2.25 = 3.15	n/a	n/a

Marketing

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Who are your main competitors? When you lose a sale, why does this happen? Which competitor generally makes the sale? What is better about your competitors' products and services? Why do your prospects choose a competitor instead of you? What are the annual sales figures for your competitors? What do they spend on their advertising and marketing efforts? (Your industry periodicals and associations can help you determine this.)

4. Differentiate yourself.

How are you better than your competitors? What is different about your company? Is your product or service a higher quality than your competitors'? Is it less expensive? Do you have better customer service? Does your product last longer? Require fewer repairs? Why do your customers choose you instead of your competitor?

What problems do you solve? Make a list of your product's features and benefits. Are they different than those of your competitors?

Try to describe your business in one short and succinct "tagline," or positioning statement. This should be a clear statement of what you do and what you stand for in no more than eight or ten words. Coca-Cola, for instance, says Coke is "The Real Thing." Once you create this short positioning statement, create your 30-second sound bite, also known as your "elevator speech," to use when you introduce yourself in public. This is also what you will use to help you focus your marketing efforts.

5. Create a marketing plan and execute it.

Now that you know who you are, who your competitors are and how you are better than them, you can create a roadmap to follow—a marketing plan for your company. Remember to include measurable short- and long-term goals, specific strategies, and appropriate tactics to reach your goals. Then, put your plan into action and evaluate the results, making adjustments as required.

~Lois Carter Fay,
MarketingIdeaShop.com

PCAV Annual Conference Recap

The 2006 Annual Convention for the PCAV was held on September 12–14 at the Wintergreen Resort. The convention was well-attended by our Producers, Associates and VDOT.

Golf Outing Fun

Despite the fact that we traded sunshine for fog, the golfers were still able to play at the Stoney Creek golf course in



Ventriloquist Steve Brogan performs at Annual Conference.

the valley. Many thanks to Golf Chairman Jim Richmond of Americast for his patience and persistence to reorganize our golfers due to the weather conditions. Our group dinner was concluded with Steve Brogan, a ventriloquist, performing a great show.

Day Two

The next day began with the Associates meeting and then our general session. We were enlightened and amused by Dr. Ken Hover from Cornell University. He not only educated our group but made the science of concrete entertaining. His speech was very informative and all comments were excellent. During the meeting, our committee chairs also presented brief reports about the past year.

Several folks from VDOT attended the conference, and PCAV greatly appreciates their support. Mal Kerley, Chief Engineer

at VDOT, offered some brief remarks toward the end of the convention, and PCAV President Hank Gottschalk of Hanson



Brogan and his dummy "talk" to Don Wagner, Hanson Pipe and Precast.

Pipe and Precast delivered the closing remarks.

Gottschalk also welcomed everyone to our send-off luncheon. Not only did this trip provide terrific education but a good time was had by all!

Please mark your calendars for Wintergreen in 2007. Our convention will be held on September 18-20, 2007.

~Marie Derby
PCAV Associates Director
Essroc Cement

Vacuum Testing

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2. Write down the results.
3. Repeat the process.

Note that a single test is not enough to predict how all of your tanks will perform. At least three tests before a trend is indicated.

~Ed Pennypacker, Jepco Sales

And The Winners Are . . .



THE FIRST-PLACE TEAM

John McConnell (Nansemond Precast), Mike Barg (Rinker Materials) Ed Pennypacker (Concrete Sealants), Marie Derby (Essrock), Rick Terrill (USF Fabrication), Jim Richmond (Americast)



THE SECOND-PLACE TEAM

Ed Plucinski (Hanseon Pipe and Precast), Jerry Mativa, Winchester Building Supply, Marie Derby (Essrock), Bob Swope (Swope Associates), Jim Richmond (Americast), John Rainero (Permatile Concrete Products)

Fun For All At Annual Conference



(LtoR) Carissa Alexander (Hanson Pipe and Precast), Marie Derby (Essrock) and Jim Richmond (Americast). Alexander won the longest drive. (Not pictured): The winner of the Longest Putt was Scott Lander.



Jim Fullerton (Fullerton & Associates), Adam Wilkerson (VDOT), Brian DeChirico (BASF Admixtures), and Rollie and Marilyn Walk (Universal Sales).

In the picture at the left are: Conference Speaker Ken Hover (Cornell University), Jim Richmond (Americast), Paul Lewis (Engineered Wire), Mary Beth Rainero (Permatile Concrete Products), Adam Wilkerson (VDOT), Don Anger (Americast).



"We are what we repeatedly do. Excellence, then, is not an act but a habit."

~Anonymous

2007 Calendar of Events

MONTH	EVENT/LOCATION
Jan. 9	PCAV/VDOT Meeting Board Meeting Holiday Inn Koger Center Richmond, Va.
July 17	PCAV/VDOT Meeting Board Meeting Holiday Inn Koger Center Richmond, Va.
Sept. 18-20	PCAV Annual Conference/ Wintergreen

PCAV/VDOT Meetings

At the PCAV/VDOT meetings listed above, there will also be numerous committee meetings held in conjunction with these meetings. These meetings will run from 9:00 a.m. to 1:30 p.m. Please note these dates on your calendars. Further information on these meetings will be sent out 30 days in advance of each meeting.

Check out the PCAV website!
www.gopcav.com

PCAV Members

Producer Members

Americast - Division of
Valley Blox, Inc.
Contractors Precast Corp.
Frederick Precast
Concrete, Inc.
Hanson Pipe & Precast, Inc.
Mack Industries
Nansemond Pre-Cast
Concrete Co. Inc.
Permatile Concrete
Products Co.
Rinker Materials
Rotondo Precast/
Oldcastle Precast
Winchester Building
Supply Co., Inc.

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City of Chesapeake

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Capital Foundry of Virginia, Inc.
CDS Technologies, Inc.
Concrete Sealants, Inc.
Dayton Superior Corp.
East Jordan Iron Works, Inc.
Engineered Wire Products, Inc.
Essroc Cement
Fullerton & Knowles, P.C.
Hamilton Form Company
Hamilton Kent LLC
Insteel Wire Products
Ivy Steel & Wire
Kaufman Products, Inc.
La Farge North America
Lehigh Portland Cement Co.

Luck Stone Corporation
M.A. Industries, Inc.
Martin Marietta Aggregates
Master Builders
Meadow Burke Products
NPC Inc.
Press-Seal Gasket Corp.
Roanoke Cement Company
Seaboard Asphalt Products Co.
Spillman Company
St. Lawrence Cement Corp.
Swope & Associates, Inc.
The Euclid Chemical Company
The SEFA Group
Universal Sales
U.S.F. Fabrication
Vulcan Construction Materials
W.R. Grace & Co.

Not a member? What's stopping you? Join now!
Call 888.503.4800 or visit www.gopcav.com.

PCAV Mission

The Precast Concrete Association of Virginia is dedicated to the growth of the precast concrete industry. We pursue that purpose by educating and partnering with specifiers, installers and end users on the advantages and proper utilization of our products and systems. The association will represent its members in the Commonwealth of Virginia

PCAV Past Presidents

Bill Tichacek, Americast	1991-1993
Jim Richmond, CP&P	1993-1995
Kirby O'Malley, Hydro Conduit	1995-1996
Don Anger, CP&P	1996-1997
Richard Rotondo, Rotondo Precast	1997-1999
Scott Crumpler, Americast	1999-2001
Mimi Rainero Coles, Permatile	2001-2003
Stephen Rodgers, Contractors Precast Corp.	2003-2005

Hard Facts is a publication of the Precast Concrete Association of Virginia for its members. Submissions, story ideas, member kudos, letters to the editor and comments are welcomed. Contact the editor, Lois Carter Fay, at 800.203.8660 or lcf@marketingideashop.com.

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