

Pennsylvania Precast Association

Membership Meeting

January 5th – Carlisle, Pa

Meeting called to order at 9:05 AM

- 1.) Reviewed anti-trust policy
Self introductions and sign in
- 2.) Reviewed financials
Balance- \$60,492.77
Receivables -\$
Payables- \$9,953.94
Est. reserves- \$52,338.83
- 3.) Executive committee review
President- Pat Holleran
Vice President- Phil Weber
Treasurer- Open
Secretary- Rusty Fox
Immediate Past President- Jay Behney
- 4.) Committee Membership review
 - a.) Quality Assurance and Specifications
 - b.) Manhole Standards work group
 - c.) Membership and Marketing- Open Chair
 - d.) Septic Tank Manufacturing Committee
- 5.) Action items from November 3rd meeting
 - a.) Inlet exception data base review is up and running Bob Horwhat will work on a presentation of problems for the next meeting.
 - b.) Box culvert grouting specs has been clarified. Grouting must take place within 3 days after post-tensioning is completed.
 - c.) Box culvert erection template is intended for bridge structures not box culverts.
- 6.) QA specific issues
 - a.) Sales tax vs. use tax and the sale of material vs. doing construction. This was explained by Hank and he will look into having a CPA put guidelines together for use by PPA members.
 - b.) Use of WBE, MBE, &/or DBE issues. Prompt pay, contractors must pay subs within 30 days after receiving payment from the state.
- 7.) Membership & Marketing issues
 - a.) Please direct addresses to Hank for Precast Solutions magazine. These magazines can be sent out to engineers and other specifiers to educate them on the advantages of using precast concrete.
 - b.) Web site traffic continues to increase.
 - c.) Mid Atlantic Quality Assurance workshop will be held February 9-11 2011 in Hershey, Pa

- d.) PA Concrete Conference February 1-2 2011 in Grantville, Pa
 - e.) NPCA affiliates Forum is at www.forum.precast.org please check it out.
 - f.) Dan Houk Chairman of the NPCA and President of Wilbert Precast Inc. was present and spoke about the goals of the NPCA and they're affiliates on what they are doing to increase the use of precast concrete and also the resources NPCA offers to affiliate members. (Copy of presentation is attached)
- 8.) Penn DOT Topics
(Copy of presentation is attached)
- a.) QA workshop February 9-11 at the Hershey Lodge
 - b.) Inlet top cracking, Penn DOT has collected various plastic chairs to have testing done such as infrared analysis, moisture absorption, composition testing, and volumetric expansion.
 - c.) Problems with visible deficiencies on galv. bearing plates supplied by a bulletin 15 approved source. Galvanizer was made aware of the problem & has changed procedure & also submitted a repair procedure which Penn DOT approved.
 - d.) The exception form online must be filled out completely if not request will be canceled
 - e.) Penn DOT renewed January 1st 2011 two new five year inspection consultants. All fabricators were notified by a December 20th department letter.
- 9.) Associate Spot light – SIKA Workability Retaining Admixtures- Sika Visco Flow 10
- a.) Sika- Ketan Sompura, Ph. D
Products Manager
(Copy of presentation is attached)
Open Date March 2nd 2011
- 10.) Directors report
- a.) Keep your listings up to date on PPA's website.
 - b.) What training or tools do you need help with? Let Hank know.
 - c.) Transportation funding update and continued contact with elected officials
 - d.) Note change in email addresses info@paprecast.org
- 11.) Upcoming meeting dates
- a.) March 2nd - Hotel Carlisle
- 12.) Comments- None



DAN HOUK

Wilbert Precast Inc., *president and CEO*
National Precast Concrete Association, *Chairman of the Board*

NPCA AFFILIATE MEMBER LOCATIONS

- 1 California Precast Concrete Association, Pleasant Grove, CA
 - 2 Cement & Concrete Products Industry of Hawaii, Honolulu, HI
 - 3 Central Atlantic Precast Concrete Association, Jessup, MD
 - 4 Concrete Tile Manufacturers Association, Buena Park, CA
 - 5 Illinois Precast Association, Manhattan, IL
 - 6 New Jersey Precast Concrete Association, Farmingdale, NJ
 - 7 Northeast Precast Concrete Association, East Taunton, MA
 - 8 Ohio Precast Concrete Association, Sidney, OH
 - 9 Pacific Northwest Precast Concrete Association, Portland, OR
 - 10 Pennsylvania Precast Association, Allentown, PA
 - 11 Precast Concrete Association of New York, Rochester, NY
 - 12 Precast Concrete Association of Virginia, Richmond, VA
 - 13 Wisconsin Precast Concrete Association, Madison, WI
- INTERNATIONAL AFFILIATE**
 British Precast Concrete Federation, Leicester, England



NPCA BOARD OF DIRECTORS INITIATIVE



Create a more proactive relationship with affiliate members



NEW AFFILIATE PROGRAM

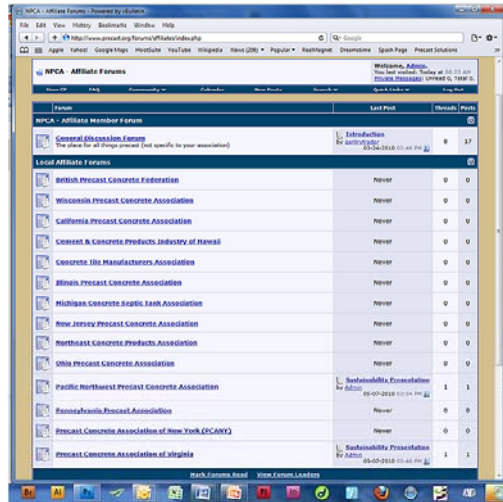


HEADLINES

- * Precast Forecast 2010
- * Precast Solutions new issue (Architectural Issue)
- * Precast Inc. new issue (Face of Fury)
- * Affiliates Forum now open
- * LEED Calculator now online!



NEW AFFILIATE PROGRAM



The forum is a space where affiliate members can share information and create discussion threads



NEW AFFILIATE PROGRAM

RESOURCES CURRENTLY AVAILABLE

Free access to NPCA's specifier database



NEW AFFILIATE PROGRAM

RESOURCES CURRENTLY AVAILABLE

Bylaws in a Box



NEW AFFILIATE PROGRAM

RESOURCES CURRENTLY AVAILABLE

Free training courses during NPCA events



NEW AFFILIATE PROGRAM

RESOURCES CURRENTLY AVAILABLE

Free training course:
How to Lobby Your
State Government



NEW AFFILIATE PROGRAM

RESOURCES CURRENTLY AVAILABLE

Legislative alerts and
economic updates for
newsletters



NEW AFFILIATE PROGRAM

RESOURCES CURRENTLY AVAILABLE

Meeting space at
The Precast Show for
a networking event



NEW AFFILIATE PROGRAM

RESOURCES CURRENTLY AVAILABLE

Technical assistance
in developing/running a
membership campaign



NEW AFFILIATE PROGRAM

RESOURCES UNDER DEVELOPMENT

Print on Demand



NEW AFFILIATE PROGRAM

RESOURCES UNDER DEVELOPMENT

Print on Demand

- Product sheets
- Brochures
- Lunch & Learn Invites
- Other marketing materials



NEW AFFILIATE PROGRAM

RESOURCES UNDER DEVELOPMENT

Technical support on
website and SEO Search
Engine Optimization



NEW AFFILIATE PROGRAM

RESOURCES UNDER DEVELOPMENT

Partnering on variety
of education and
training initiatives



NEW AFFILIATE PROGRAM

RESOURCES UNDER DEVELOPMENT

Other initiatives



PPA MEETING – JANUARY 5, 2011

PENNDOT TOPICS by
Serge G. Ter-Arakelov, P.E.



The Mid-Atlantic States *Quality Assurance Workshop*

[Registration Forms](#) [Agenda](#) [Accommodations](#) [Vendor Info](#) [Planning Committee](#) [History](#) [Charter](#) [Contacts](#)

Sponsorship of the Workshop is rotated yearly, with the Pennsylvania Department of Transportation hosting the 2011 meeting, which is to be held **February 9-11, 2011** at the **Hershey Lodge**.

The meeting is open to anyone interested in highway construction materials including government transportation employees, contractors, producers and suppliers. Details can be found at <http://www.midatlanticqaw.com>

Full registration is only \$175/person
Single day registration for the Thursday break-out sessions is only \$100/person

Inlet Tops Hairline Cracking issue (update)

Based on information published by Composite Designs Group (CDG) and unexplainable 'delayed' cracking found inlet tops, PennDOT has collected the samples of plastic chairs from different inlet manufactures and is presently conducting a series of tests on the chair types to identify their composition and volumetric expansion:

- ▣ Infrared analyses (nylon vs. poly based plastic)
- ▣ Moisture absorption test ASTM D570
- ▣ Composition test
- ▣ Volumetric and linear expansion

Galvanized C-top bearing plates issue.

- ▣ During a recent plant, visible deficiencies were noted on the galvanized bearing plates supplied by a Bulletin 15 approved galvanizer for use in Type C- Inlet tops.
- ▣ Many plates had a significant amount of zinc deposited as runs, sags and spikes that allowed concrete to bleed over the bearing plates, when they were positioned on the forms. The condition would also prevent even bearing of the grate after installation in some cases :

Galvanized C-top bearing plates issue (cont.)



Galvanized C-top bearing plates issue (cont.)



Galvanized C-top bearing plates issue (cont.)

- In their response to our concerns, the precaster notified their galvanizer who revised their procedures and reoriented the parts to avoid excessive build up on the bearing surfaces.
- In addition, they submitted an appropriate repair procedure:

Exceptions Form, page 1

- Not all old records were resubmitted to the newly created web site.
- All records under "Project" and "Structure" field need to be filled in order to populate the "Approved" button (see next page)

Exceptions Form (cont.)

PPA Pennsylvania Precast Association
Allentown, PA 18104-3420

Home
My Case List

Serge Ter-Aralev
stera@ppa.org
Last Logged On: 6:20 AM on 12/15/2010
Logout

Cancel

CASE #: 1191
DATE: 11/19/2010

CONTRACTOR
Name: [Redacted]
Location: [Redacted]
City: [Redacted]
State: [Redacted]
Zip: [Redacted]

PROJECT
Type: [Select a project type]
Project #: [Redacted]
Route: [Redacted]
County: [Redacted]
PennDOT District: [Select a District...]
Design Engineer: [Redacted]

SUBMISSION
Producer: [Redacted]
Contact: [Redacted]
Phone: [Redacted]
Date: [Redacted]

APPROVED BY
For PennDOT: [Redacted]
Name: [Redacted]

STRUCTURE INFORMATION
Structure Number: [Redacted]
Top of Grate: 0.0000
Invert Out: 0.0000
Pipe Type & Size: [Redacted]

Angle: 0
Total Height: 0.0000
Step Location: [Redacted]
Issue as Designated: [Select a Structure Issue...]

ADDITIONAL INVERTS
Invert in #1: [Redacted]
Pipe Type & Size: [Redacted]
Angle: 0.0000
Invert in #2: [Redacted]
Pipe Type & Size: [Redacted]
Angle: 0.0000
Invert in #3: [Redacted]
Pipe Type & Size: [Redacted]
Angle: 0.0000
Invert in #4: [Redacted]

New 5 Year Consultant Inspection Agreement Contracts (Quality Assurance inspection)

Beginning January 1, 2011 PennDOT executed two new 5 years consultant agreements to provide in-plant Quality Assurance inspection at Bulletin 15 approved precast/prestressed and reinforced concrete pipe producers. All fabricators were notified by our December 20, 2010 Department letter regarding the prime consultants (TRC or Pennoni) assigned to provide inspection at their plant.



Workability Retaining Admixtures

Presentation for – Pennsylvania Precast Association



PPA, Hotel Carlisle, Carlisle, Jan 5th, 2011

Presentation by –

Ketan Sompura, Ph.D

Sika Corporation

Contents

- ▲ Introduction
- ▲ Requirements of precast industry
- ▲ Performance of workability retaining admixtures
- ▲ Benefits
- ▲ Questions



Sika Corporation

Workability Retaining Admixtures

- ▲ Admixtures that can retain workability of concrete over time without significantly delaying the set time of concrete and improving early age strength.

- ▲ Sika ViscoFlow 10

1. How do they differ from retarders?
2. How do they differ from HRWR?



Sika Corporation

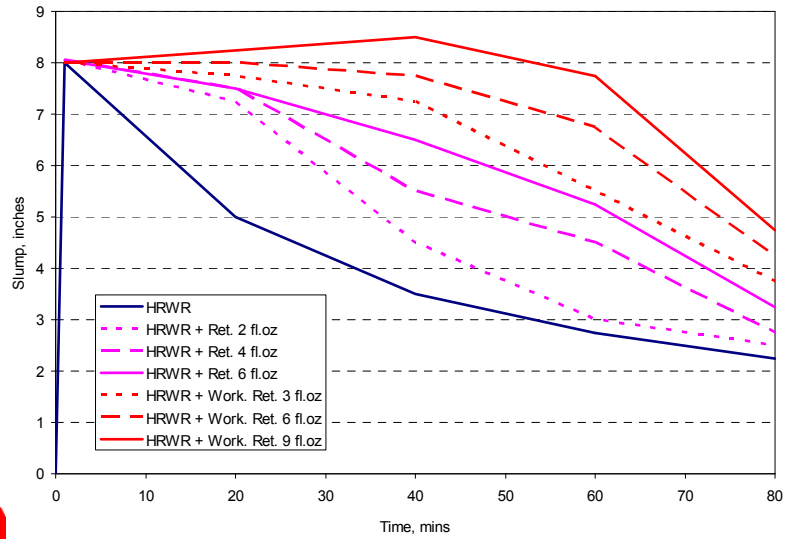
Requirements of Precast Industry

- ▲ Faster Productivity
- ▲ High early strength
- ▲ Increased workable life of concrete, especially in high temperature concrete
- ▲ Improved consistency
- ▲ Improved concrete quality
- ▲ Optimization of SCM



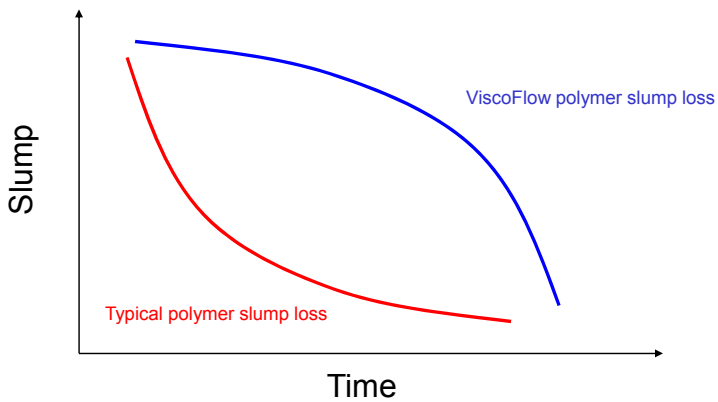
Sika Corporation

Workability Retaining Admixtures



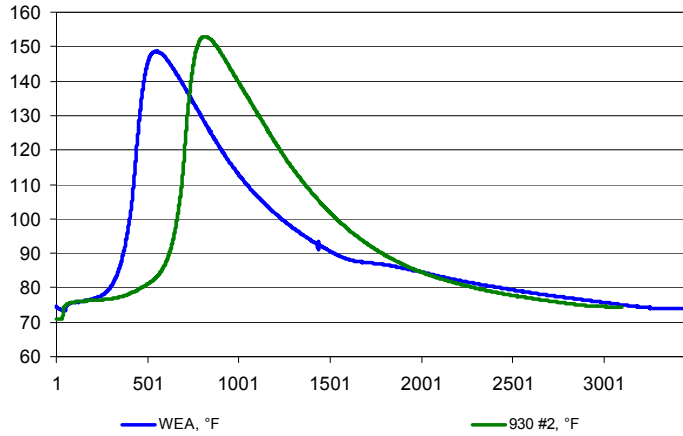
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Pattern of workability loss



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Heat curves



Initial set : 292
Final set : 442

3hrs difference

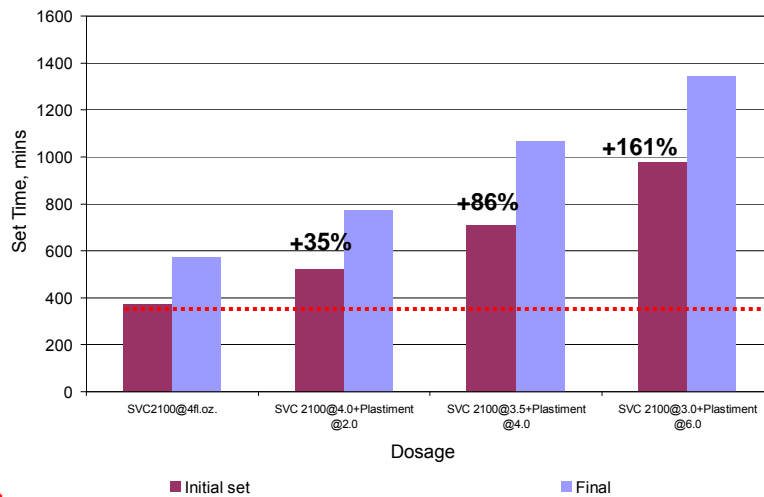
Initial set : 471
Final set : 694



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Retarding Admixtures Set time v/s dosage

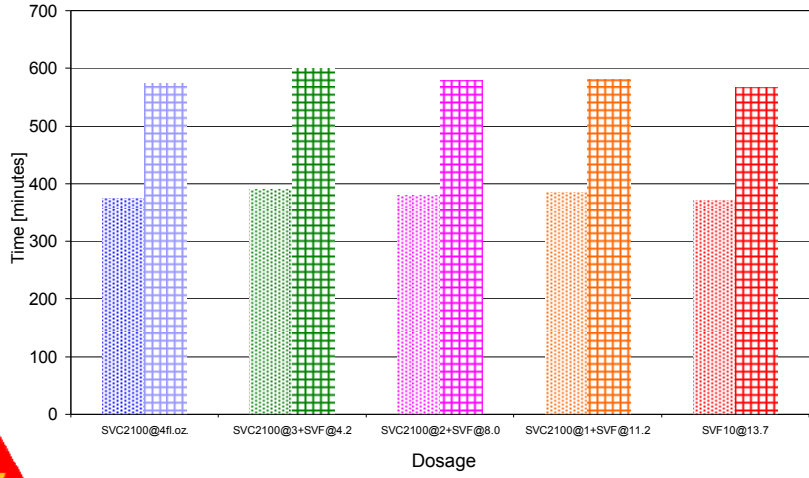
HRWR vs. HRWR + RETARDER



Sika Corporation

Workability Retaining Admixtures Set time v/s Dosage

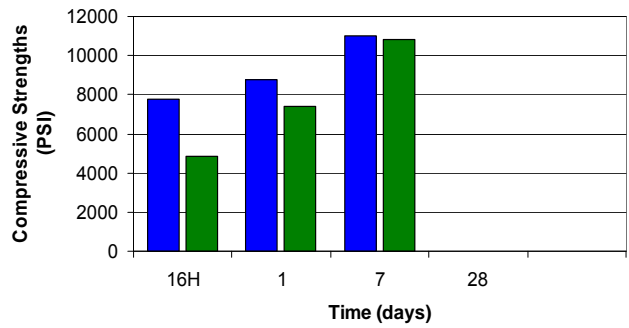
HRWR vs. HRWR + Sika ViscoFlow 10



Sika Corporation

Improved early age strength

Time Vs Compressive Strengths
w/c = 0.29, Lafarge III, prestress



■ 4.75fl.oz. Sika ViscoCrete 2100 + 4.0fl.oz. Sika ViscoFlow 10 ■ 6.0fl.oz. Sika ViscoCrete 2100 + 4.0fl.oz. Sikatarad 930



Sika Corporation

Improved consistency

- ▲ Factors affecting concrete consistency
 - ▲ Variable moisture content
 - ▲ Ambient temperature
 - ▲ Material consistency, calibrations etc
- ▲ Concrete slump is adjusted either by-
 - ▲ Adjusting HRWR/ retarder dosage
 - ▲ Adjusting amount of water
- ▲ Adjusting water increases variability (strength, air), leads to overdesign
- ▲ Use of Workability retaining admixtures provide more working time and require less adjustments of water or HRWR dose
- ▲ This reduces standard deviation and provides opportunity to reduce cement and replace with SCM
- ▲ Less adjustment of water also improves air quality and consistency



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Field Example -1

Cement Roanoke III	575
F Ash	144
# 68 stone	1520
Sand	1301
Water	32
AEA-14	0.5fl.oz.
SVC 4100	7.5fl.oz.
Plastiment	3fl.oz.
W/C	0.36
UW	142.15

Flow	21"
Air	6.1%
11.5hrs strength	4700

Cement Roanoke III	575
F Ash	144
# 68 stone	1520
Sand	1301
Water	32
AEA-14	0.5fl.oz.
SVC 4100	7.5fl.oz.
Sika ViscoFlow 10	2.5fl.oz.
W/C	0.36
UW	142.15

Flow	23"
Air	4.9%
10.5hrs strength	5175



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Field Example - 2

Cement Roanoke III	564
Coarse stone	1850
Sand	1420
Water	31.5
SVC 2100	5fl.oz.
ViscoFlow 10	-
W/C	0.47
UW	151.71

Cement Roanoke III	564
Coarse stone	1850
Sand	1420
Water	30.5
SVC 2100	4fl.oz.
Sika ViscoFlow 10	2.5fl.oz.
W/C	0.45
UW	152.20

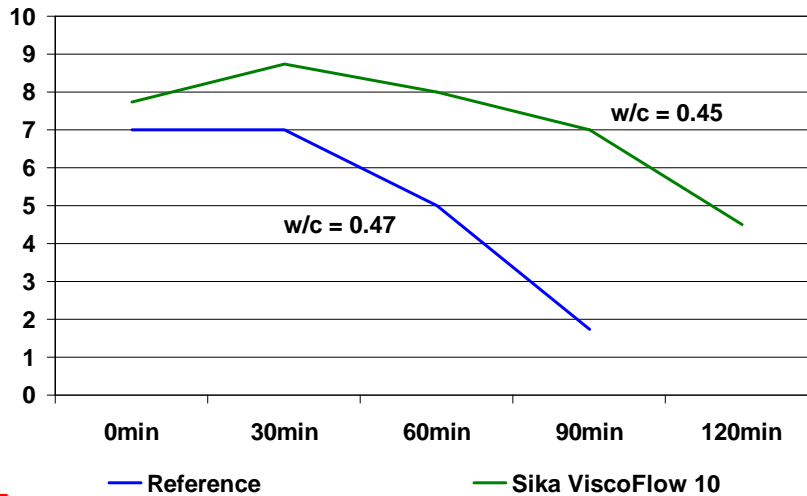
Initial Set	430min
Slump	7"

Initial Set	440min
Slump	7 3/4"



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Field Example - 2



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Benefits of using workability retaining admixtures

- ▲ Producers looking for optimization
 - ▲ Reduction of overdesign = reduction of cement = reduction CO₂ = greener mix
- ▲ Producers using retarders / hydration stabilizers for slump life (RM&PC)
 - ▲ Added benefit faster strength gain and faster finish
 - ▲ The only way to extend slump life without extending set times
- ▲ Producers looking for more controlled production
 - ▲ Driver ≠ Batch Operator
- ▲ Improved Concrete Quality
 - ▲ More workable time leads to improved placement and reduced need for touch up or rework



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Summarizing benefits of Workability Retaining Admixtures in Precast

- ▲ Increased workable life of concrete
- ▲ No delay in set time
- ▲ Increased early strength
- ▲ Allows faster finishing
- ▲ Reduces risk of rejection
- ▲ Flexible dosage according to ambient conditions
- ▲ Improved quality control



Sika Corporation

Construction

Thank you

Questions??

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