



# THE INSIDER

By Don Allen - Publisher

## VACUUM TESTING MANHOLES

This is the first part of a two-part article dealing on the topic of vacuum testing concrete manholes.

First a brief history of human sanitation. Let's only go back as far as the middle ages. In European cities it was common to use "chamber pots" for human waste and empty them on the streets, or dump them from second story windows on passing pedestrians. Talk about a hazard! In the country side locals used ditches, fields, and then outhouses. The big advances came when cesspools and septic tanks came into use in the mid to late 19th century.

During the industrial revolution, emerging cities needed a safer way to dispose of their waste. Many municipalities used local rivers to dump raw sewerage into. Cities started to use early sewer systems to control these health risks and establishing regulations to protect their citizens. Some of the old brick and clay sanitary systems still are in use, but as these cities expanded with growth, modern concrete and PVC systems came into service.

The day of the old brick and mortared manholes have been replaced with poured in place and precast units. The practice of brick and mortared in pipes into the manhole unit are no longer accepted. Many places now require rubber boots or cast in place gaskets.

Using these new techniques and materials insures a more leak free environment and allows for better testing procedures.

ASTM developed standard procedures (C1244-93) to test pre-cast concrete

manhole sections using a vacuum test method to demonstrate the integrity of the installed materials and construction procedures, This test method is used for testing concrete manhole sections utilizing mortar, mastic, or gasketed joints.

Their test method is intended to be used as a preliminary test to enable the installer to demonstrate the condition of the concrete manholes prior to backfill. It may also be used to test manholes after backfilling, however, testing should be correlated with the connector supplier.

ASTM standards are a minimum set of guide lines to use. Many municipalities differ greatly in what they require. One area may go by the ASTM minimums, some demand a greater set of requirements, while other cities or counties may not require tests at all!

In the next issue I will address the basics steps of manufacturing of manholes, coating procedures, boots, sealants through delivery to help you make a better product and pass your vacuum tests.

I welcome comments, tips and advice from readers to help share their knowledge. **Till next month....**

Publisher

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## JUST FOR FUN!

Hidden somewhere in this issue is a small "WALL CLOCK" that looks like this.

All readers who fax our office with the correct location will be entered into a drawing to

Win a \$25 Gift Certificate.

FAX: 352-351-4730

It could be hidden anywhere (but not on this page!) ... in a feature article, in an advertisement, upside down at the end of a sentence...**ANYWHERE!** So search every page, enjoy this issue and find the hidden item.

The winner will be announced in the February 2007 issue of Concrete Today.



## WE HAVE A WINNER!!!

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Well, our winner for the October issue is **Richard Sevigny of David L. Sevigny, Inc. in Wichendon, MA.** The "Swiss Army Knife" was hidden on page 53, on the bed of the boom truck ad... **Great Work Richard!**

## HONORABLE MENTION

The following sharp-eyed readers also found the hidden item, but sorry! Only one winner per issue. Better luck next time!

James Gilby - Twin City Ready Mix

Ft. Smith, AR

Aaron Lieghton - Graves Concrete

East Templeton, MA

Andy Keenan - Prestress Eng. Corp.

Prairie Grove, IL

Bud Ervin - Mattoon-Charleston Ready-Mix

Mattoon, IL

Bryan Strand - Aggregate Industries

Hawley, MN

Anne Adams - Leap Associates International

Tampa, FL

Ron Barker - Klaver Construction Products, LLC

Harper, KS

Gerald Wagner - Little Bay Concrete Products

Gladstone, MI

Kevin Josing - Over & Over Ready Mix, Inc.

Sun Valley, CA