



eNewsletter

Winter 2013

February 1, 2013

Mailing Address:
PO Box 24
New Carlisle, OH 45344

Email:
info@ohioprecast.org

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2013 OPCA Conference

Each year, the Ohio Precast Concrete Association holds an annual meeting and conference. The 2013 conference is set for March 11-12 at the Embassy Suites (North), in Columbus, OH.

The conference will begin with registration and setup at noon on Monday March 11th. The program will begin at 1pm on Monday with education, exhibits, networking, and an exhibitors reception. A business meeting will be held at 5pm.

The Embassy Suites is providing an OPCA rate of \$122 for overnight accommodations. The rooms are all suites, and provide a comfortable and relaxed environment. A made to order buffet breakfast is included with your stay.

After breakfast on Tuesday, the conference will start at 8am with an update of the ODH septic tank regulations provided. Several exhibitors will share what is new and exciting in the exhibitors corner.

Lifting and handling of precast is a risk that each precaster must face everyday. Do you know how to plan for the best method of handling? Ron Thornton will share his knowledge in a course entitled *Precast Lifting Practices*.

Registration is open, and members can attend this year for free when they register by February 18, 2013. A reduced rate for exhibitors is also available. See you in Columbus in March!

For additional information, please contact the OPCA by email at info@ohioprecast.org.

2013 Membership Renewal Time

Being a member of the Ohio Precast Concrete Association has many valuable benefits. First of all, member companies treat each other as friends, even though there is market competition for sales. Friends look out for the best interest of the group. Some producer members devote many non-billable hours in service to their fellow precasters. This effort has helped maintain the interests of precast concrete septic tanks throughout the development of the new sewage regulations.

Another value of membership is the strength in numbers that comes with association. If there is an issue that affects precast concrete, one plant may not have the leverage to influence decisions. But, as an association of manufacturers, the OPCA can and does use its strength in numbers to affect decisions at the local, state, and national levels.

Email us at info@ohioprecast.org for membership information.

Spoerr Precast Hosting Crane Certification

Spoerr Precast Concrete, Inc. is hosting an Articulating Crane Operators Workshop and NCCCO National Certification Exam at their Sandusky, OH facility on March 22-24.

The two day workshop assist employers in meeting the current federal rule for "trained and qualified crane operators"

for general industry crane use. The course prepares those who are required to take the NCCCO national certification exam to meet the new Federal Construction Crane Law 29CFR1926.1400CC. This program includes articulating boom cranes, articulating boom loaders, and articulating boom winches. Those

passing the written and practical "qualification" exams will receive an Articulating Crane Operator photo ID card directly from Overton Safety Training.

For more information, go to www.overtonsafety.com or call 866-531-0403.

"Be more concerned with your character than your reputation, because your character is what you really are, while your reputation is merely what others think you are."

— John Wooden

Tech Talk...How do I do that?

By Ron Thornton, P.E.

What is "Area-of-Steel"?

We know that the primary purpose of reinforcing steel in concrete is to provide tensile strength to the member because, while concrete is strong in compression, it is not so strong in tension. An engineer will determine the amount of reinforcing needed in a concrete member to resist bending from external forces (i.e. dead and live loads) or from internal stresses such as temperature and shrinkage. The amount of steel determined will typically be expressed as "Area-of-Steel" or A_s , which can easily be converted to rebar size and spacing or welded wire designation. The English units for A_s are square inches per foot (sq-in/ft).

Rebar size designations (e.g., #4 or #5) refer to the diameter of the bar in eighths. Therefore, a #4 bar is 4/8" in diameter, which is the same as 1/2". The ultimate tensile capacity of any single bar or wire is its yield strength, F_y , times its cross-sectional area. So if our #4 bar is 1/2" in diameter, then it's cross-sectional area is 0.20 in²/ft.

$$T_u = A_s F_y = 0.20 \text{ in}^2 * 60,000 \text{ psi} = 12,000 \text{ lbs}$$

If the engineer specifies an Area-of-Steel, A_s of 0.34 in²/ft, then what spacing do we need if we use #4 bar? The number of bars per foot would be:

$$0.34/0.20=1.7$$

or, expressed a better way is:

$$0.20 \times 12 \text{ in} / 0.34 = 7" \text{ oc.}$$

(oc = on-center spacing)

Let's try a #5 bar, which has a cross-sectional area of 0.31 in²:

$$0.31 \times 12 \text{ in} / 0.34 = 11" \text{ oc.}$$

The above example shows that #4@7" and #5@11" have the same Area-of-Steel and will, therefore, have the same tensile capacity. We must caution, however, that substituting a larger bar with a wider spacing may not always be acceptable due to serviceability criteria for crack control.

Wire reinforcing designations are a little different. Wire size is typically preceded by a 'D' for deformed or 'W' for smooth and the number refers to the cross-sectional area of the wire expressed in 1/100 square inch. Therefore, a W4 wire is smooth and has an area per wire of .04sq. in. Wire fabric designation also includes the spacing. For example, 4x4 W4/W4 has .04 wires spaced at 4"oc. The area-of-steel, A_s , is then computed the same as for bar. Thus:

$$A_s = .04 \times 12/4 = 0.12 \text{ in}^2/\text{ft} \text{ each direction}$$

Converting bar size and spacing or wire designation to area-of-steel is a simple calculation. You may also find charts from CRSI and other sources that allow you to look up this value directly. Remember, however, to always follow the engineering design for proper reinforcing size, spacing, and location and be sure request approval from your engineer before making any substitutions.

Ron Thornton, P.E. is a Project Manager with Delta Engineers in Binghamton, NY. Ron is an active member of the NPCA and ASTM, serving on various committees representing precast concrete.

**"Measure twice
and cut once"**

OSHA Crane Standard: *Understanding and complying with the new crane rule*

1926.1427 Operator qualification and certification.

(a) The employer must ensure that, prior to operating any equipment covered under subpart CC, the person is operating the equipment during a training period in accordance with paragraph (f) of this section, or the operator is qualified or certified to operate the equipment in accordance with the following:

(a)(1) When a non-military government entity issues operator licenses for equipment covered under subpart CC, and that government licensing program meets the requirements of paragraphs (e)(2) and (j) of this section, the equipment operator must either be:

(a)(1)(i) Licensed by that government entity for operation of equipment within that entity's jurisdiction; or

(a)(1)(ii) qualified in compliance with paragraph (d) of this section.

(a)(2) Where paragraph (a)(1) of this section is not applicable, the certification or qualification must comply with one of the options in paragraphs (b) through (d) of this section.

(a)(3) Exceptions: Operator qualification or certification under this section is not required for operators of derricks (see §1926.1436), sideboom cranes (see §1926.1440), or equipment with a maximum manufacturer-rated hoisting/lifting capacity of 2,000 pounds or less (see §1926.1441).

(a)(4) Whenever operator qualification or certification is required under §1926.1427, the employer must provide the qualification or certification at no cost to operators who are employed by the employer on November 8, 2010.



Certification by an accredited crane operator testing organization.

(b)(1) For a testing organization to be considered accredited to certify operators under this subpart, it must:

(b)(1)(i) Be accredited by a nationally recognized accrediting agency based on that agency's determination that industry recognized criteria for written testing materials, practical examinations, test administration, grading, facilities/equipment and personnel have been met.

(b)(1)(ii) Administer written and practical tests that:

(b)(1)(ii)(A) Assess the operator applicant regarding, at a minimum, the knowledge and skills listed in paragraphs (j)(1) and (2) of this section.

(b)(1)(ii)(B) Provide different levels of certification based on equipment capacity and type.

(b)(1)(iii) Have procedures for operators

to re-apply and be re-tested in the event an operator applicant fails a test or is decertified.

(b)(1)(iv) Have testing procedures for re-certification designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section.

(b)(1)(v) Have its accreditation reviewed by the nationally recognized accrediting agency at least every three years.

(b)(2) An operator will be deemed qualified to operate a particular piece of equipment if the operator is certified under paragraph (b) of this section for that type and capacity of equipment or for higher-capacity equipment of that type. If no accredited testing agency offers certification examinations for a particular type and/or capacity of equipment, an operator will be deemed qualified to operate that equipment if the operator has been certified for the type/capacity that is most similar to that equipment and for which a certification examination is available. The operator's certificate must state the type/capacity of equipment for which the operator is certified.

(b)(3) A certification issued under this option is portable and meets the requirements of paragraph (a)(2) of this section.

(b)(4) A certification issued under this paragraph is valid for 5 years.



Hosted by Spoerr Precast Concrete, Inc.

2020 Caldwell St. • Sandusky, OH 44870
March 22-24, 2013 7:30 am - 4:30 pm



Articulating Crane Operator Workshop (Mar. 22-24)

Ohio Precast Concrete Association

PO Box 24
New Carlisle, OH 45344

Phone:412.389.1607

E-mail: info@ohioprecast.org



OUR PURPOSE

The Ohio Precast Concrete Association (OPCA) is a group of producer members and associated industries cooperating together as an association. The intent being to bring pertinent issues and information that impact the Precast Concrete Industry, to the attention of government agencies which participate in the origination of these issues.

The OPCA is interested in assisting these agencies by providing expert advice and counsel in the development of regulations involving the industry and the general public.

The OPCA producer and associate members whose products and services range from the construction of buildings and highways to the manufacture of precast concrete products for the treatment of commercial and residential waste water. The OPCA member products and services affect the lives of nearly every Ohioan on a daily basis.

Some specific areas of interest being pursued by the OPCA are as follows:

The introduction of new sewage guidelines relating to the specific construction and operation of home waste water treatment products (septic tanks, aerators, etc.) by the Ohio department of health and the Ohio EPA.

The introduction of programs and policies relating to the testing of materials and products being used on Ohio Department of Transportation projects.

The development of quality control procedures and inspections services training by the Ohio Department of Transportation.

The Ohio Precast Concrete Association will be expanding its' scope of interest as membership roles grow and diversify. The need for input, regarding issues and regulations which effect the large segment of the public which it serves, comes to the forefront.

OPCA Member Companies

PRODUCER MEMBERS

- E.C. Babbert, Inc.
- Everly Concrete Products, Inc.
- Hanson Pipe and Precast
- J.K. Precast, LLC
- Lindsay Concrete Products
- Mack Industries
- Norwalk Concrete Industries
- Poland Concrete Products, Inc.
- Premier Precast Products
- Quaker City Septic Tanks, LLC
- Scioto Valley Precast
- Sickels Septic Tanks, Inc.

- Spoerr Precast Concrete, Inc.
- Stiger Precast, Inc.
- Uniontown Septic Tank, Inc.
- United Precast, Inc.

ASSOCIATE MEMBERS

- A-lok Products, Inc.
- A.L. Patterson, Inc.
- Blackthorn, LLC
- Champion Pump Company
- Concrete Results, Inc.
- Concrete Sealants, Inc.
- East Jordan Iron Works
- Engineered Wire Products, Inc.

- Euclid Chemical
- Hamilton Kent, LLC
- Infiltrator Systems, Inc.
- Jet, Inc.
- Mixer Systems, Inc.
- Ohio Electric Control, Inc.
- Polylok, Inc. / Zabel Environmental
- Premiere Concrete Admixtures, LLC
- Sika Corporation
- Spillman Company
- St. Mary's Cement
- Tuf-Tite, Inc.
- W.P. Hilts & Company