



# Slingmax® Rigging Solutions

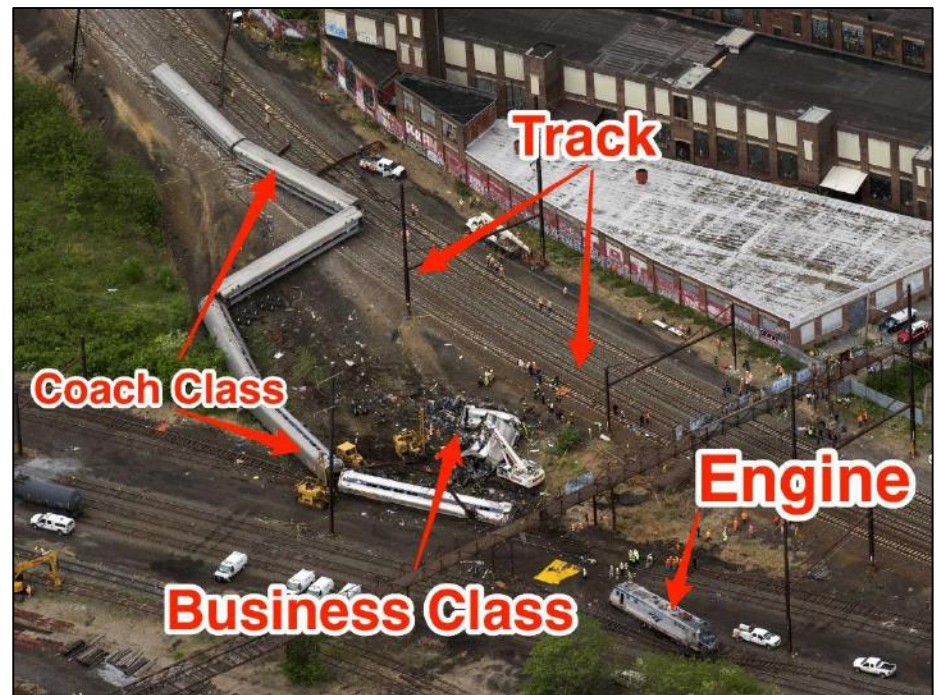
Webinar 3



Scott St. Germain

# Emergency Rush Orders for Lightweight Twin-Path® Slings

- Amtrak Train Derailment,  
Philadelphia May 12, 2015



**Rush Order – 16ea. TPXCF 20,000 x33Ft. (May, 2016)**

**\$160,000 order      Only 2 shop workers needed**

**Entire order delivered less than 3-Days ARO**



If you don't have it...

You can't sell it

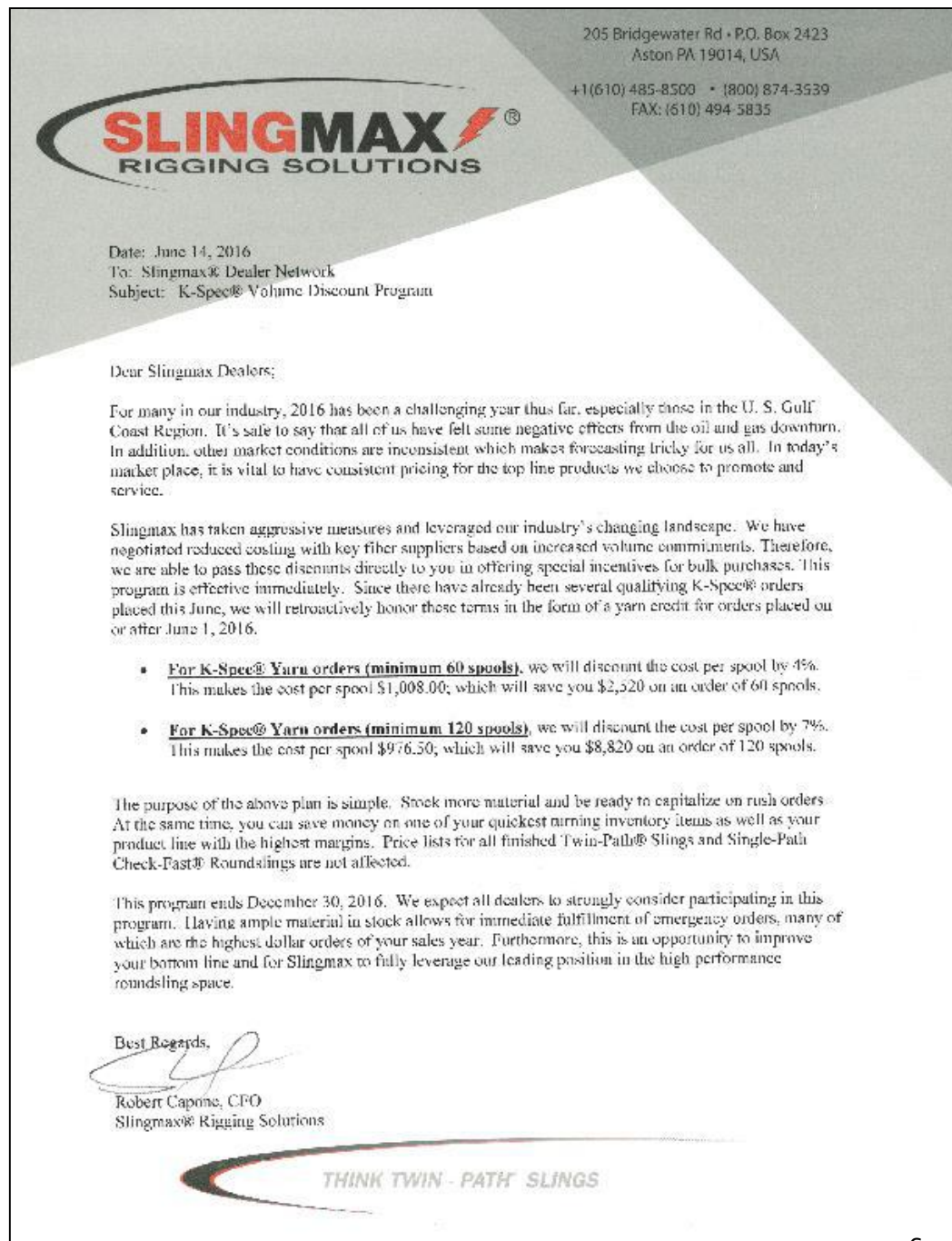


Each Dealer should always  
maintain a Minimum of 40–spools  
of K-Spec®

For Super Rush Orders–



- Volume Discount Notice
- E-Mailed June 14, 2016
- Sent to all Owners & Top Management



## Typical Rigging Shop Inventory



Wire Rope: 30%



Turnbuckles- ?

# TPXCF 40,000 x 100-ft. \$56,000 per sling



If you don't have it...

You can't sell it

Get it?...

Each Dealer should always  
maintain a Minimum of 40–spools  
of K-Spec®

For Super Rush Orders–





# Slingmax<sup>®</sup>

## Webinar

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June 15, 2016

Jeff Susman, President

Slingmax<sup>®</sup> Rigging Solutions

# Challenging business environment

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- Think “out of the box”
- Pursue non-traditional customers
- But don’t forget the basics
- Pursue competitor’s customers
- Ask Slingmax<sup>®</sup> staff for help



# Ask Slingmax<sup>®</sup> for help

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- SLINGMAX<sup>®</sup> STAFF
- Sales
- Marketing
- Engineering
- Rigging
- Other technical



# Back to the basics

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- Always quote Twin-Path® slings when asked for heavy-lift rigging
- Upsell a customer to Twin-Path® slings – don't just take the order
- Go for your competition's customers – they're not Slingmax®
- Check why a customer hasn't ordered Twin-Path® slings recently
- Return to a customer who refused Twin-Path® before
- Get cozy with local crane companies
- See if or why your biggest orders were not for Twin-Path® slings

# Out-of-the-box strategy

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- Just selling one department in a company?
- Find and sell non-traditional customers
- Brainstorm internally – don't just do reports
- Brainstorm with Slingmax® staff

# Non-traditional customers

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- New energy generation
  - Transportation
- Hospitals / medical centers
- Museums and art galleries
  - Tilt-up construction

# New energy generation – biomass/cogeneration

## Proposed new and expansions

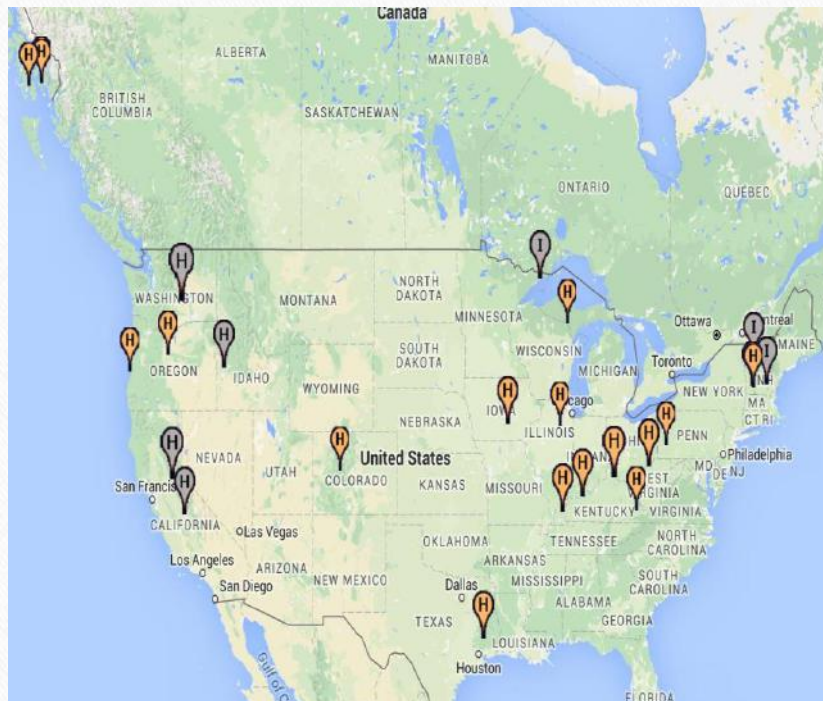
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# Hydro & Mini-hydro

## Proposed new and expansions

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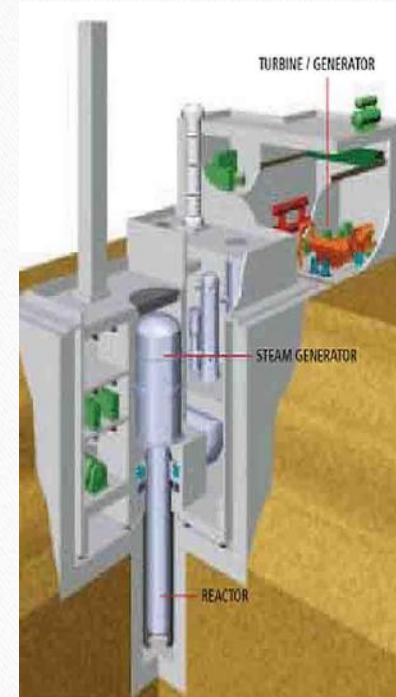


# Small nuclear

## Projects coming soon

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- Quicker to build
- Fewer licensing issues
- Cheaper
- More reliable
- Easier to maintain
- Final stage licensing



# Spent fuel transport and storage



## NAC Tech Update

### MAGNASTOR® TSCs Delivered to Duke McGuire

NAC announced that the first two MAGNASTOR Transportable Storage Casks (TSCs) were delivered separately to Duke McGuire. Both TSCs have been satisfactorily fabricated, tested and inspected at Hitachi-Zosen (HZ) in Arake, Japan. Some ancillary components for the two TSCs are still in the process of being shipped to Duke McGuire. These two TSCs are the initial deliveries for the first batch of TSCs for Duke McGuire. The remaining casks are still in various

stages of production at HZ.

The transfer cask and ancillary equipment for the loading operations for the TSCs have been fabricated and completed at General Electric - Hitachi (GEH) in Canonsburg, Pennsylvania. They were delivered in June 2010 and are currently in storage at Duke McGuire.

The Vertical Concrete Cask (VCC) liners for the first batch of TSCs were also fabricated by GEH. The delivery of the VCC liners to Duke McGuire occurred earlier

this year. The accompanying on-site construction campaign for the VCCs has also been completed.

Duke McGuire has ordered an additional batch of TSCs. HZ will continue to fabricate and complete the second batch of TSCs, with delivery expected to begin in early 2012. The corresponding VCC liners are currently in fabrication at GEH. They are scheduled for completion in the last quarter of 2010. VCC construction is scheduled for the spring of 2011.



TSC package ready for shipping to Duke McGuire

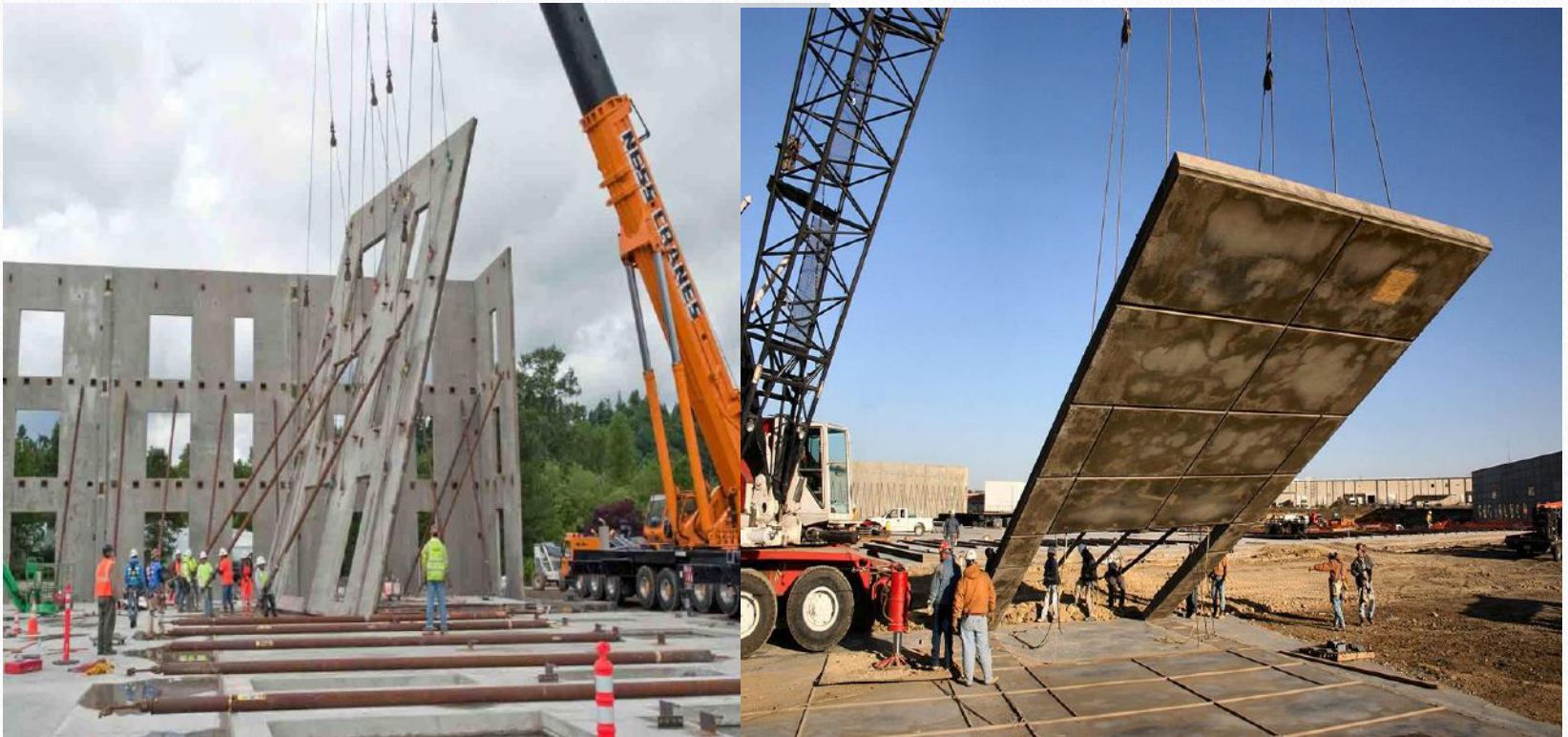


MAGNASTOR Transfer Cask



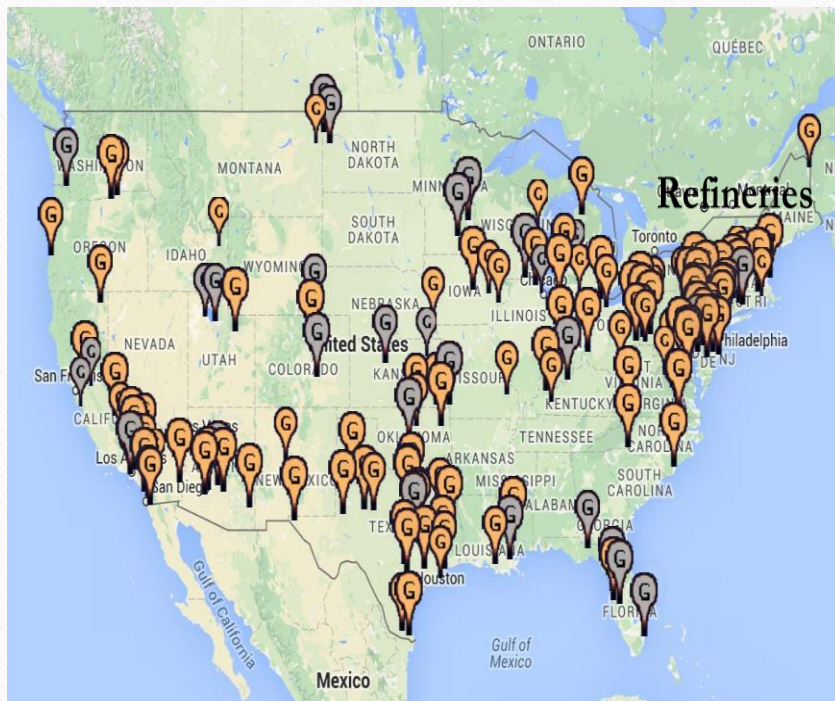
# Tilt-up construction applications with Slingmax® Equalizer Blocks

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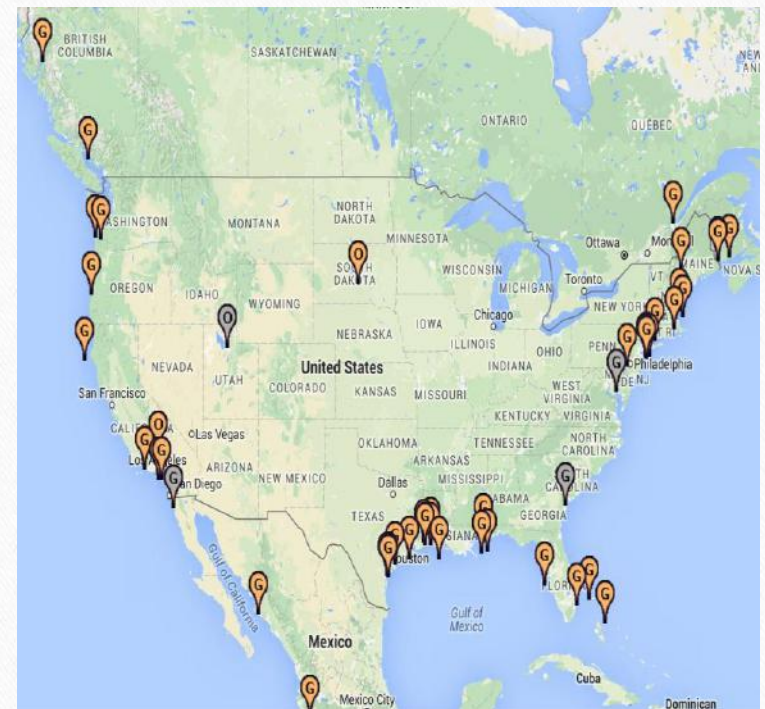


# Natural gas & LNG plants & refineries

Proposed new and expansions



Natural gas and  
LNG



Refineries

Plenty of opportunities – get your  
share

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Thank you for your time

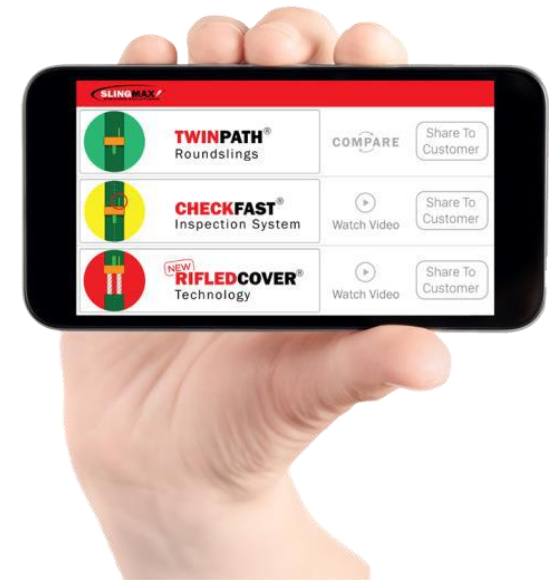
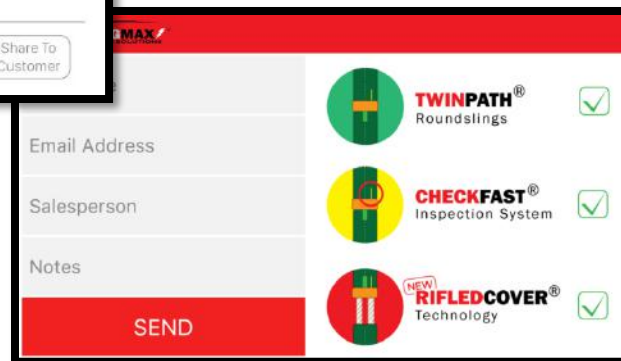
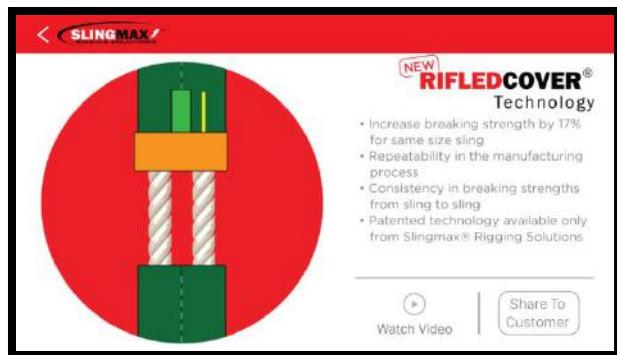


# Marketing

Dan Ross

# App

- ▶ Current active installs – 250
- ▶ Slingmax® Sales App at trade shows
- ▶ Sharing is caring – Help make the new Slingmax® videos go viral at your customer locations. Remember: Out of site out of mind.
- ▶ We are always looking for suggestions for future updates.



# Technical Talk E-mails

- ▶ Frequency – Generally once every quarter
- ▶ Extremely important sales /technical information
- ▶ One of the main arteries for slingmax information
- ▶ If you're not opening/reading/retaining this information you are missing out.



## The Official Slingmax® Technical Talk



### Slingmax® Technical Talk 6:

#### *Pin Size Testing to WSTDA and CI standards*

The current CI 1907 and the proposed WSTDA-RS-1HP both recommend minimum pin diameters when performing destructive testing to High Performance Roundslings. To demonstrate compliance with these standards the Slingmax® Technical Team completed testing on all sizes of Twin-Path® Slings in accordance with these recommendations.



# Testing flyer

- ▶ Dealing with tough competition? – Use this flyer.
- ▶ Slingmax® Rigging Solutions spends the most resources and conducts more testing than the competition.



## Have they done the testing? We have.

### Competitor 1

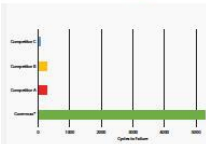
"Our products are just as good as Slingmax® products"

### Competitor 2

"We can do that too"

### Competitor 3

"Those features are overrated and do not work"



Covermax® cover abrasion test results



3,000,000 lbs. Twin-Path® sling test



Check-Fast® System functionality in different hitch configurations

## Some companies seem to have a lot of opinions about Slingmax® products... But do they have proof to back up their claims?

Slingmax performed abrasion tests on Twin-Path® Covermax® roundslings jackets. Also included in these tests were the roundslings jackets used in competitors' high performance roundslings. Slingmax® Covermax® outlasted the competition by a factor of 20x.

Slingmax conducted performance testing on all size Twin-Path® slings including our largest catalog sling - TPXCF 60,000 with a working load limit of 600,000 lbs. This sling was taken to its full 5:1 design factor of 3,000,000 lbs.

Slingmax has validated all product designs, including the Check-Fast® Inspection System. Testing proves the external warning indicator functions in every hitch configuration.

- Vertical
- Basket/double wrap basket
- Choke/double wrap choke
- Twin-Path® Adjustable Bridle

For additional technical information on these tests and others please contact Slingmax® Rigging Solutions

[www.slingmax.com](http://www.slingmax.com) • +1(610)485-8500 • [info@slingmax.com](mailto:info@slingmax.com)

## We KNOW we meet the standards. Do they?

When we created the first high performance roundslings in 1988 there were no standards. Slingmax had to do our own testing to convince riggers that Twin-Path® slings are a better alternative to conventional rigging products.

Since then we have meticulously tested and fine tuned each component of our high performance roundslings. When an industry standard calls for testing, it is only natural for us to invest our time and resources to make sure Slingmax® products conform.

Don't just assume your high performance roundslings meet the standards.

**Demand proof.**

Destructive testing was completed on 15 different Twin-Path® roundslings ranging in capacity from 10,000 to 200,000 lbs.

Roundslings were tested on the four different pin sizes required by the CI 1905 & proposed WSTD-A RS-1HP standards.

Long term reliability testing performed with trusted third party facilities such as: DNV-GL, The Crosby Group, and TMT Laboratories.

This ensures that our Twin-Path® roundslings will outperform and outlast the competition.

Twin-Path® slings meet or exceed the requirements of ASME B30.9 and OSHA.

Every Twin-Path® sling is taken to proof load during the manufacturing process. Slingmax takes this extra step beyond the requirements of the standards.

# New Rigging handbook

- ▶ Full color
- ▶ Completely redesigned with new info from The Slingmax® engineering team
- ▶ Informative tool for your sales people
- ▶ Great customer give away
- ▶ Recommended resource for training/company seminars

AVAILABLE NOW

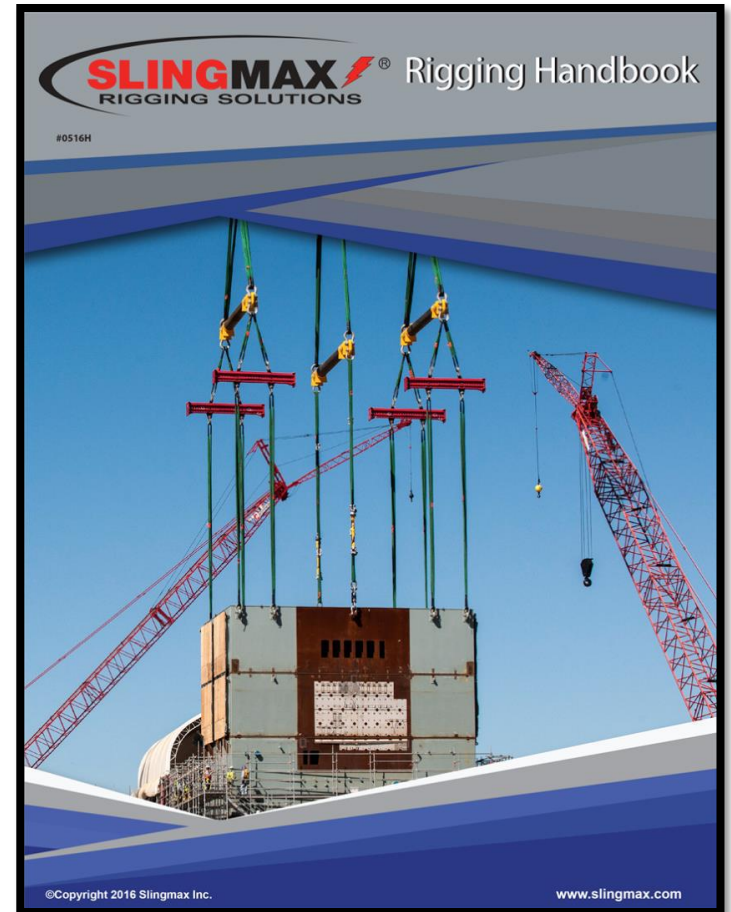
0-10 books for company use: FREE

10-200 books – \$7.00 per

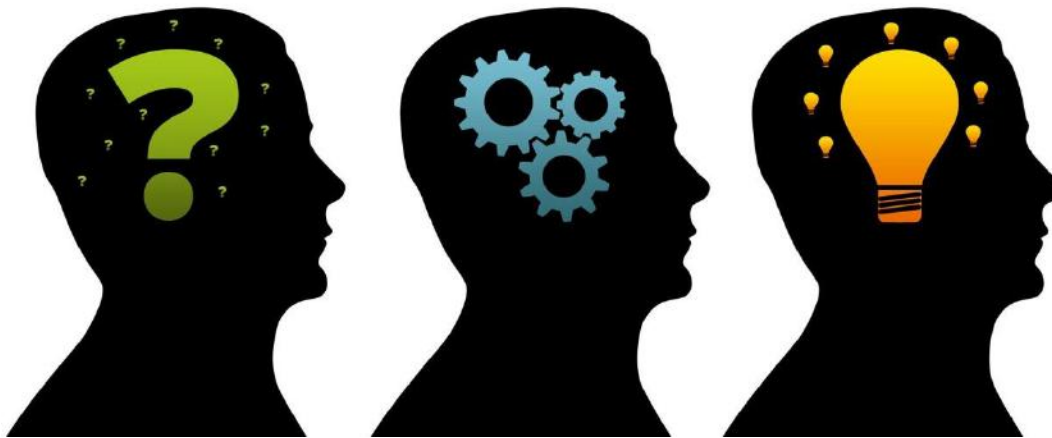
200-500 – \$6.00 per

500+ Call me for pricing

Comparable rigging handbooks sell for around \$15.00 and \$18 a piece.

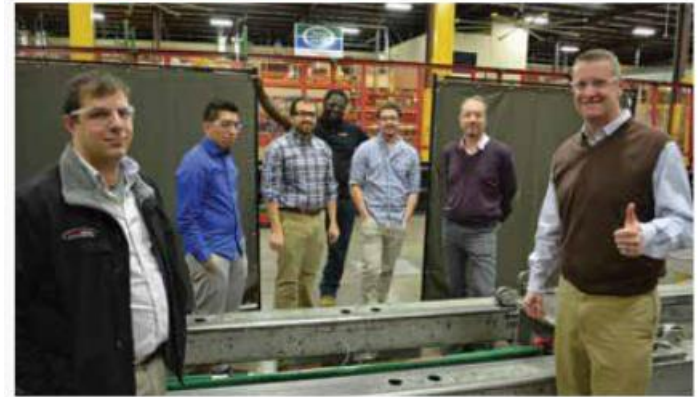


# Slingmax® R&D facility complete



Turning problems → → → → Into Solutions

## Slingmax Rigging Solutions Expands Engineering Capabilities



> Slingmax® Rigging Solutions is proud to announce that construction has been completed on a state of the art rigging technology and testing laboratory at company Headquarters in Aston, Pennsylvania. Slingmax® Inc. is an industry leader well known for high quality overhead lifting equipment with innovative technologies that have developed into staples of the rigging industry.

With the facility expansion and laboratory construction complete, Slingmax has also grown the product research and development team. R&D projects are now being worked on by an eight person team comprised of technical specialists; three full time staff engineers, engineering consultants from Temple University, Virginia Tech, and a specialized PHD who has previous experience working on projects with NASA. In conjunction with this team, the new laboratory expands capabilities in fiber testing, prototyping, material analysis, and design verification. Slingmax® Inc. is looking to the future of the rigging industry and now has the pieces set in place for continuous improvement and innovation. ■

# Conference information

- ▶ WHEN: September 14th – 16th 2016
- ▶ WHERE: Philadelphia PA
- ▶ **Wednesday September 14**
  - ▶ Morning – Introducing the new Train-The-Trainer program
  - ▶ Evening – Welcome cocktail party
- ▶ **Thursday September 15**
  - ▶ All day – Conference presentations next door to the hotel
  - ▶ Evening – Dinner at Amada restaurant close to hotel
- ▶ **Friday September 16**
  - ▶ Morning – Demonstrations at Slingmax® headquarters and plant tour via our buses

All Hotel reservations should be made through  
**The Franklin Hotel at Independence Park**  
(formerly the Omni):

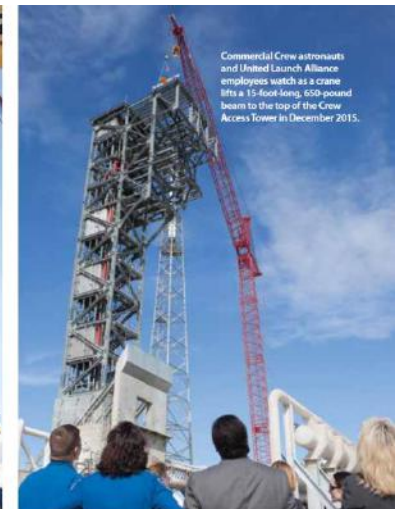
Address: 401 Chestnut St, Philadelphia, PA 19106

Phone:(215) 925-0000

# Slingmax® in the news

- ▶ Slingmax® Mentioned in two new articles
  - Hudson Yards project NYC
    - Slings & Equalizer Blocks sold by I&I Slingmax
      - Wire Rope Exchange May/June 2016
  - Kennedy Space Center refurbishing launch pads
    - Slings sold by Certified Sling & Supply
      - Wire Rope Exchange March/April 2016

All Slingmax® articles available at [www.slingmax.com/articles](http://www.slingmax.com/articles)



# WSTDA / CI Pin Size Testing



WEB SLING & TIE DOWN ASSOCIATION

- ▶ **WSTDA-RS-1HP**
- ▶ **Recommended Standard Specification for High Performance Yarn (HPY) Roundslings**



- ▶ **CI 1905**
- ▶ **Synthetic Roundslings**



# WSTDA / CI Pin Size Testing



**7.1 For break testing of slings made with high tenacity core material (see Para. 4.2) the pin sizes shall be of a size that will withstand the force applied without distortion. The pin sizes should conform to the sizes given in table 2.**



# WSTDA / CI Pin Size Testing



WEB SLING & TIE DOWN ASSOCIATION

**3.5.1 Destructive pull testing of roundslings in a vertical hitch, excluding sling fittings, shall be tested using pin diameters listed in Table 3-1. The pins shall be capable of sustaining the maximum applied load without deformation or failure. For HPY roundslings with a rated capacity in excess of 200,000 lbs. consult the roundsling manufacturer.**



# WSTDA / CI Pin Size Testing

Sling Capacity (lbs)	CI Max Pin Diameter	WSTDA Max Pin Diameter
10,000	3.5 in	3.5 in
15,000	3.5 in	3.5 in
20,000	3.5 in	3.5 in
25,000	3.5 in	3.5 in
30,000	3.5 in	3.5 in
40,000	5 in	5 in
50,000	5 in	5 in
60,000	5 in	5 in
70,000	5 in	5 in
85,000	5 in	5 in
100,000	7 in	7 in
125,000	7 in	7 in
150,000	7 in	7 in
175,000	9 in	9 in
200,000	9 in	9 in

# WSTDA / CI Pin Size Testing

- ▶ 3 sets of custom pins and adapters made
- ▶ 15 Twin-Path® Slings destructively tested
- ▶ Over \$40,000 in materials and testing
- ▶ All slings exceeded 5:1 design factor



# Unirope Sling Testing

- ▶ 5 x TPXCF 10000 Slings tested to destruction
- ▶ 3 x 55 ton shackles tested to destruction
- ▶ 3 x Custom test bed pins fabricated



# Uniropes Sling Testing

- ▶ 2.71 in bow of shackle
- ▶ Result: 5:1 DF



# Uniropes Sling Testing

- ▶ **2.75" Shackle Pin**
- ▶ **No protection (not recommended practice)**
- ▶ **Result: 3.8:1 DF**
  
- ▶ **With Shackle Pin Pad**
- ▶ **Result: 4.8:1 DF**



# Shackle Pin Pads



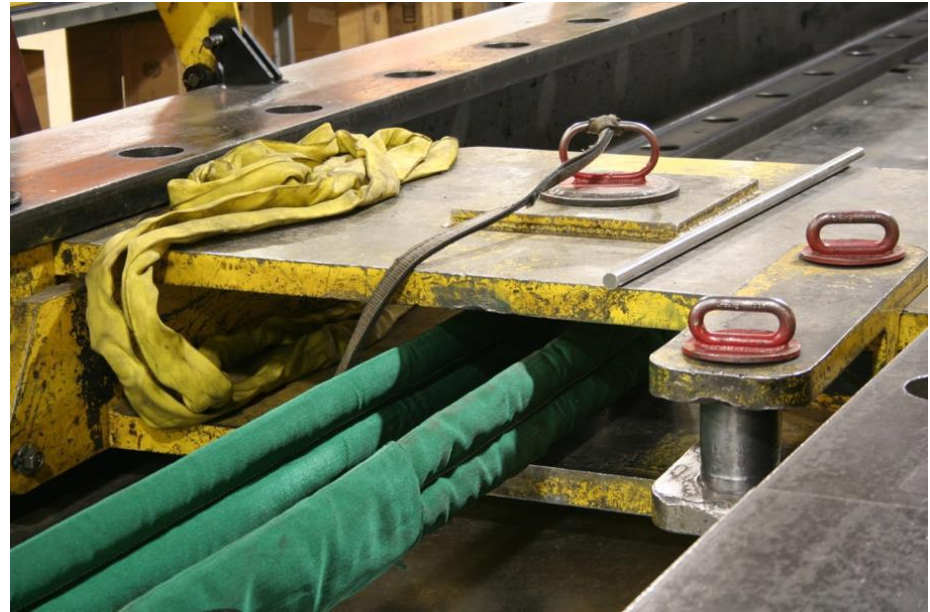
# Unirope Sling Testing

- ▶ **2.75" Test Bed Pin**
- ▶ **Result: Pin Bent – No Sling Damage**
- ▶ **3.5" Test Bed Pin**
- ▶ **Result: Pin Bent – No Sling Damage**
- ▶ **4.5" Test Bed Pin**
- ▶ **Result: 5.4:1 DF**



# Uniropes Sling Testing

- ▶ **7" OEM Test Bed Pin**
- ▶ **Same Diameter as CI & WSTDA maximum pin**
- ▶ **Result: 5.4:1 DF**
- ▶ **Exactly the same as 4.5" pin**
- ▶ **Roundslings are not strongly effected by pin size**
- ▶ **Small hardware will fail before sling**



# Twin-Path® roundsling vs Rope Sling

- ▶ Equivalent 12-strand HMPE Rope sling would be 2.5" diameter
- ▶ Min Length 22 ft
- ▶ 3x Diameter recommended pin size
- ▶ 7.5 in vs 2.71 in
- ▶ 55 ton standard shackle vs. 75 ton grommet shackle
- ▶ 50 lbs vs 115 lbs per shackle



# Twin-Path® roundsling vs Rope Sling



**TWINPATH®**  
Roundslings

VS

Compare



Attribute	Twin-Path® and Ropes	High Performance Fiber Rope Slings
UV Resistance	Excellent	Poor if unjacketed Moderate if jacketed
Corrosion	No	No
Flexibility	Excellent	Excellent
D:d in Eye	Any comparably rated fitting	3:1 (3.5x Larger)
D:d in Body	Any comparably rated fitting	8:1 (10x Larger)



John Ketchum

**“Don’t give up.  
Don’t ever give up.”**

**Jim Valvano**











Know your  
competition

Follow up

Gain repeat  
business

