HELIX™ MICRO-REBAR

INFORMER

Oct • Dec 2018

Luke Pinkerton was honored with the Robert Aiken Memorial Award for innovation at the Tilt Up Concrete Association. convention. The award recognized pioneering work in performance-based design methods to support both residential and commercial markets.

Featured Project:
Vela Development in Grand Cayman. Helix Micro-Rebar added durability and resilience, while slashing over 10 weeks from the construction schedule.

Concrete Applications:
Pilasters, ICF Walls, Slab, Stem Walls

Specific Dosage Rates:
6" ICF Walls : 14.5 lbs
8" Stem Walls : 11 lbs
8" Slab : 11 lbs
Pilaster: 27 lbs

Micro-Rebar brings VALUE to Tilt Wall panels

Imagine the value to the tilt-up industry if it were possible to reduce panel thickness by 20%, eliminate 70% or more of traditional rebar, and erect panels the same day they are poured. While any one of these provides a positive incremental benefit, the combination of the three is a truly disruptive advancement that significantly improves project efficiencies, reduces time to completion, and provides up-front cost advantages.

This concept was unveiled with panel erection demonstrations at the Tilt-Up Concrete Association (TCA) convention and Expo in Dallas, TX last month. A multidisciplinary team involving TCA, TAS Commercial Concrete, Pinnacle Structural Engineers, CMC, Argos Ready Mix Corp, Terracon, CTS Cement and Helix Steel, collaborated to successfully integrate and optimize engineering, materials, constructability, delivery, and performance to prove this innovative advancement in tilt-up panel design.

Two panels were poured and erected at the event. The first utilized Helix Micro-Rebar with a 70% reduction in rebar and 20% reduction in panel thickness. A second panel utilized Helix Micro Rebar with a 75% reduction in rebar in combination with CTS' Rapid Set® Cement that was erected in just 4 hours.

TCA TILT-UP CONCRETE ASSOCIATION | CTS CEMENT | Rapid Set | HELIX™ MICRO-REBAR

Helix-reinforced heavy traffic slab application exceeds customer expectations

The Sun Recycling Center facility had been dealing with cracking and failing slabs due to the heavy traffic from their metal scrap business. Sun Recycling contacted Ahrens Companies seeking a more resilient concrete slab design. Aware of the benefits of Helix Micro-Rebar, Ahrens turned to Helix Steel for the solution. The Helix engineering team reviewed the initial design of a 6 1/2" thick concrete slab, reinforced with 1 layer of #5 rebar at 12" OCEW. Based on the Helix Design Method, the team engineered the full replacement of rebar with a 22.5 lbs. per cubic yard dosage of Helix Micro-Rebar.

Category:	Industrial
Contractor:	Ahrens Companies
Location:	Pompano Beach, Florida
Application:	Slab on Grade,
Original Design:	1 layer of #5 rebar @ 12" OCEW
Helix Dosage:	22.5 lb/yd3

ADDED HELIX STEEL VALUE

Increase in Shear Strength:	260 %
Increase in Modulus of Rupture:	46 %
Increase in Durability:	15 %
Increased Speed of Construction:	18 Days
Reduction in Carbon Footprint:	800 Tons

Engineering Spotlight

Samhar Hoz has been a structural engineer at Helix Steel since 2011. She is a member of American Concrete Institute (ACI) and a secretary of 3 ACI sub-committees. To schedule an engineering webinar about Helix, contact Samhar Hoz at samhar.hoz@helixsteel

Upcoming Events

WORLD OF CONCRETE
WOC 2019
Exhibits Jan 22nd – 25th
Las Vegas Convention Center
HELIX™ MICRO-REBAR
North Hall, Booth N3227

Learn more about Helix Micro-Rebar @

2019 World of Concrete

North Hall, Booth #3227

Jan 22nd - 25th, Las Vegas

Value Proposition

With the rising cost of steel, increasing labor shortages and compressed construction schedules, it is essential to provide significant value to customer projects. Helix Micro-Rebar does just that. Go to our ROI calculator to find out more.
https://roi.helixcalculator.com/

HELIX™ MICRO-REBAR

2,778	Total cubic yards
25,000	Total Helix steel (lbs)
85,220	Total net steel removed (lbs)
153,396	Total CO_2 reduction (lbs)
10.56	Total time savings (man days)
$11,880	Total labor cost savings
$5,282	Total construction time savings
$16,332	Total Helix steel value proposition