

Golden[®] Trowel

2020

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(LAS VEGAS) The Face[®] Companies' prestigious 2020 Golden Trowel[®] Awards were presented today at the World of Concrete in Las Vegas.

Because the global pandemic prevented Face[®] representatives and most of the winners from attending this year's WOC, awards for the three winners who did attend were presented by Bryan Birdwell of Structural Services, Inc., a 26-time Golden Trowel winner and a recipient of the Golden Trowel "Sam" Award. The ceremony was held in the booth of Somero Enterprises, Inc., whose products have been used by winning entries since the contest began.

The Golden Trowel has been presented for 32 years to contractors who produce the world's flattest and most level floors. They are awarded in several different categories, based on how the floor was initially struck off, how wide the floor castings are, how much shake-on hardener or steel fibers were used, and other factors that influence flatness and levelness. Golden Trowel Gold Plates are awarded to the winner in each category, while Golden Trowel Silver Plates recognize truly outstanding entries that achieved exceptional results but did not dominate the category. The thought behind the genesis of the Golden Trowel was that competition would drive up quality. That thought has been proven conclusively to be true, year after year. The best floor in the world back in 1990 wouldn't even be considered for a Golden Trowel today. And North America no longer totally dominates the awards. North America was shut out of the world records last year and got only one of two world records for 2020.

Why are floors so much better now? People continue to learn how to use existing concrete placing and finishing tools to better advantage and are passing on that knowledge and skill to new generations of concrete finishers. Concrete floor consultants are learning what works and what doesn't and are teaching the best practices. And not to be ignored, batch plants are being held to high standards on the concrete that they deliver to the field. The tools available are better than they were, even just a few years ago. The Somero Laser Screed revolutionized the way concrete could be struck off. As laser screeds got better and better, and as people learned the best ways to use them, the flatness and levelness of floors improved significantly even as daily output was dramatically increased. All these factors have made a big difference in the flatness and levelness of floors. But so has striving for excellence and for the recognition that comes from being the best in the world – a winner of the Golden Trowel.

2020 World Records

Hand screeding a floor is hard and tedious work. Doing this on an unshored elevated metal deck, with lots of block-outs, does not usually lead to very flat floors. But the **George J. Shaw** company from Kansas City, MO produced a slab on metal deck with a fantastic FF (flatness) of 71.4. It is amazing that they were able to do this over a huge 139,000 square feet. In 2007, the Golden Trowel for Unshored Elevated Deck was awarded for FF 47; in 2017, ten years later, (only 4 years ago) it was awarded for FF 54.2. In 2018, just 3 years ago, the winner set a new world record of FF 60.5.

Another world record was produced by **Azzurri Concrete**, a company from Moorebank, NSW Australia, for producing a huge 523,000 square foot Laser Screed floor that had 98 ft wide bays. Azzurri's floor this year measured FF 109.9 and FL 112.5. That is phenomenal to be able to do this for over half-a-million square feet of floor. On top of that, the concrete contained 20kg/m³ of 4D steel fibers. When you look at F-Numbers of floors, a very high FF Number means that the floor is very flat. A very high FL Number means that the floor is very level. With the world's best floors, sometimes one floor has a really good FF Number and a more or less average FL Number, and another floor has an average FF Number but a really great FL Number. If you add the FF Number plus the FL Number, you can get a sort of "composite" number that combines both Flatness and Levelness, making it easy to compare them. The sum for the 2007 world record in this category was 153. The sum for Azzurri Concrete's floor is 222.4. We've come a long way, baby! There are many great concrete floor companies using Laser Screeds nowadays, so this category is one of the hardest ones to win. Although Azzurri has competed in the Golden Trowel contest in the past, this was their first win.

Other 2020 Golden Trowels

Pyman Latinoamerica, from Panama, won with their first-ever application for a Golden Trowel in the Large Laser Screed category (over 100,000 sf.). This was for a project in Costa Rica, a floor of 112,000 sf, with an FF of 98.4 and an FL of 99.3. They used a Somero S-15R. While this is not a world record, there have only been three other floors in this category that had better F-Numbers.

Producing concrete floor surfaces for ice rinks is always a challenge. The concrete is placed over multiple layers of Styrofoam insulation and over cooling pipes that will create the ice surface above the concrete. This year, **D.J. Rossetti, Inc**, from Ballston Spa, NY produced an NHL-sized ice rink using a Somero S-840 that measured FF 85.5 / FL 67.2. There have been ice rinks with higher FF Numbers, and other ice rinks with better FL Numbers, but there has never been an NHL sized rink produced with a higher combined score of FF + FL. This is Rossetti's 6th Golden Trowel award, and their 5th in ice rinks.

Miron Construction, from Neenah WI, built a 63,000 sf floor using a Somero S-15, with 58-ft wide bays. Although not a world record for this category, it is the 7th best such floor ever recorded, with an FF of 110.5 and an FL of 112.7, for a total score of 223.2.

Here's proof that the Golden Trowel Asia is promoting excellence: **Chengdu Keyixin Technology Company**, from Chengdu, Sichuan, China, won a Golden Trowel Asia last year, and this year they produced a 14,628-sf floor in Pengzhou, China using a Somero Copperhead that won a Golden Trowel in the worldwide contest! The F-Numbers of FF 117 / FL 119 are great for any category, but are especially noteworthy here since the floor was produced with a small walk-behind Laser Screed (Copperhead) in 58 ft wide bays and they used both 7 Kg/m² Dry Shake and 45 Kg/m³ steel fibers.

Fmin Projects:

There were two Golden Trowels awarded for Fmin projects this year. Fmin is a different sort of F-Number that reflects the ride quality of a floor in a narrow aisle warehouse. There are four different Fmin Numbers that must all meet the spec: Longitudinal Levelness, or fore-and-aft tilt; Longitudinal Flatness, or bumpiness in the fore-and aft direction; Transverse Levelness, or sideways tilt; and finally Transverse Flatness, or side-to-side rocking.

Florida Concrete Unlimited, from Miami, produced an Fmin Laser Screed floor with more than 140,000 sf of floor surface with 40-ft wide placements. This floor was unique in that for project schedule reasons, they used two Somero S-22 EZ screeds facing each other to be able to get the widest possible bay done in the minimum amount of time. The aisles were nearly 500 ft long, and what's more, the concrete was for a freezer, so it had to be placed over insulation. The Fmin Numbers were Longitudinal Levelness, Fmin 126.7; Longitudinal Flatness, Fmin 119.1; Transverse Levelness, Fmin 105.2, and Transverse Flatness Fmin 107.5. The average Fmin was 114.6.

2020 Silver Trowels

Silver Trowels are a sort of "Distinguished Honorable Mention" category. Silver Trowels are **not** awarded in every category, but as you will see below, sometimes a floor that would have won a Golden Trowel, or might even have been a world record in other circumstances, is overshadowed by an even more spectacular floor the same year. This kind of a floor deserves recognition and is awarded a Silver Trowel.

This year in the Unshored Slab on Metal Deck category, we had not one, but two floors break the old world record. In this category, as mentioned earlier, just 3 years ago, the winner set a new world record of FF 60.5. This year, **California Hi-Tech Floors**, of Upland, CA, broke the old world record with a 62.4. This would have been a Golden Trowel and a world record for them, but then along came George J Shaw that produced an even higher world record this year. This is their first award.

Full-Tilt Constructors, of Sanford, Florida, seems to specialize in super-large and ultra-large 96-ft wide Laser Screed floors. This year they produced a floor with an FF of 96.9 and FL of 78.5, with a combined score of 175.4. These are great numbers for any size floor, but this floor is just short of a million square feet. It is very hard to keep making superior quality floors day after day; this is an example of how it can be done if you are among the best in the business. They used two Somero S-22 EZs. This floor would have won a Golden Trowel, and is one of the best ever in this category, except that they produced the floor this year, when Azzurri produced their world record. This is Full-Tilt's fourth Award.

In addition to their Golden Trowel at Pengzhou, China, **Chengdu Keyixin** also produced a large, wide, Laser Screed Large floor at the Tianfu Airport Cargo Area that measured FF 93.7, FL 95.2 for a total of 188.9. Their FL Numbers were higher than the world records of 2012, 2016, and 2017, but it could not quite match the floor produced by Pyman this year, so they are awarded the Silver Trowel in this category. They used a Somero S-15R.

Chengdu Keyixin also produced a small, wide, Laser screed floor at the Sichuan Airlines Warehouse that measured FF 109.1 and FL 101.1. This included 30 Kg/m³ steel fibers. They again used their Somero S-15R. When the judges were considering who should get second place behind Miron Construction in the small Laser Screed category, they had a hard time deciding between Chengdu Keyixin and **Concrete Strategies, LLC**, out of St. Louis, because although Chengdu Keyixin had an FF of over 109, Concrete Strategies had a whopping FF 119.5. However, Chengdu Keyixin had a great FL that is over 101, and Concrete Strategies had an FL of only 86.8. Since the total scores were nearly the same, the judges have awarded both Chengdu Keyixin and Concrete Strategies Silver Trowels. Concrete Strategies used a Somero S-22 EZ.

In the Ice Rink over Styrofoam category, **Thompson Concrete**, from Carroll, OH produced an NHL sized ice rink that measured FF 65.5, FL 85.3. This would have been the third highest overall F-Numbers and would have won a Golden Trowel, except for the rink produced by Rossetti this year. Thompson Concrete's rink has in fact the highest FL Number for a floor of this kind, so they are being awarded the Silver Trowel in this category. This is their 2nd Award.

A total of 143 different contractors from North and South America, Europe, Central America, Asia, and Australasia have claimed the 358 Trowels awarded in the contest's 32-year history (1989 through 2020).

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

George J Shaw Construction Co.

Unshored Slab on Metal Deck • FF 71.4 **WORLD RECORD**

139,000 ft² • Wide Bay • Raven Building 6 Springfield, NE

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Hand screeding is physically demanding and tedious, and almost always results in relatively poor FF and FL Numbers. It's almost never done for floors larger than 100,000 ft². This broke the 2018 world record of 60.5 by more than 11 points. Incidentally, do you know who held the world record in 2018? The George J. Shaw company.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Azzurri Concrete

Laser Screed 28 m wide • FF 109.9 / FL 112.5 **WORLD RECORD**

20 Kg/m³ 4D Steel Fibers 48,604 m² • Qube 5 Moorebank, NSW Australia

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In 2007, the world record for this size floor (over half a million square feet) was FF 87 / FL 66. The current world record was set in 2018 by a company in Spain, with a combined FF+FL of 193.9. The sum of FF+FL for Azzurri Concrete's floor is 222.4. To win this hotly contested category by more than 28 points better than the previous world record is fabulous. They are a first-time winner. They used a Somero S-22E.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

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Pyman Latinoamérica, S.A.

Laser Screed 27m Wide Bay • FF 98.4 / FL 99.3

10,432 m² • Extralum, Parque Activa, Grecia, Costa Rica

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Pyman is another first-time winner. There have only been three other floors in this category that had better F-Numbers. They used a Somero S-15R.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Miron Construction

Laser Screed 58 ft Wide Bay • FF 110.5 / FL 112.7

63,120 ft² • Project Wolfpack Green Bay, WI

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Yet another first-time winner, using a Somero S-15R.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

George J Shaw Construction Co.

Laser Screed 41 ft Wide Bay • FF 134.1 / FL 113.9

8,452 ft² • Multivac Kansas City, MO

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G.J. Shaw teamed with KB Concrete of Bucyrus, KS to make this very small Laser Screed project using a Somero SXP. The combined FL+FL was a stunning 248. G.J. Shaw has now won a total of five Golden Trowels.

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DJ Rossetti Inc.

NHL Size Ice Rink over Styrofoam • FF 85.5 / FL 67.2

17,000 ft² • Hollydell Ice Arena Sewell, NJ

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There has never been an NHL sized rink produced with a higher combined score of FF+FL (152.7). They used a Somero S-840.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Chengdu Keyixin Technology Co., Ltd.

Copperhead 1359 m² 18 m Wide Bay • FF 117.1 / FL 119

7 Kg/m² Shake • 45 Kg/m³ Fibers Yonghui Logistics Pengzhou, P.R.C.

FACE[®]

They won a Golden Trowel Asia last year and are now a first-time winner of a Golden Trowel in the worldwide contest. This is a great result for a very large Copperhead floor.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Alphapiso Tec. Em Pisos Inds. LTDA

Wet Screed / Hand Screed • FF 98.2 / FL 49.5 • 8016 m²

4 Kg/m² Dry Shake • Assai Atacadista Hortolândia, SP Brasil

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Alphapiso is no stranger to the Golden Trowel contest, having won a total of 12 Golden Trowel awards in the past 8 years, including this one. Of these 12 awards, 3 were world records!

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Q & D Construction LLC.

Unshored Slab on Metal Deck • F_F 58.8

26,600 ft² • Michael Inskip Elementary School Reno NV



Though not a world record, this is the 8th best ever recorded in this category, not bad at all for their first Golden Trowel award!

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Florida Concrete Unlimited

Preferred Freezer Hialeah, FL

F_{min}: LLevel 126.7 LFlat 119.1 TLevel 105.2 TFlat 107.5

40 ft Wide Bay over Styrofoam • 140,000 ft² • 18 Aisles, 8748 linear ft



These are the highest Fmin Numbers recorded for a project this size with placements over 40 ft wide. This is their first Golden Trowel They used two Somero S-22 EZs facing each other.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Eldridge Concrete

Ashley Furniture II Four Oaks, NC

F_{min}: LLevel 147.2 LFlat 145.7 TLevel 101.6 TFlat 132.4

Narrow Strip • 49,000 ft² • 16 Aisles, 3760 linear ft



The average Fmin was 131.7. Each aisle was 235 ft long. They used a Somero S-22 EZ to win this, their third Golden Trowel.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

California Hi Tech Floors, Inc.

Unshored Slab on Metal Deck • F_F 62.4

180,000 ft² • Wide Bay • Spectrum Terrace Phase 2 Irvine, CA

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This is their first Award. This would have been a Golden Trowel and a world record for them, except for George J Shaw's even higher world record.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Full-Tilt Constructors

Laser Screed 96 ft Wide • F_F 96.9 / F_L 78.5

990,000 ft² • Project Normandy • Deltona, FL

FACE[®]

These are great numbers for any size floor, but this floor is just short of a million square feet. They used two Somero S-22 EZs.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

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Thompson Concrete

NHL Size Ice Rink over Styrofoam • F_F 65.5 / F_L 85.3

17,000 ft² • Chiller Ice Rink • Dublin, OH

FACE[®]

This would have been the third highest overall F-Numbers and would have won a Golden Trowel, except for the rink produced by Rossetti this year. They used two Somero S-840s.

**Golden[®]
Trowel**

In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Concrete Strategies LLC

Laser Screed • F_F 119.5 / F_L 86.8

35,182 ft² • Archbald Logistics Center Jessup, PA

FACE[®]

Higher FF, Lower FL than Chendu Keyixin. Since the total scores are nearly the same, the judges awarded both Concrete Strategies and Chengdu Keyixin Silver Trowels. Concrete Strategies used a Somero S-22 EZ.

**Golden[®]
Trowel**

In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Chengdu Keyixin Technology Co., Ltd.

Laser Screed 9846 m² 27 m Wide Bay • FF 93.7 / FL 95.2

5 Kg/m² Shake 20 Kg/m³ Fibers Airport Cargo Area Chengdu, P.R.C.

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In Recognition of Excellence in Construction of Flat & Level Concrete Floors

2020

Chengdu Keyixin Technology Co., Ltd.

Laser Screed 2527 m² 24 m Wide Bay • FF 109.1 / FL 101.1

30 Kg/m³ Fibers Sichuan Airlines Tianfu Airport, P.R.C.

FACE[®]

They used a Somero S-15R for both of their Silver Trowels.