

NAWASTITCH BRINGS GAME-CHANGING STRENGTH TO SANTA CRUZ MOUNTAIN BIKE TEAM'S NEW CARBON-FIBER RACE WHEELS

- NAWA Technologies officially announces its partnership with the Santa Cruz Syndicate
- As a partner of the Syndicate, its new materials concept NAWAStitch has been employed in the downhill team's Reserve-branded carbon-fiber race wheels
- NAWAStitch brings huge increases in strength, giving the race wheels far greater resistance to shock impacts from rocks, resulting in far fewer wheel failures during competition
- This innovation uses vertically aligned carbon nanotubes (VACNT) to act as 'nano-velcro' through interlaminar reinforcement of composite materials
- NAWA believes this new material also has potential across other sports, consumer, automotive, aerospace, space and defence as well as sporting equipment, consumer products and luxury goods
- Images: https://bit.ly/NAWA_SantaCruz

Dayton, Ohio, USA, 1st July 2021 - [NAWA](#), pioneers of advanced nano-material technology, is delighted to officially announce it is a key partner of the Santa Cruz Syndicate in 2021, with the world's leading downhill mountain bike team using its next-generation carbon fiber-reinforcing technology for its ultra-strong composite racing wheels.

The competition-only Reserve rims feature NAWA's materials concept, **NAWAStitch**, which employs unique, strengthening nano-technology. Enabling Santa Cruz to create a downhill mountain bike wheel that is not only more resistant to strike damage than conventional carbon fiber but has far greater sheer strength too, **NAWAStitch** has the potential to dramatically reduce the number of wheel failures experienced by the team over a competitive season by 80%.

This leap in performance results from integrating nano-sized tubes between the composite layers of the wheel. Called vertically-aligned carbon nanotubes (VACNT), these are manufactured by NAWA using a patented process and, when applied to composites, add superior strength to the structure. For the Reserve wheels, the NAWAStitch material consists of a thin film containing trillions of VACNT, arranged perpendicular to the carbon fiber layers. Acting as 'nano-velcro', the tubes reinforce the weakest part of a composite: the interface between the layers.

Eliminating the probability that a crack will occur in the interface, NAWAStitch greatly improves strike damage resistance – and, in its own tests, NAWA has found that NAWAStitch-reinforced carbon fiber composites have shear strength increased by a factor of 100 and shock resistance by a factor of 10.

In development by the Santa Cruz Syndicate since 2017, the NAWAStitch-enhanced Reserve wheels were first used in the 2018 World Cup Downhill season. Now entering their fourth competitive season – ridden again in 2021 by Greg Minnaar, the most winning Men's Elite Downhill rider in history, and Luca Shaw – the Santa Cruz Syndicate has experienced enormous benefits.

Senior composites engineer Nic McCrae, from Santa Cruz explains: *"In downhill racing, the wheels suffer hard, repeated impacts with rocks and roots. Failures occur when the tire bottoms out and the rim bead cracks. NAWAStitch has made the wheels much stronger, we believe by increasing the buckling resistance of the inner surface of the rims during these high compressions.*

"We've had far fewer wheel failures as a result. What's more, NAWAStitch does not affect the way wheels respond to the riders' inputs – they behave completely consistently, which allows them to push harder and go faster. Through a combination of our own profile design, precise wheel-building and the introduction of NAWAStitch, our Reserve wheels are without doubt the strongest rims on the circuit."

NAWAStitch technology has been incorporated in all Syndicate team competition rims for the last four years, with the long-term goal of being able to use NAWAStitch in future mass-production Reserve wheels.

COORDONNEES: C/O STMICROELECTRONICS - 190 AVE CELESTIN COQ ZI - 13106 ROUSSET CEDEX / 0695 200 201 /
WWW.NAWATECHNOLOGIES.COM

Pascal Boulanger, Founder, Chairman of the board, CTO of NAWA Technologies said: “We are delighted to officially announce that NAWA is one of the key partners of the Santa Cruz Syndicate and what more challenging environment than the MTB Downhill World Cup. NAWAStitch brings game-changing improvements in the core strength of composite materials and we are very proud to see its considerable performance benefits coming to the fore in the team’s Reserve race wheels. We look forward to working with Santa Cruz Syndicate and wish them every success in competition.”

Development of multifunctional ultra-strong composites, such as NAWAStitch, is led by NAWA’s NAWA America division, based in Dayton, Ohio. NAWA America was created by the acquisition of the assets of the US leader in VACNT for composite applications, N12 Technologies, in 2020. The division has an established collaboration with the University of Dayton Research Institute (UDRI) and a technology licensing agreement with Massachusetts Institute of Technology (MIT).

In addition to supporting the Santa Cruz Syndicate in the development of its competition-only Reserve wheels, NAWA America is finalizing development of NAWAStitch for use in volume industrial applications, and expects to ramp-up to full production by next year. In the short term, first markets will be sporting equipment, consumer products and luxury goods, while longer-term prospects are in automotive and aerospace. Combined with its home facility in France, NAWA Technologies will offer a wider portfolio of solutions to its customers, combining lighter, stronger and smarter composites and energy storage.

ENDS

Media contact:

Sam Hardy
Email: samh@influenceassociates.com
T: +44 7815 863 968

Media images: Images: https://bit.ly/NAWA_SantaCruz

About NAWA Technologies

Headquartered in Aix-en-Provence, France with a second location in Dayton, Ohio in the US, NAWA Technologies is a world-leader in innovative energy storage and composites. Its range of game-changing products are all based on one patented technology: vertically aligned carbon nanotubes (VACNT).

NAWA has applied the unique properties of VACNT to create high power and high energy ultracapacitors, one of the [fastest electrodes](#) for lithium batteries – and also reinforced carbon fiber composites.

NAWA Technologies now enters its next exciting phase – mass manufacturing on both sides of the Atlantic – but with environmental benefits always at its core. NAWA’s goal is to be a carbon neutral company. Already, its NAWACap batteries have been awarded 1000 efficient solution for the planet by Solar Impulse foundation.