

Press release Swissloop Tunneling
Sunday, September 12th 2021 | Las Vegas

At today's finals of the Not-a-Boring-Competition, Swissloop Tunneling, the official team of ETH Zurich, placed second and won the Innovation & Design Award of Elon Musk's tunneling competition with their tunnel boring machine Groundhog Alpha.

In summer of 2020, Elon Musk announced The Boring Company's first tunneling competition. Unlike the last four SpaceX Hyperloop competitions, this competition was not about building „pods“, the capsules for the Hyperloop concept, but about faster infrastructure development in tunneling. As this is the only way to realize the Hyperloop concept in the future.

Out of over 400 teams, only 12 finalists, the "Digging Dozen", were invited to the Not-a-Boring-Competition in Las Vegas. During the past week, these twelve teams had to undergo various checks from The Boring Company. This Saturday, only two teams, Team TUM Boring from the Technical University of Munich and Swissloop Tunneling, the team from ETH Zurich, advanced to the final round on Sunday. The goal: building a 30-meter tunnel with a diameter of 0.5 metres – the fastest team wins.

The entire team congratulates TUM Boring for winning the speed competition with their pipejacking machine. In addition, we congratulate the other winning teams in the categories Precision Award, Safety Award and Fastest Starting Design. The Swissloop Tunneling team is very happy about placing second and the Innovation and Design award. With Groundhog Alpha, Swissloop Tunneling aims to revolutionize the status quo in tunneling:

The unique and innovative liner system, which makes it possible for the first time to fabricate a tunnel tube in situ using a 3D printing mechanism, enables non-stop tunneling. In the process, a special polymer mixture is applied to the tunnel wall. The tunneling mechanism's two discontinuous hydraulic grippers rest against the newly created tunnel tube after the polymer is applied, enabling the tunnel boring machine to move forward continuously.

Swissloop Tunneling also feels affirmed by this success in its approach of taking the difficult but innovative path. In the coming years, Swissloop Tunneling strives to use the full potential of its tunnel boring machine and is already planning further iterations in order to scale up to the Hyperloop diameter of four meters.

Groundhog Alpha

Lenth: 7m

Mass: 2.5t

Diameter: 0.56m

Propulsion Force: max. 200kN

Motor speed: max. 3600rpm

Rotation Speed of Cutterhead: 27rpm

Target Speed: 1cm/s