

Matterhorn: TRUMPF to laser away peaks

The striking mountain peak of the Matterhorn may soon be a thing of the past. This is because the German high-tech company TRUMPF is to cut off the top meters of the peak with the five-ton superlaser "TruGranite" starting in late summer of 2023. In the Swiss canton of Valais, the plans are causing great excitement, because the tourist region has big plans for the plateau that shall be made out of the current peak.

Ditzingen/Zermatt, April 1, 2022 - The 4478-meter-high Matterhorn could shrink by around 20 meters as early as 2023: a piece of the peak is to be removed with the help of a laser, creating a plateau. For despite all the fame of the landmark, tourists, mountaineers and photographers are always annoyed by the jagged peak because there is only room for a few mountaineering enthusiasts on it. For the technologically highly demanding undertaking, TRUMPF is to rely on one of the world's most powerful lasers, which already shone into the sky on the Swiss mountain Säntis in the summer of 2021 to render lightning harmless (see press release).

Missed shot from Säntis started Matterhorn project

"Actually, our lightning conductor project was even decisive for the Matterhorn program," says Thomas Metzger, who, together with his team at TRUMPF Scientific Laser in Munich, is to put the Matterhorn cut into practice. Because back then on the Säntis, he says, the wrong coordinates were accidentally entered during the lightning conductor test run: Instead of aiming at the thunderclouds, the laser cannon aimed at the top of the neighboring Wildhuser Schafberg. As a result, the laser shattered about half a meter off the 2373-meter-high peak.



"Lightning rod laser" on Säntis 2021: Idea generator for the Matterhorn.

One of our English explorers, an enthusiastic mountaineer, said: "The famous Thompson R. Keystone would have liked this. He wanted to straighten - in his words - "the damn steep peak" of the Matterhorn, but at that time he would have lacked the tools for it. After reading Keystone's vision of the Matterhorn, I could almost picture this prestigious project," explains Thomas Metzger.

Enthusiasm in Zermatt

TRUMPF then inquired in the canton of Valais and, contrary to expectations, was met with enthusiasm. There, a removal of the top was already under discussion. The newly created level - the plans covered around 226 square meters - was to be used to operate a slender but multi-story hotel on the height. "We probably couldn't design the Matterhorn more beautifully than with such a straight structure on the top," was the statement from the "New Matterhorn" association founded especially for the hotel project.

Approval still pending

Before work can begin on this hotel, however, a number of permits still have to be obtained. But TRUMPF would also first have to clear a few boulders out of the way in order to be able to work at all on the Matterhorn with the so-called "TruGranite" laser measuring almost nine meters long and weighing five tons. All the arrangements should be in place by mid-2023. The processing and leveling itself should then be fairly quick. "After a week of lasering at the highest level, we should have laid a clean cut. Meanwhile, we will be simultaneously crushing the rock that has been removed," says Andreas Conzelmann, CEO of TRUMPF Schweiz AG

TRUMPF is well aware that working on the mountain is not without risk for its employees. "That's why the month of September is planned. By then, the snow on the Matterhorn has largely melted and the weather conditions are usually stable. In addition, the main season for alpinists is already over. In an emergency, we switch off the laser if someone is still in the summit area and can thus guarantee the safety of all climbers at all times," says Andreas Conzelmann, who has already climbed the Matterhorn himself.



Andreas Conzelmann, CEO TRUMPF Switzerland, still has a few things to sort out before the giant laser "TruGranite" can clip the Matterhorn peak in September 2023.

Trumpf employees with mountain experience on site

In general, TRUMPF Switzerland can rely on mountain-experienced employees for this project, who, according to Conzelmann, are excited to be involved on site: "There will be two employees at the summit around the clock: one laser specialist and one safety engineer. All of the employees involved are very fast and safe climbers. They are able to get from the Hörnlihütte, located at the foot of the summit, to the top of the mountain within three hours - a slightly longer than usual commute - but also the most beautiful one imaginable."

Slide for rock: east wall predestined

While helicopters will take over the transport of the building material for the construction of the planned hotel, there are simpler plans for the extraction of the rocks. The rock extracted by the "TruGranite" superlaser is to be transported down into the valley via a huge chute. Andreas Conzelmann: "The municipality of Zermatt and TRUMPF quickly agreed on this point. The east face allows the rocks to be safely disposed of via a chute onto the Zmutt glacier - so neither the Hörnli Hut nor the Bossi shelter bivouac are in the line of fire. "

Not all details of the project have been finalized yet. One point that could cause controversy in the leveling and construction of a hotel is the internationality of the mountain. This is because the Matterhorn has a Swiss and an Italian part of the summit. Care must therefore be taken to ensure that an equal number of square meters are created on Swiss and Italian soil in order to make a "fair cut."

Further questions about the project concern the final height of the new Matterhorn. Because even if a piece of the summit is likely to be missing soon - including the hotel, one would "ascend" from a height of 4,640 meters to the highest peak in Switzerland. "This is certainly a topic that we will still deal with in a next special meeting," says the association "New Matterhorn" in this regard.