

# CASE STORY

## Security Printing

### Landqart AG Landquart, Switzerland

**Landqart AG has been working with a new roll splitting system since the spring. It is part of an integrated shredding process which ensures an irreversible destruction of substrates for bank notes and identity documents.**

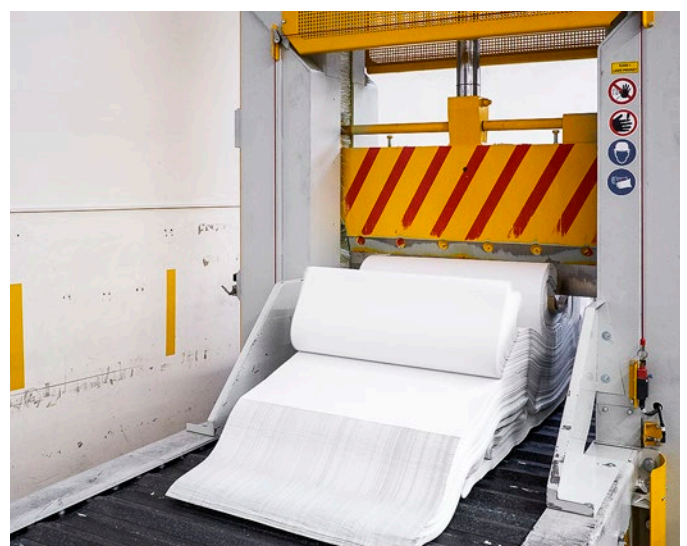
By order of state authorities and central banks, Landqart AG produces substrate for identity documents and for the printing of bank notes. The products undergo a strict internal quality control. Substrate rolls which are faulty must not leave the production operation and must be destroyed in an absolutely secure internal process. For this purpose, Landqart AG installed a new roll splitting system in the spring. The system shreds the substrate rolls in an automatically controlled process in 20 to 60 centimeter stacks; this value can be set as required.

#### **Secure Shredding in a Closed System**

Landqart AG engaged Hunkeler Systeme AG for the engineering and the installation. The suggested concept has fulfilled in an optimal way the need for a secure and at the same time efficient shredding process, as Werner Vieli says. He is responsible for logistics, security and planning at Landqart AG. Werner Vieli is referring here to the closed system, which includes not only the splitting process, but also a shredder with two shredding grades and a granulator. The end products are particles, which correspond to security level P5. They are turned into compact briquettes in a press and are re-used as admixtures in the manufacture of various other products.

#### **Internal Recycling of Valuable Materials**

Previously, the splitting process and the following shredding were not two connected operations. To split the rolls, Landqart AG worked with a hydraulically driven gib head, which had to be manually operated. Shredding was laborious and slow; transporting the material to the shredder plant meant long distances had to be covered. The company took advantage of the investment in the new splitting plant and reconsidered the layout in favour of shorter transport routes and a more efficient shredding process. In contrast with the earlier gib head, the new splitting plant is set up at the cutting area, exactly where the rolls are cut. Additionally, the transport belt exits from the splitting plant in two directions. The forwards and



The splitting plant shreds substrate rolls in stacks whose width can vary between 20 and 80 centimeters



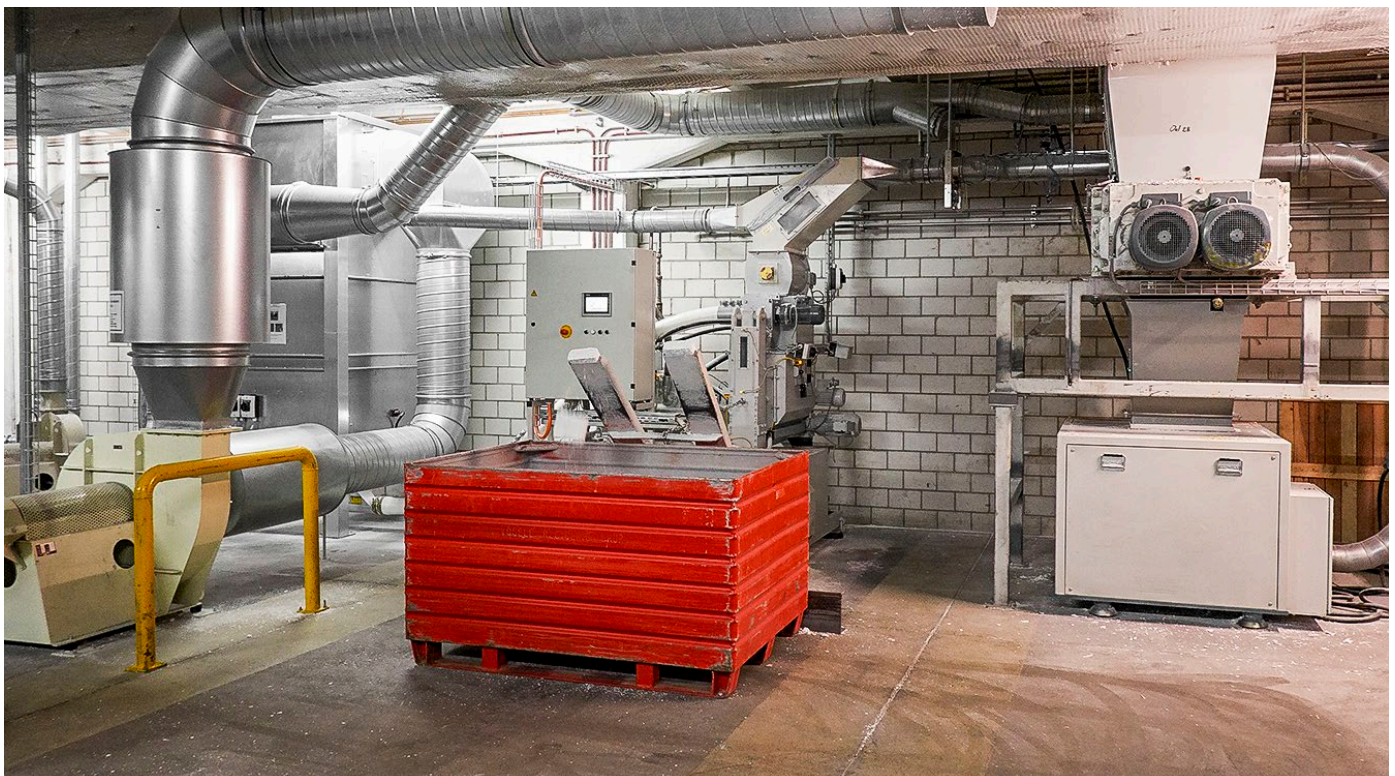
backwards mode means that that scrap material resulting from when a new order run on one of the paper machines is not sent to the shredder but transported in the other direction to the waste container. This high-quality material is re-used by Landqart AG in stock preparation. And because the material is pre-shredded, it disintegrates in the pulper relatively quickly.

**The system ensures economic production operations**

Landqart AG has been working with the new plant for almost ten months. What is the verdict? Werner Vieli refers to greater speed. In that the rolls are split into small pieces, the shredder performance is increased by 20 per cent, compared to the previous system, he says. The rapid and logistically correctly arranged system for the splitting and shredding of the substrate rolls is an obvious benefit for the economic efficiency over the entire production operation for Landqart AG, Werner Vieli notes.



In a closed system, a conveyor belt transports the stack after the splitting process to a shredder with a downstream granulator.



The end-product of the shredding process are small particles, which are compressed in a press (centre of picture) to briquettes.