



GRI 306:
Waste by type
and disposal
method

Cart-One installs new water treatment plant

Case Cart-One, Italy

Cart-One's Mezzani plant is equipped with a chemical-physical purification plant for the treatment of industrial wastewater: This consists of flexo wastewater generated by the printing units in the flexographic printing machines and starch water coming from the gluing units in corrugating machines. The treatment process generates sewage sludge that has to be disposed of as special waste – and on the other hand, purified water which is reused in the production of starch glue for bonding the cardboard in the corrugation phase.

A process that had to be revised: in 2017, Cart-One experienced an increase in the quantity of wastewater that had to be treated, while there was considerably less water available that could be reused for the preparation of starch. The latter was mainly due to the need to improve the starch quality, requiring a higher

quantity of pure water for its preparation. As in many cases, the customer was the driver behind this development – as food safety issues are raising ever more concerns in the market, the reuse of wastewater in production processes is closely scrutinized by experts and relevant authorities. Apart from that, better bonding performance and constant starch quality improves product quality and production processes. As a consequence, the cost of disposal of excess water soared.

To overcome this increasing challenge, Cart-One decided to install a new industrial water treatment plant. Starting with the original flocculation and centrifugation chemical-physical treatment plant, an anaerobic digester was added. Furthermore, the centrifugal separator was replaced by a more modern and larger version. Finally, the

chemical additives were changed to enhance quality and reduce costs. Well-considered measures that led to very satisfying results: the treatment process generated extremely high-quality water, allowing it to be re-used for production or discharged in the local canal without impact to the environment. Cart-One achieved the perfect compromise between cost, water quality and recyclability – a benefit well worth the investment.

State-of-the-art water treatment - formula of success

- Integration of an anaerobic digester
- Integration of a modern (and bigger) centrifugal separator
- Change of chemical additives – higher quality, reduction of cost