

Helping a Greek laundry serve tourists, one towel at a time



INTRODUCTION

Astor S.A. is a commercial laundry that for the past 10 years has provided high quality linen service to the HoReCa segment on the island of Crete in Greece. The laundry serves approximately 200 hotels and tourist accommodation entities, delivering fresh, clean linen within 24 hours to any location in Crete. Due to the seasonal nature of the business, the laundry operates only during the summer months of the year, making productivity and resource optimization even more essential.

SITUATION

In 2017 Astor S.A. saw the opportunity to significantly grow its business, but faced challenges with limited capacity, especially during peak tourist season. Looking ahead to the 2020 tourist season, Astor plans to double its production capacity by building a new laundry facility.

Helping customers doing more with less through tailored and personal approach is the key principle of Ecolab’s business model, applied in cooperation with laundry Astor.

Customer Impact



Economic results

Totally more than 8.700 m3 of fresh water saved (-43%) due to AquaCatch technology



Water savings of more than EUR 10.000/year

Plant can process 15% more textiles thanks to Thermo-mixing solution



15% higher production capacity of the plant with the same washing and drying equipment

CUSTOMER GOALS

The KPIs for this project included:

- Reduction of fresh water consumption
- Increase production capacity with the existing machinery

SOLUTION

Over the last two years, Astor and Ecolab have implemented several laundry optimization solutions to ensure sustainable business growth for Astor, while helping to preserve the natural beauty of the surrounding environment. Wastewater limits on the island are very strict. Astor and Ecolab agreed to work together to reuse as much water in the washing process as possible to reduce the laundry's freshwater consumption. These efforts also serve to reduce the amount of wastewater that goes into the sewer, minimizing the risk of penalties and helping the business grow responsibly.

However, the total freshwater consumption of the laundry had already been optimized with the existing Ecolab water filtration unit, so any further reduction of fresh water in the existing process would have created a risk in ensuring washing quality. Instead, the team decided to focus on reducing the press-water volume.

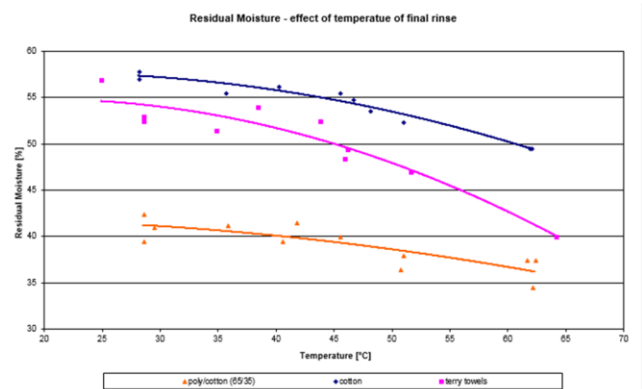
Press water is the water that is pressed out from the clean textiles at the end of the washing process with a continuous batch washer. This water is clean and can be reused in the different phases of the washing process. By sending the water back into the process, we can reduce the amount of water that gets drained into the sewer and use less fresh water in the process. Ecolab's AquaCatch, a press-water recycling unit, has been connected to both continuous batch washers at the laundry.

This unit measures press water with its inductive flow meter and ensures highly efficient rinsing with the programmed rinse water volume.

With the help of this technology the consumption of the fresh water has been reduced by 1,5 liters per kilogram, saving almost 9,000 cubic meters per year which is helping the business to thrive.

After the successful water optimization project, the team set its sights on the next challenge. The existing laundry equipment was not allowing the processing of more textiles because the washing capacity had been higher than the drying capacity. This resulted in washers often stopping because there were too many textiles waiting to be dried. This caused serious productivity issues and the loss of potential income for Astor.

To solve this issue, Ecolab's Thermo-mixing solution uses hot water for rinsing textiles in continuous batch washers. This reduces the residual moisture in the textiles after rinsing. Therefore, drying times are shortened, and more kilograms of textiles are dried per hour (see illustration below). The extra benefit of the solution is that this reduces the number of times the continuous batch washer cannot unload, if all dryers are occupied. Hot rinsing increases the drying capacity with the existing dryers, as well as the volume of textiles washed per hour. As a result, Astor is able to process 15 percent more textiles per hour, ensuring the further growth of its business



Rinsing with 55°C instead of 40°C reduces residual moisture by ca 6% in 100% cotton towels. Source: ECOLAB

eROI : EXPONENTIAL VALUE

By implementing several water and energy solutions, we helped Astor:

- Reduce amount of fresh water used by 9,000 cubic meters per year
- Save more than 10,000 euros as a result of water savings
- Increase production capacity by 15 percent

CONCLUSION

The implemented solutions help laundry Astor to grow its business and profitability. Following the success of these projects, we've also introduced EU Ecolabel-certified washing program OxyGuard40. OxyGuard40 helps customers like Astor ensure the highest degree of whiteness (above 220 GANZ) and the best stain removal at low temperature (40°C) while saving water and energy. The Ecolabel certificate and future projects to optimize the laundry operations will not only help Astor expand its business but will also allow the island of Crete to preserve its environment and remain a top location for tourism in Europe.