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No. 73
Pollution prevention case studies

Water consumption reduction in the dairy industry

Company Lura's Sirela factory, Bjelovar, Croatia.

Industrial sector Agro-food industry. Dairy industry.

Environmental considerations Lura is the biggest producer of milk and dairy products in Croatia. In Lura's Sirela factory, approximately 70,000,000 litres of milk are processed per year, obtaining the following main products: hard cheeses, semi-soft cheeses, soft cheeses, butter and dehydrated dairy products.

The Croatian Cleaner Production Centre carried out a demo project in the factory, focusing on reduction of water consumption for technology needs and reduction of the quantity of wastewater.

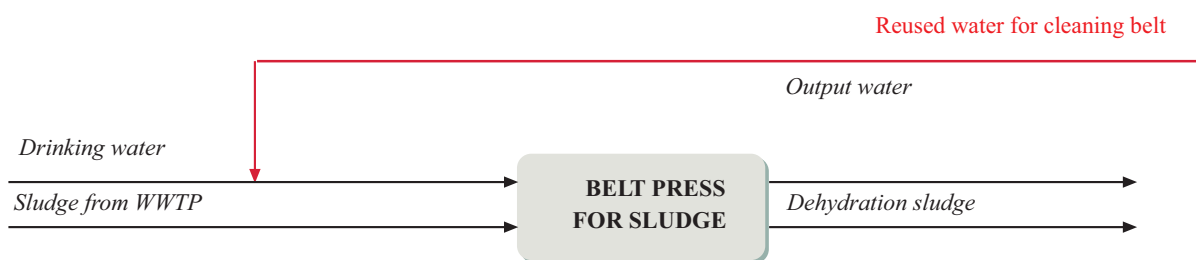
Background The following targets were identified for the project:

1. Reduction of water consumption in the Wastewater Treatment Plant (WWTP).
2. Reduction of wastewater.

Summary of actions Four measures were chosen:

1. Reducing water consumption in the WWTP by replacing the use of drinking water for cleaning the belt press for sludge in the WWTP with purified water from the plant.
2. Reducing cooling water consumption, with recirculation and repeated cooling in the evaporation condenser.
3. Reducing water consumption by using condensers.
4. Installation of "washing pistols" on washing hoses.

Diagram measure 1:



Options

Benefits obtained

Water saving and pollution load reduction options	<p>Savings of fresh (drinking) water 92,325 m³/year</p> <p>Reduction on waste water amount by 92,325 m³/year</p> <p>Reduction of waste water pollution load (COD) by 18%</p>
Total investment	15,000 €/year
Savings	115,000 €/year
Payback period	55 days

Conclusions

This is an example of how a simple implementation of low-cost measures can result in a significant fresh water saving and pollution reduction.

NOTE: This case study seeks only to illustrate a pollution prevention example and should not be taken as a general recommendation.



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