

## SUCCESS STORY

Decanter centrifuge D for  
sludge dewatering at  
RHV Steyr, Austria



SEPARATION

# INNOVATIVE ENERGY EFFICIENCY TECHNOLOGIES

STEYR WASTEWATER  
TREATMENT PLANT

**ANDRITZ**

ENGINEERED SUCCESS

# The challenge

## Coping with increasing effluent in line with legislation

RHV Steyr, a community environmental association serving the city of Steyr (Austria) and several neighboring villages, enlarged and modernized its sewage treatment facility to cope with the ever increasing requirements of more stringent legislation in the face of rising effluent levels and thus, increasing amounts of sludge. The city has benefitted from its experience in heavy industry and production of various commodities, always seeking the latest innovations and advanced technologies in order to streamline its business solutions. Based on its history, it was not surprising to hear that RHV Steyr was looking for the best possible concept to implement its plans, given the following constraints:

- increase sludge treatment capacity to handle a volume of 140,000 PE (population equivalent)
- controlled energy consumption
- controlled operating costs (maintenance, polymer, and dumping over a period of eight years)

At the request of RHV Steyr, extensive independent testing was performed on both similar and different equipment, comparing multiple suppliers using the same technology. The ANDRITZ Separation solution proved to be superior.



MORE THAN  
**30%**  
DRYNESS

UP TO  
**30%**  
ENERGY REDUCTION

CAPACITY OF  
**600 KG**  
DRY SOLIDS/HR

TurboJet weir plate

# Our solution

## Minimize energy consumption while maintaining constant performance

ANDRITZ Separation's decanters, featuring the TurboJet weir plate solution and the Metris addIQ control system to minimize electricity consumption while ensuring best possible performance in terms of polymer consumption and solids dryness, had convinced RHV Steyr and come out top in the evaluation. Two parallel sludge processing lines are equipped with ANDRITZ decanter centrifuge D4L for a capacity of 600 kg dry solids/hr of sewage sludge.

Besides the TurboJet liquid discharge feature for lowest energy consumption, the decanter is equipped with the latest high-performance scroll ensuring lowest polymer consumption with high solids dryness at the discharge. The plant furthermore comprises a system to fill the dewatered sludge into truck containers. Operations and control are fully automated, including monitoring of the solids height in the container. If a container is full, the next container is activated automatically for filling.

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## Results

### Lower polymer consumption and higher dryness

The ANDRITZ decanter centrifuges D4L were started up in June 2014 and, in the following evaluation period, the performance guarantees were met or surpassed. In fact, the polymer consumption was lower than guaranteed and cake dryness was surpassed at the

same time. The high dryness in the cake ensures lowest possible annual dumping costs for the sludge. The outstanding performance with more 30% dryness in sewage sludge solids at the discharge is especially pleasing for the management of RHV Steyr.

**"With the new centrifuges, dewatering of the sludge can be managed sustainably and effectively."**

**GÜNTER MAYRHOFER**

President of the association for wastewater treatment for Steyr and its environs -  
Vice Mayor of the city of Steyr



## WHAT'S YOUR SEPARATION CHALLENGE?

ANDRITZ Separation is the world's leading separation specialist with the broadest technology portfolio and more than 2,000 specialists in 40 countries. For more than 150 years, we have been a driving force in the evolution of separation solutions and services for industries ranging from environment to food, chemicals, and mining & minerals. As the OEM for many of the world's leading brands, we have the solutions and services to transform your business to meet tomorrow's changing demands – wherever you are and whatever your separation challenge. **Ask your separation specialist!**

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