HUBER Technology Nordic AB

HUBER flotation plant and screw press are a great help with the apple harvest in Serbia

Two sludge flotation plants type HDF S

View into the HUBER Dissolved Air Flotation Plant HDF

The company Podgorina Frucht supplies to customers in the food industry high-quality fruit juice concentrates, purées, flavours, dried fruit and frozen goods. All their products are made from selected Serbian raw material.

The wastewater generated during production is treated in the company's own in-house sewage treatment plant to such an extent that the clean effluent can without problems be discharged directly into the small Jadar river.

The well trained company personnel operates a SBR plant for biological wastewater treatment. As a special feature of this project a HUBER Dissolved Air Flotation Plant HDF S is used to retain the activated sludge within the system. "S" stands for the application "sludge flotation". The HUBER Dissolved Air Flotation Plant HDF S is able to reliable meet the high effluent standards of <10 mg/l AFS even with seasonally greatly varying inlet concentrations.

Compared to the basic HUBER Dissolved Air Flotation Plant HDF type "S" models excel for a longer residence time and a considerably increased free water surface. The voluminous surplus sludge can therefore be separated reliably and effectively. Moreover, a HUBER Dissolved Air Flotation Plant HDF S needs three to four times less space than a secondary settling tank that provides a comparable capacity.

Through appropriate control of the preceding plant components both HUBER Dissolved Air Flotation Plan HDF S 15 units can be fed virtually continuously. An absolutely solids-free effluent is achieved by adding only a small amount of polymers (few g/kg DS), this is ensured through analogously monitored NTU values below 5. The flotation plant proves its capability even with solids loads higher then the maximum design values of 150 kg/h and 30 m^3/h. The customer can therefore rely on additional reserve capacity for the future.

The separated flotate sludge with a concentration of approx. 5% DR is recycled into the bio-system, the pre-thickened surplus sludge can optimally be dewatered to the maximum with a HUBER Screw Press Q-PRESS®, in this case a size 440 unit. Due to the sludge volume reduction in excess of 80 % the customer profits from tremendous savings of transport and disposal costs. In addition, due to the high separation efficiency of the screw press in excess of 98 %, the return load to the bio-system is minimized.

Facts and figures:

- Wastewater type: Effluent from SBR, fruit juice production
- Special feature: Flotation plant as replacement for a secondary settling tank
- Machines:

- 2x HUBER Dissolved Air Flotation Plant HDF S 15
- 1x HUBER Screw Press Q-PRESS® 440

- Capacities:
  - HDF each: 50 – 300 kg/h (solids load); 15 – 50 m³/h (hydraulic)
  - Q-Press® 440: 50 – 150 kg/h (solids load)
- Effluent values:
  - HDF S 15: NTU < 5, AFS < 10 mg/l
  - Q-Press® 440: > 20 % DR; > 98 % separation efficiency

A member of the HUBER Group

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