



APPLICATION

Online Condition Monitoring of decanter centrifuges



Increased system availability

Predictive maintenance

Service concepts with Remote Monitoring

- Innovative solutions for
- production
 - quality assurance
 - system startup
 - process assurance
 - increased availability
 - service concepts

Decanter centrifuges: process assurance and inc



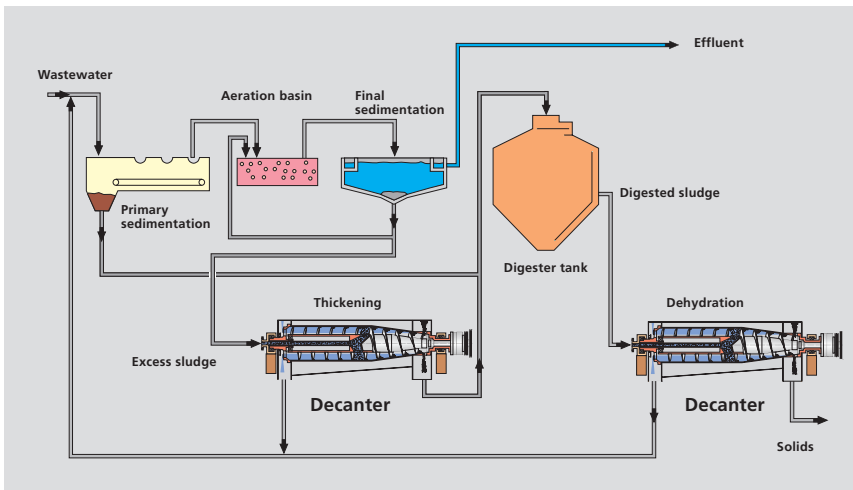
Horizontal solid bowl screw centrifuge for sludge dehydration in a wastewater treatment plant

Decanters

Decanters are employed in the continuous extraction of suspended solids from liquids, the clarification of liquids, the classification of fine pigments, and more.

Typical application areas are the dehydration and thickening of sludge from municipal and industrial wastewater, plastics manufacturing (PVC, HDPE, etc.) and the production and processing of animal and vegetable raw materials (vegetable oils and fats, starch, proteins) and beverages (wine, beer, fruit and vegetable juices).

Any unscheduled downtime is a serious disruption of the entire technological process.

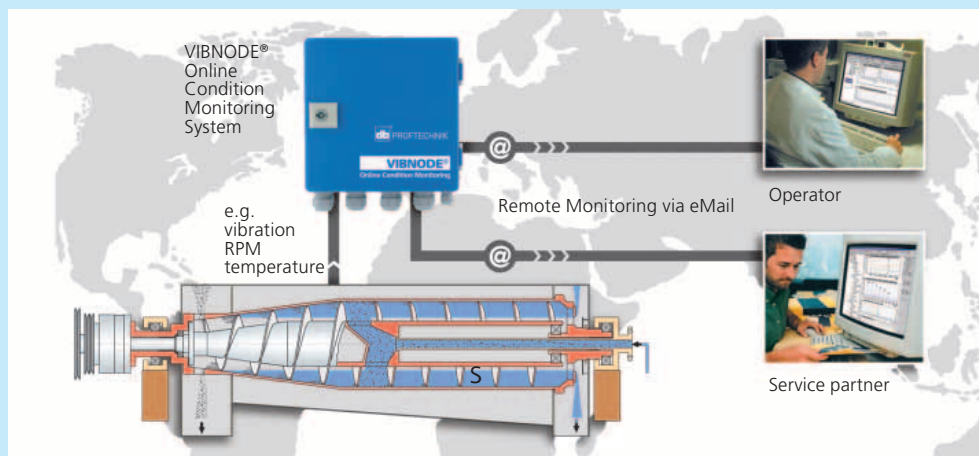


Physical configuration of a wastewater treatment plant – mechanical-biological treatment

Innovative service concepts: Condition Monitoring via eMail or Internet – worldwide

The VIBNODE® Condition Monitoring System collects overall values and diagnosis signals for condition monitoring. When thresholds are exceeded, the operator and service partner are immediately notified by an eMail alert.

Based on the diagnosis signals, which are measured automatically, reliable recommendations can be made to the operator on how to proceed.



Example of a globally implemented service concept

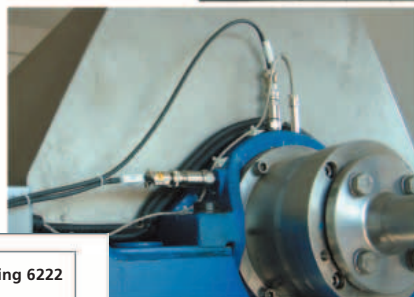
Increased availability

Reliable monitoring with the VIBNODE® Online Monitoring System

Specific machine and roller bearing vibrations can be tracked for the following main components:

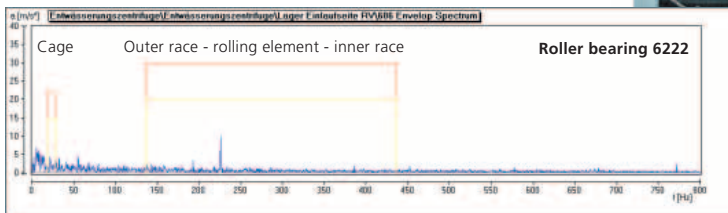
- rotor
- screw
- bearings
- drive

They are monitored on a frequency-selective basis in combination with operating parameters such as bearing temperature, rpm and differential rpm. All condition-related information is automatically transmitted via a network or by eMail to the central control system of the operator or to a service partner.



Sensors on bearing (infeed side)

VIBNODE® with integrated GPRS modem and antenna



Roller bearing spectrum

Frequency-selective monitoring of a roller bearing with two alarm bands.

– Level 1 –

Overall value monitoring

The system tracks the trend of the overall vibration values along with the operating parameters. An alarm is output if a threshold value is exceeded. On the basis of a rise in the trend, predictions can be made on how other condition parameters will develop.

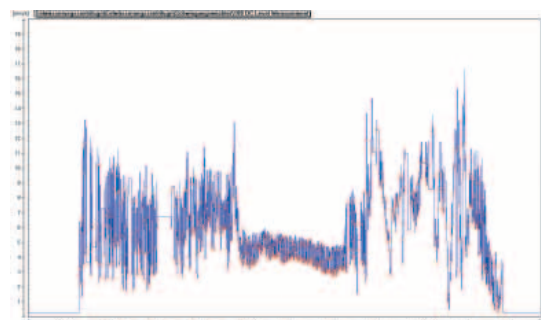


View of three overall values in a multidigram

– Level 2 –

In-depth diagnosis

The possible causes for condition deterioration are narrowed down using in-depth diagnosis functions. This permits condition-based and cost-optimized planning.



Beat caused by the superposition of rotor and screw vibrations.



▶ Profit from the **benefits** of our
proven measurement systems –
and from the **extensive experience**
of our **worldwide PRÜFTECHNIK**

Machinery Service! ▶



Online + offline machine monitoring and diagnosis



Troubleshooting – Videoscopy, torque measurement



Measuring roller parallelism



Training, consulting and engineering



**Mobile measurements
Diagnosis + troubleshooting service**



Temporary and telediagnosis service

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