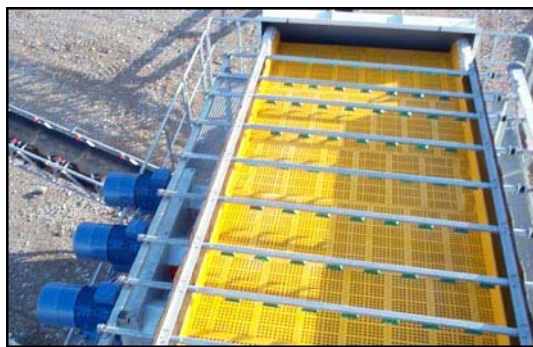


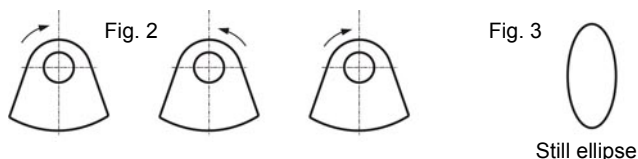
P6000-frequency converters control elliptic screen separator!

Gravel, pebble gravel and sand is important raw material for several projects in the civil industry. Currently utilised material should be for its next processing screened according different size of grain. The company Bräuer Aufbereitungsmaschinen GmbH manufactures elliptic screen separators that are equipped with Watt driving technology. This equipment utilises frequency converters of PROFI-line P6000 series construction and Watt EUSAS system drives.



Principle of operation:

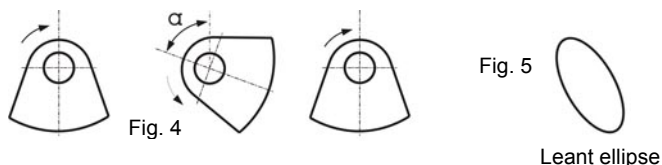
Bed of the screen separator with imbedded grating starts to vibrate. This vibration is achieved by rotating of shafts that have on girth installed unbalanced weight (Fig. 2).



For correct operation it is necessary that bed of screen separator should move in ellipse with swing of app. 6-8 millimetres, Fig. 3.

We will achieve this shape of ellipse only in case if:

- Both outer shafts rotate always in the same phase (connection via geared belt).
- The central shaft rotates in opposite direction.
- Phase angle α (Fig. 4) between central and outer shaft range from 0° to 90° , Fig. 4.



Last point is important for next transport of material. If all shafts rotate in the same phase, screening is accomplished only on locality. It is possible to vary transport rate by means of phase angle dimension.

Function of synchronous running and angular shifting is accurately controlled by means of frequency converters **WATT PROFI-line of P6000 series**, while these converters have normally in disposal all necessary functions and interfaces.

Three 6-pole asynchronous WATT motors, each with power output of 15kW, drive unbalanced shafts, whose individual weight is 800 kg.

Operational information as speed, electric current and phase angle could be find out, eventually edited via operator's board. Communication with frequency converters is realised at the same time via CAN- bus. The P6000 frequency converter has CAN interface normally installed on the board.



Another features of the P6000 frequency converter:

- programmable as SPS
- integrated converter (brake chopper) (for whole scale of power output till 90 kW)
- regulation Master-Slave and standard evaluation of master sensor and speed sensor
- U/f-control, sensor-free vector regulation, closed-loop speed regulation, absolute torque regulation with speed monitoring, as well as position regulation with planning of track
- Separated entry for drive temperature monitoring by means of contact, PTC- or KTY
- Controlling part with option, with function of parameter copying and SPS-program

Further information related to Watt's production programme is available on our web side www.wattdrive.com.