

ThyssenKrupp Fördertechnik treads new paths in screen technology

The manufacturer of high-quality processing equipment uses electrically synchronised gear box reducers for its screening machines for the first time.

Linear or elliptically vibrating screens have usually been equipped with mechanically synchronised gear box reducers so far. All screens of this type operate at a given angle of inclination defined as the angle between the main vibration direction and the screen bottom. Since a mechanically synchronised gear box reducer operates at a fixed angle, this angle can only be adjusted by costly and time-consuming dismantling of the gear and turning the gearwheels on the unbalanced shaft. In practice, it requires much time and manpower to adapt the machine to changing operating conditions rendering the adjustment to only temporarily changing material properties or grain size distributions almost impossible.

With their latest generation of linear or elliptically vibrating screens ThyssenKrupp Fördertechnik treads new paths. By using electronically synchronised gear box reducers, complicated maintenance and adjustment works are a thing of the past. The two unbalanced shafts of the screening machine are synchronised by a control system only. The differential angle between the two shafts is infinitely variable; this allows the angle of inclination and thus the main vibration direction of the machine to be changed while the screen is in operation and the screening process to be optimized any time which avoids long downtimes. Furthermore, the shape of the ellipse of the elliptically vibrating screen can also be modified. It is even completely unproblematic to change the direction of material flow when the screen performs mere conveying functions. For the removal of stuck particles from the screen cloth, the processing professionals from Ennigerloh/Germany have provided a special operating mode.

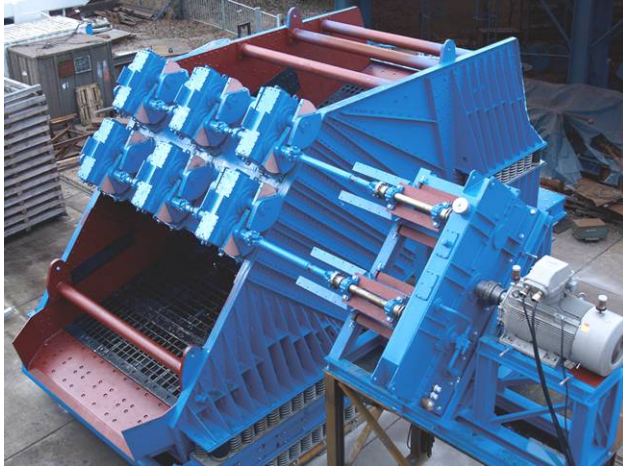


Bild 1: Synchronisationsgetriebe als Beispiel einer Zwangssynchronisation von ThyssenKrupp Fördertechnik

Fig. 1 Synchronised gear box reducer as an example of forced synchronisation from ThyssenKrupp Fördertechnik

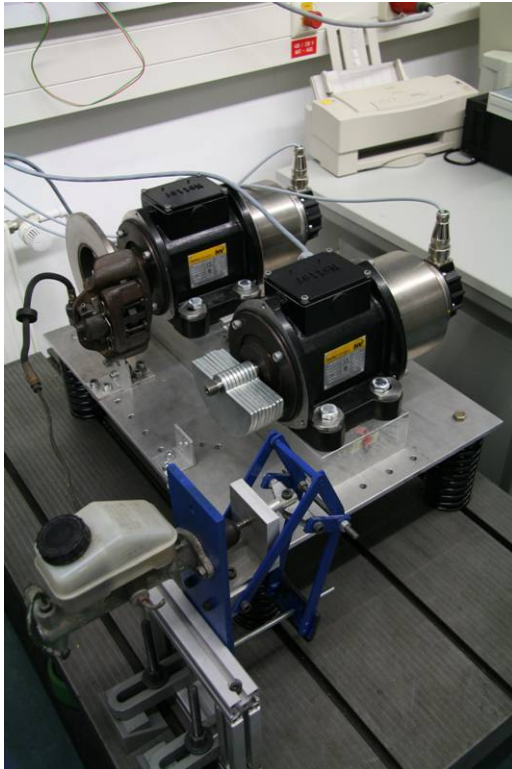


Bild 2: Versuchsstand des elektronischen Synchronisationsgetriebes, ausgestellt auf der BAUMA '07

Fig. 2 Testing stand for the electronically synchronised gear box reducer displayed at Bauma 2007