AUMUND provides Belt Bucket Elevator for Grain Sizes up to 80 mm
Rheinberg/ Germany, March 2015

Bucket elevators are playing a standard equipment role in the bulk material conveying technology wherever vertical conveying is involved. In more than 30 years, AUMUND continuously refined the bucket elevator technology and offers nowadays strong and most capable solutions worldwide for the vertical transport of bulk material. The standards forged by AUMUND have been proven in practice a thousand times over. AUMUND belt bucket elevators are characterised by large conveying heights of up to 200 m and conveying capacities up to 2,500 t/h. The AUMUND Belt Bucket Elevator BWG-GK for coarse grain makes the transport of material of grain sizes up to 80 mm possible.

Photo Gallery

Fig. 1) AUMUND Belt Bucket Elevator type BWG-GK for coarse grain: The narrow, overlapping bucket configuration permits the belt to disappear entirely behind the buckets. No coarse material will be thrown behind the backs of the buckets, even after stoppage

Fig. 2) The AUMUND belt design for reliable bucket attachment
PRESS INFORMATION

The main task during development of a belt bucket elevator for coarse material is the protection of the belt from damage by the conveyed material. AUMUND therefore follows a new path: the narrow, overlapping bucket configuration permits the belt to disappear entirely behind the buckets. It is thus protected and no coarse material can become jammed between the backs of the buckets and the belt. The outer edges of the belt are simultaneously protected. Even in the case of a stoppage with filled buckets, no coarse material will be thrown behind the backs of the buckets (Fig. 1).

Another task is to ensure a safe bucket attachment and, considering the loading conditions of the buckets, even in case of scooping. Here, the design of the AUMUND steel cord belt with transversal steel cord reinforcement provides high pull-out strength and a reliable fixing for the bucket fastening. These plate screws can be used exclusively for fitting the buckets (Fig. 2).

The plate screws developed by AUMUND differ significantly from conventional DIN plate screws and have been designed for a longer belt service life and higher carrying capacity. Therefore, further attachments to increase the clamping force at the bucket fastening are not necessary. The advantage: the belt runs smoothly and without high abrasion on the drive pulley. Only small dead loads have to be transported.

Furthermore, the belt of a bucket elevator needs to provide a high tensile strength, a low net weight and a low elongation, while simultaneous running in good alignment is demanded. This is achieved by a specialized production process and most of all by a high transversal rigidity. The bucket elevator belt has to be optimally designed for its attachments like buckets, rubber seals and endless splices in order to function as a reliable complete system in daily operation, even after many years. All this is ensured by the carcass construction of the AUMUND Bucket Elevator Belts in combination with the AUMUND bucket fastening system. Closely spaced high-tensile steel cords act as continuous tensile members.

This allows belt strengths up to 4,200 N/mm for lift heights of more than 200 m. On the front side as well as on the back side of the tensile members steel cord transverse reinforcements strengthen the belt. In contrast to reinforcements with textile fabric inlays, the advantage of steel cord transverse reinforcements is the higher adhesion of the rubber. This higher adhesion ensures a permanent connection of the individual belt layers, even under the influence of temperature.

Newly developed rubber compounds based on ethylene propylene diene monomer (EPDM) allow operational ranges up to a material temperature of
PRESS INFORMATION

150 °C for AUMUND Belt Bucket Elevators. Even peak temperatures up to 170 °C may be reached. Load tests under industrial daily routines proved that EPDM-belts are much more resistant to aging than belts made of styrene-butadiene rubber (SBR).

About the AUMUND Group
The AUMUND Group is active worldwide. The conveying and storage specialists have special expertise at their disposal when dealing with bulk materials. With their high degree of individuality, both its technically sophisticated as well as innovative products have contributed to the AUMUND Group today being a market leader in many areas of conveying and storage technology. The manufacturing companies AUMUND Fördertechnik GmbH (Rheinberg, Germany), SCHADE Lagertechnik GmbH (Gelsenkirchen, Germany), SAMSON Materials Handling Ltd. (Ely, England), as well as AUMUND Logistic GmbH (Rheinberg, Germany) are consolidated under the umbrella of the AUMUND Group. In conjunction with the headquarters of the manufacturing companies, the global conveying and storage technology business is spearheaded through a total of eight locations in Asia, Europe, North and South America.

Contact

AUMUND Fördertechnik GmbH
Reiner Furthmann – Technical Director
Saalhoffer Straße 17
47495 Rheinberg
info@aumund.de
www.aumund.com

Press Contact

AUMUND Holding B.V.
Wilhelminapark 40
5911 EE Venlo / The Netherlands
Phone: +31 77 32 00 111
marketing@aumund-holding.nl
www.aumund.com