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Sonderdruck - Reprint

SCHENCK PROCESS GmbH

from GCL - GLOBAL CEMENT AND LIME MAGAZINE July 2001

MULTIDOS - Weighfeeders made by Schenck Process

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MULTIDOS - WEIGHFEEDERS MADE BY SCHENCK PROCESS

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Development of Schenck's Multidos weighfeeder has led to some impressive innovations. The Mechatronic principal, combined with many other improvements, has lowered costs and produced advanced, future-oriented weighfeeders.

Le développement par Schenck de l'alimenteur peseur Multidos a permis des innovations impressionnantes. Le principe Mechatronic, combiné avec de nombreuses améliorations, a réduit les coûts et produit des alimenteurs pesés avancés et tournés vers l'avenir.

Schenck's Entwicklung der Multidos Dosierbandwaage hat zu beeindruckenden Ergebnissen geführt. Die Verbindung des Prinzipes der Mechatronik-Struktur mit vielen anderen Neuerungen führte zur Kostensenkung und zur Produktion einer verbesserten, progressiven Dosierbandwaage.

El desarrollo del poidómetro Multidos por parte de Schenck ha dado lugar a algunas innovaciones impresionantes. El principio Mechatronic, junto con otras mejoras, ha producido avanzados e innovadores poidómetros.

Weighfeeders have become an innovative high-end product in today's future-oriented, profitable cement and limestone industries that demand intelligent system solutions. To meet this demand Schenck Process developed the Multidos weighfeeder and has sold more than 300 units since it was introduced into the market in the middle of 1999. Advanced electronics perfectly matching the mechanical system form the Disocovr offspring: a weighfeeder with MechaTronic design.

MechaTronic, the combination of 'mechanics' and 'electronics' in one unit, stands for a new design concept for weighfeeders with regard to external design characteristics, electric wiring and integration into the overall process. Continued development in frequency converter technology for three-phase motors, which are used almost exclusively today, is one of the major factors that is improving motor-driven weighing equipment. Engineers employed by Schenck Process adopted this and other

innovations and set the pace for a revolution in weighing technology.

Developments

Project teams examined the weighfeeder, which has had decades of success, and then optimised essential technical characteristics for the customer. Many years of experience and advice given by service and commissioning engineers led to improve-

ments in many of the details of the new Schenck weighfeeder. The frequency converters used in the Multidos, together with the motor, are designed as one compact drive unit. The frequency converter with shock-proof, rust-free aluminium die-cast enclosure and special chill nails is installed on the drive housing. Operation is safe even in case of complete soiling. The MechaTronic prin-

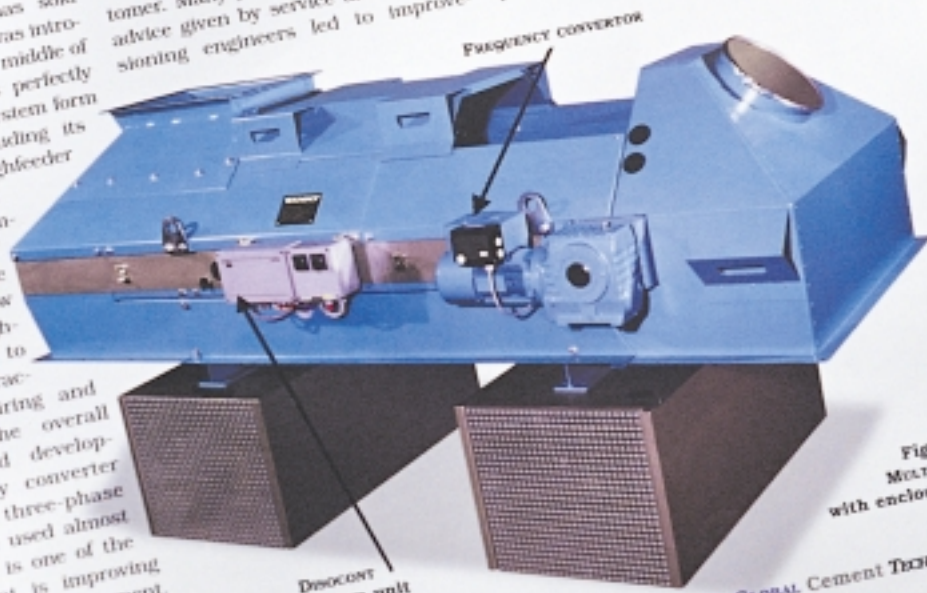


Fig. 1: Multidos with enclosure.

Disocovr system unit

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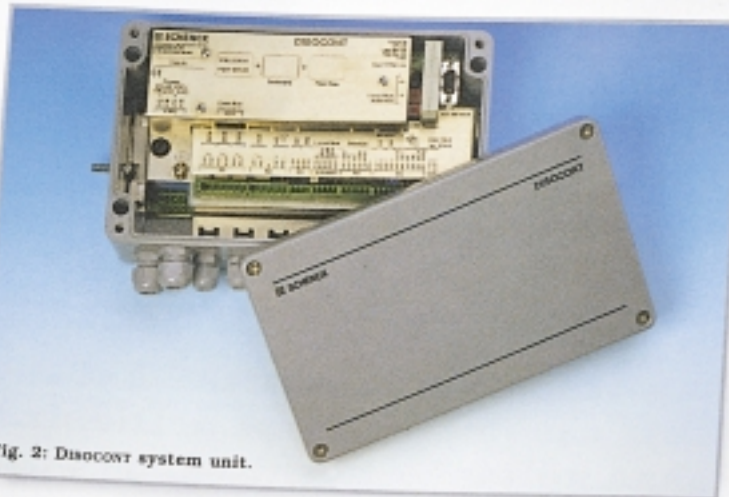


Fig. 2: Disocovr system unit.

ple enables a significant reduction in cabling. Data exchange is made via field buses whereas power is distributed via a power bus. Reduction of EMC problems is a further advantage of compact drives.

The compact design of the system without switch-gear cabinet, as was necessary in the past, is the most distinct characteristic. The support function for the installation of all electronic modules has been taken over by the frame of the weighfeeder. More than ten years of field experience in operation of the previous MULTICOV electronics have found its way into the Disocovr control electronics that have been on the market since spring 1999. About 600 units have been sold for use in various feeding systems. The devices are suited for operation under adverse conditions, e.g. in a cement or limestone factory. In the standard version with sturdy housing, protection type IP 65, all required components are installed by Schenck Process on the frame of the MULTIDOS. Thereafter the entire system is subject to quality assessment and is thus immediately ready for operation. No additional cabling is necessary. A panel-mounting version is available if installation in a switch-gear cabinet is specifically requested by the customer.

All signals from the mechanical system are evaluated by the system unit and are transmitted via serial or analogue (parallel) interfaces. Weighing data, operating status and start, stop and warning signals are

some of the signals that can be transmitted. An interface board enables data exchange with a host computer through Profibus DP or other protocol (e.g. Modbus, 3964 or DeviceNet). In this way major process data of MULTIDOS are directly available. Weighfeeders do not represent a stand-alone solution but are perfectly integrated into the overall process. The MULTIDOS weighfeeder is more than just a mechanical weighing element. It is an integral system of electronics and mechanics: MechaTronic.

New features

Some of the new features of the MULTIDOS are as follows:

Drive rollers: A new production method developed by Schenck Process enables higher torques of the drive roller, optimised by FEM calculation. One and the same type of weighfeeder can therefore be connected to small and big silo outlet cross-sections which makes MULTIDOS more flexible.

Frame: The installation height was reduced to 410mm to solve the problem of limited installation space. Extension in length is possible through low-cost standard segments starting with an axle distance of 1500mm. Belt change is quick and does not require auxiliary equipment.

Enclosed type of construction: The weighfeeder can be completely enclosed by means of easily removable standard components to prevent emission of dust into the environment.

Transport belt: The endless vul-

canised belt is made of high-quality material to increase up-time, precision and ensure stable operating conditions.

Stability: All components are designed to meet high safety standards. The hopper, for instance, can be directly supported by the weighfeeder.

Installation: All components are easily accessible. Conventional tools (like a wrench) with two opening sizes will do for any installation and maintenance work.

Maintenance: Many identical components are used in different weighfeeder construction sizes which reduces stock expenses. Overall maintenance expenses have been reduced to a minimum. All checks can be made while the enclosure remains in place. Removal of covers is possible without needing a lifting tackle which eases and speeds up maintenance work. Detailed documentation is available in different languages to support the job. The service hotline of Schenck Process is at the customers' disposal, 24 hours a day.

The user benefits from absolute reliability and accuracy of the weighfeeder guaranteed by many years of expertise and machine building excellence of Schenck Process.

In summary, the advantages and features of the new Multidos weighfeeder are considerable. There is a compact drive with electronics for local installation, as well as linkage via a bus system. Easy and quick maintenance, reduced variety and other factors combine to mean low investment and operating costs. In the unlikely result of any problems or queries there is a detailed documentation and Schenck Process service.

The MULTIDOS weighfeeder is a product with innovative and future-oriented characteristics that offers quantifiable advantages to the cement and limestone industries. Start-up and maintenance periods are shortened and stock of necessary wear-and-tear parts is reduced. Cost savings achieved by optimised production at manufacturing locations in Germany are transferred to the customer resulting in the development of a high-quality and favourably priced weighfeeder for the world market.

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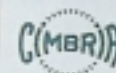
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6. Symposium 'Textile Filter' 5-6. März 2001, Chemnitz

Auf dem 5. Symposium informieren Teilnehmer aus 7 Ländern Entwicklungstendenzen auf dem G-Filter. Vertreten waren 100 Unternehmen der Textilindustrie sowie Produzenten von Filteranlagen.

Schwerpunkte des 6. Symposiums

- Neue Ausgangsmaterialien und innovative Filtermedien für die Herstellung von Filtermedien
- Innovationen in der kombinierten Feststoff-Schadgasabscheidung
- Prüfung von Filtermedien/Filtern
- Abscheideleistung/Zuverlässigkeit von Filteranlagen

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Expocement shows off ambition of Romania's Uzinexport



Nils Berg of Schenck Process, Germany, giving his polished talk to the conference.

ROMANIA Uzinexport invited GCL Magazine, along with a number of leading equipment suppliers and cement producers from across the world, to its well-organised and interesting recent conference.

The conference gave an opportunity for leading Romanian and international equipment suppliers to show off their technical expertise. Presentations from companies such as Pillard (France), Schenck Process (Germany), K-Tron (Switzerland), AAF (Netherlands), BMH Claudius Peters (Germany), Bedeschi (Italy) and Scheuch (Austria) gave the conference an international flavour. Romanian speakers included a selection of informative speeches from Uzinexport's group of companies. There was also a presentation from Fortus - an expert in manufacturing rollers for coal vertical mills. Fortus' sales manager announced successful projects in Croatia, Jordan and Yemen.



The new lobby of Uzinexport, with its panoramic view of Bucharest, offered an opportunity to meet industry figures.

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