The bamboo chain conveyor

Simultaneously reducing micro plastic contamination & carbon emissions

With the creation of a new eco-attentive product for multiple usage, one company is taking another step towards aligning itself more closely with the best interests of the environment.

As a company with 75 years of experience in the field of high-tech technologies and services applied to seed processing, Cimbria has been focussing the attention of its own internal R&D department keenly on the development of sustainable solutions.

This decision has been taken with the aim of harnessing the potential exciting opportunities created by our global industry, which is currently undergoing rapid change.

As often happens, innovations are borne out of the need to solve a specific customer need. In this case, for the company it was a question of acting towards more sustainable practices in the supply chain of feed processing.

However as there are many other production lines within the feed, food & aqua industry, all of these facets are disrupted by the presence of micro plastics in the finished product.

Selecting the perfect material

In order to remedy this situation, with the vision of changing the game for the entire industry, Cimbria decided to focus its research and development department on searching for an alternative solution to the plastic materials used in chain conveyors. After numerous analysis and product tests, the team picked up the bamboo wood as the perfect material for its tensile and flexural strengths.

Thus, plastic components in contact with raw materials during the distribution process, were replaced with bamboo wooden parts (pictured), making this the first conveyor on the market produced with the reduction of micro plastics in the food supply chain in mind.

It is worth noting at this point that the replacement of plastic with bamboo does not in any way alter the functionality of the product, as bamboo has been chosen for its incredible resistance, its tensile strength which is higher than steel. Bamboo is also incredibly lightweight.

As a matter of fact, the bamboo chain conveyor offers a range of features which make it ideal for these industries, because of its loading capacity, versatility and speed stress resistance. Last but not least the Bamboo Chain conveyor creates a better working wellbeing, thanks to its smoother operation and lower noise.

The bamboo chain conveyor is the demonstration that sustainability is not only a good intention or a vision for the future of a company, it is a business approach which is necessary to remain competitive and preserve value in the long-term.

The use of bamboo in the feed processing line opens new opportunities for future product developments, showing that sometimes, sustainability is also a key driver of innovation and creativity for businesses.

A range of chain conveyors

The bamboo conveyor is just one of many belts within the Cimbria portfolio, with the range applicable to a variety of applications. Its specific solutions for the milling business include horizontal or slightly inclined conveyors for the transportation of cereals to silos.

The range of chain conveyors also includes models that are specifically constructed to suit various raw materials and tasks, with dimensions and capacities customisable on individual requirements.

Strength is ensured by the chain, which is manufactured in special steel with welded flights, and fitted with hardened steel bushes. Durability is ensured by galvanised steel sheets covering.

Flexibility is made by easy assembling sections of 500 -1000 - 2000 – 3000mm, with many other standard features complete the range such as drive station and intermediate sections.

Other standard features include a 10mm wear plate on the bottom plate, drive terminal with hollow shaft gear, and motors and gears from well-known and acknowledged supplier in energy classes IE2 and IE3.

What makes Bamboo sustainable?

- It is classified as grass, has the ability to absorb up to seven times more $C0_2$ than conventional forest trees.
- It has complex roots providing nourishment to the soil after years of different cultivation.
- It can be planted in poor quality soils, without replacing essential food crops.
- It does not require huge quantity of irrigation or pesticides because it is very resistant.
- It grows very fast and regenerates itself, increasing the yield and extending the life of the plantation for tens of years.
- It is very lightweight and therefore easy and economical to carry and transport.