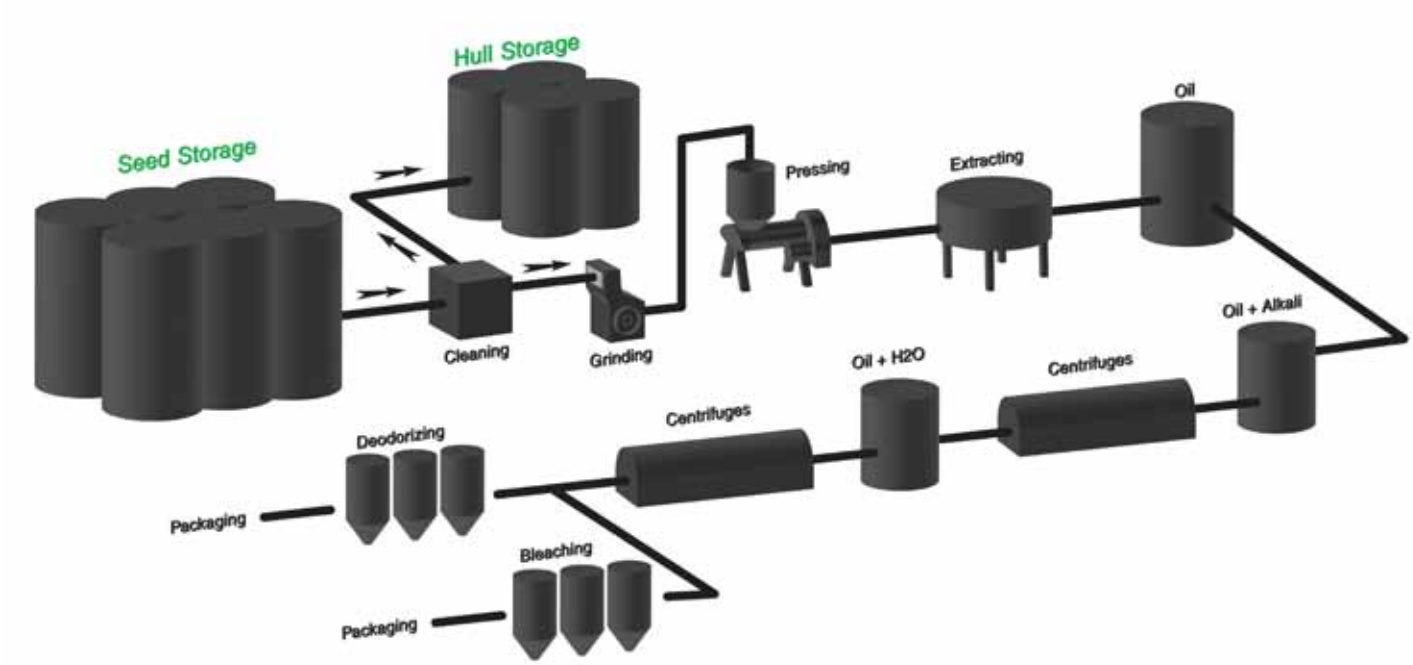
Food & Beverage

Oilseed Production



3DLevelScanner

Seed Storage

Application: Prior to being processed into various kinds of oils, seeds (such as sunflower, canola, palm, safflower, sesame, and grape seed) or nuts (including peanuts, soybeans, almonds, and walnuts) are delivered to the plant and stored in large storage silos to ensure there is adequate material available for the production process.

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Challenges: The large silos used to store these raw materials can be greater than 50' (15 m) in diameter and be over 130' (40 m) tall. Monitoring the amount of raw material exiting the storage silos and entering the oil extracting machines is essential for tracking inventory and maintaining production efficiency. BinMaster's 3DLevelScanner addresses the need for accurate inventory. Material can build up inside the silo and as the temperature rises over time, the quality of the beans diminishes. This can ultimately cause spoilage and result in hard clumps of material that cannot be used. Therefore, end users hope to address this challenge by being able to detect areas of buildup as soon as they begin to form. The 3DLevelScanner's visualization tool allows the end user to see the topography of material inside the silos in real time, detect buildup and schedule maintenance and cleaning before damage is caused to the material or unexpected interruptions of the production process occur.

Accurate inventory control is required to ensure a sufficient supply of raw materials to meet the production plan, taking into account delivery times which can vary considerably. By using multiple-point surface mapping technology, the 3DLevelScanner system provides end users with accurate, reliable and continuous non-contact volume measurement enabling them to better manage inventories.

Hull Storage

Application: Byproducts from oil processing (such as meals, hulls, lecithin, hominy/dried maize and others) are stored in silos before being shipped for use in the production of fertilizers, animal feeds, cosmetics and other products.

Challenges: A major challenge, apart from continuous measurement of the material inside the silo, is early identification of material buildup in the storage vessel. This can damage the quality of the product as the internal temperature of the material within areas of buildup rises over time, causing the stored byproducts inside to deteriorate and stick to each other, forming hard clumps that cannot be used. End users can address this challenge by being able to detect areas of buildup as soon as they begin to form. The 3DLevelScanner provides accurate real-time measurement of the volume of stored byproducts remaining in the vessel, which takes into account such material buildup. The 3DLevelScanner's visualization tool allows the end user to see the variability of the material surface inside the silos in real time, facilitating the scheduling of any required maintenance and cleaning before damage is caused to the material or unexpected interruptions of the production process occur.

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