Shear and Friction test methods for bulk materials with particle sizes up to 0.75” (19mm)

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Abstract:
Laidig systems reclaim bulk materials by means of a reclaim auger positioned radially in the bottom of a storage structure. The reclaim auger continually advances around the vertical central axis of the storage structure. These systems feature first-in, first-out inventory control of the stored bulk material while reclaiming at metered delivery rates. There are multiple design considerations for each unique application. Among these considerations is providing the reclaim auger drive train with available torque to reliably start and run under changing customer material conditions inside the storage structure. Predicting these loads requires an in-depth study of the customer material. Key among these studies in quantifying reclaim auger torque are measuring the customer material shear strength under a given head of material as well as the frictional loads on the reclaim auger induced by the given bulk material.

Background:
Laidig Systems is proud to be the leading provider of turnkey storage and reclaim systems in the World. Laidig’s custom-engineered material handling systems offer proven performance and reliability that is second to none. Laidig is recognized throughout the industry for sophisticated, high-quality systems with special handling requirements, and is the leader in innovative, effective designs customized to store and reclaim materials. The reliability and automation of a Laidig reclaim system has proved to be invaluable for industrial, process-driven applications around the globe, serving industrial industries such as mining & minerals, power, pulp & paper, biomass, wood pelleting, ethanol, food processing, cement, meals and many, many more.