FEECO INTERNATIONAL

Project Profile: Self-Supporting Bucket Elevator

PROCESS

As one of the industry's most reputable suppliers of custom bulk material handling equipment, FEECO was tasked with engineering and building something not many manufacturers can accommodate: a super-capacity, self-supporting bucket elevator for a global fertilizer producer.

Self-supporting or free-standing super-capacity bucket elevators fill an essential gap in vertical handling needs. When elevators will be operating outdoors, or structural steel supports are not available (or too costly), these elevators offer a cost-effective option for handling extremely high tonnages.

These high-capacity elevators are built with incredibly robust components that allow them to be self-contained, bearing the weight of the unit and its load—up to 40,000 lbs of chain pull plus the weight of the casings and drive components. A specially designed head frame is affixed to the bearings. The bearings transfer the weight of the unit into gusset plates, which in turn transfer the load to the heavy-duty casing, which are reinforced with structural steel angle iron and horizontal crimp stiffeners.

Self-supporting elevators are backed by structural analysis by a licensed Professional Engineer to ensure the elevator will be structurally sound despite extremely heavy loads and external horizontal loads such as wind.

PROJECT SPECS

Customer:
Proprietary

Equipment Supplied:
Self-Supporting Super-Capacity Bucket Elevators

Project Location:
Canada

Industry:
Fertilizer

Material:
Ammonium Sulfate

Project Engineer:
FEECO International, Inc.

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