




case histories **WATER/
WASTEWATER**

WORLD LEADER IN
WATER/WASTEWATER LIFTING DAVITS



HAND / POWER / HYDRAULIC / AIR WINCHES • DAVIT CRANES



Winona, MN USA

ABOUT US

What We Do

Thern specializes in the design and manufacturing of winches and davit cranes. Thern winches and cranes have established a world-wide reputation for toughness, versatility and reliability. Our ability to provide clients with a full range of services, and custom-built solutions has made us a leader among our peers. Whether you need to lift, lower, pull or position virtually anything weighing 100 lbs. to 100,000 lbs. Thern has the perfect product for you.

Design Leader

Superior quality is designed into every product we manufacture. Any manufacturer can say they build a better crane or winch. Only Thern can back that claim up with a steadfast reputation for dependable products chosen time and again by companies worldwide. Thern products are manufactured to the highest industrial and quality standards because your application is our application. We also understand that some jobs require a tool that isn't available right off the shelf. That's why Thern employs an experienced engineering and technical sales staff that can consult, design and make modifications as necessary to provide the best possible product for your application.

Quality Assurance

Every product we manufacture must meet our strict quality standards or it doesn't carry the Thern name. Our quality management system is certified to ISO 9001/2008 standards. All inspection tools are maintained and calibrated regularly as required under the ISO standard. All new products are rigorously tested to ensure performance and durability. Thern has the ability to test products statically and dynamically with load capacities up to 55,000 lbs. and line speeds of up to 200 fpm. Test and inspection certificates are available upon request.

Markets We Serve

For over 60 years Thern has been serving a broad range of industries all over the world. Our primary markets include these industries: Water/Wastewater, Entertainment, Oil and Gas, Bulk Handling, Government/Defense, Mining, OEM, Construction, Manufacturing and Marine.

Customer Care

The glue that holds our performance together is "service." We specialize in getting the job done right. Thern is a professional company that is easy to do business with, whether you want to lower the Ball in Time's Square every New Year's Eve or position a load-out chute at a mine in Australia, our expertise and experience is here to serve you. It's been said before, and it's worth saying again: Thern is big enough to handle any project yet small enough to care.



Davit Cranes at Upper Blackstone,

Thern supplied a variety of davit crane systems to the Upper Blackstone, MA WWTP expansion project. Thern cranes are being used at the facility for pump, mixer and motor maintenance.

The project required eight stainless steel davits with epoxy-finished power winches equipped with an emergency hand crank in case of a power outage. Thern also provided a large capacity davit crane for pulling pumps at the lift station and another crane at the top of the sludge holding tank for routine motor maintenance.





Thern Davits Lift Mixers at Telluride, CO

The Regional Wastewater Treatment Plant at Society Turn processes 2.1 million gallons of wastewater per day for the Town of Telluride, Colorado and nearby developments. The plant operates an extended aeration process utilizing aeration basins and clarifiers.

The addition of a mixer created a need for a crane to lift the mixer for positioning and maintenance. A Thern 5110 Series Portable Davit Crane was ideal for the job. Designed with a quick disconnect anchor for quickly attaching or removing the wire rope from the winch drum, Thern's 5110 Series Portable Davit Crane allows operators to attach or detach the crane from even submersed mixers with ease.





Thern Cranes and Winches at New WWTP Facility in Pickerington, OH

The Pickerington, OH WWTP used Thern's Dura-Hoist winches to lift/lower drain pipe to regulate the level of water in the final digester process. The winches were also equipped with emergency hand cranks in case of a power outage.

An epoxy finished, large capacity Captain davit crane is used to lift trash baskets during pre-treatment process while a galvanized First Mate davit is used to lift submersible pumps at multiple stations.

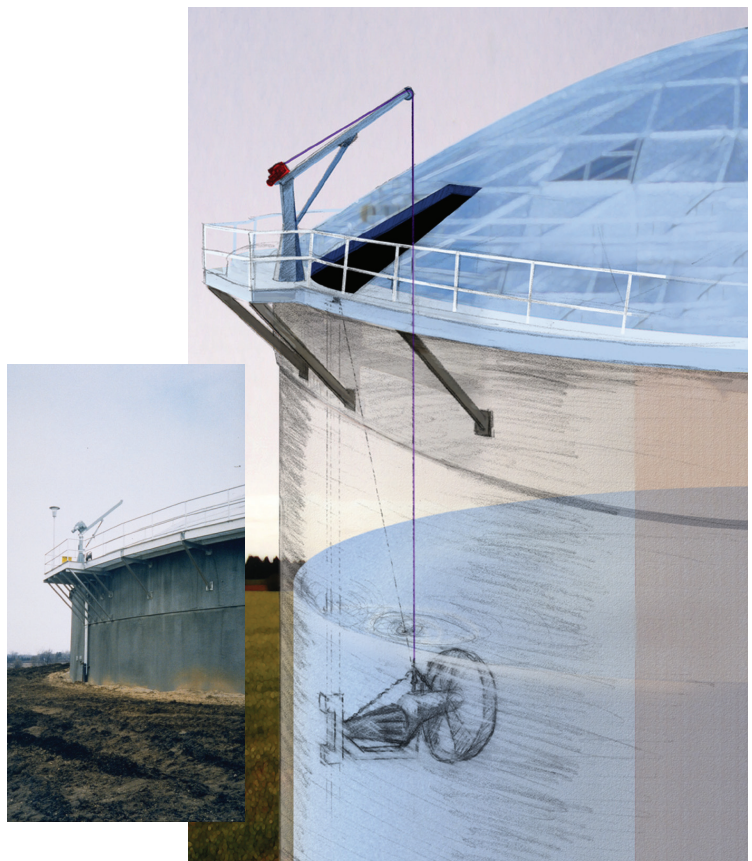
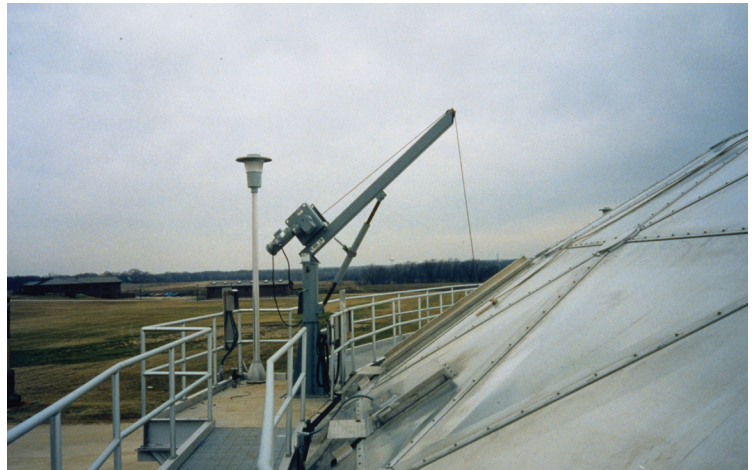




Raising and Lowering Mixers at WWTP

Several Thern 57 Series Fre-Rol cranes are used at this wastewater treatment plant in Wisconsin to position mixers. The crane is operated with a 4WS Series electric winch to raise and lower the mixer into position along a guide rail attached to the wall of the mixing tank. A secondary tie off supports the mixer once it is in position. The crane boom adjusts with a ratchet style screw jack allowing the operator to keep the end of the boom centered over the mixer. This helps to avoid side pulls which cause the mixers to bind on the guide rails.

Multiple cranes are located on each mixing tank. Cranes and winches are finished with a three coat epoxy to provide superior resistance to corrosion.

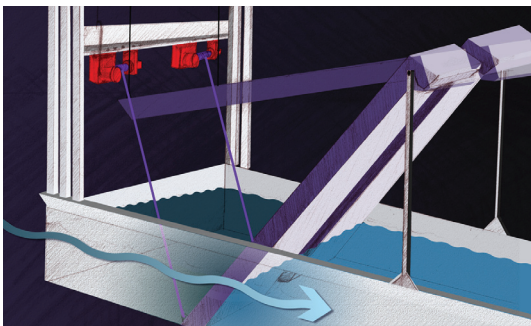
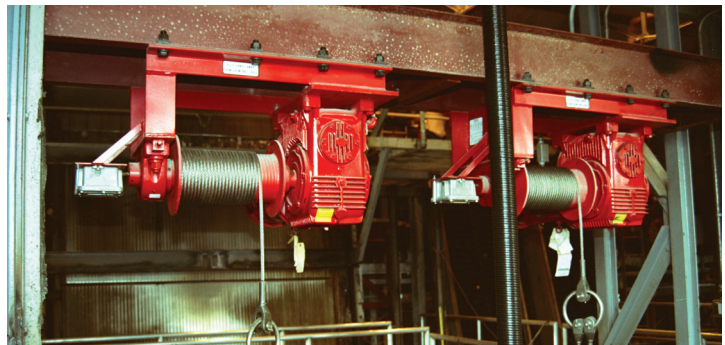




Thern Winches Raise Bar Screens at Blackwater Facility

Modified 4HW Series electric winches are operated as hoists to raise and lower screens for periodic cleaning at a wastewater treatment plant. The screens filter water during the first stage of purification.

A secondary tie-off is used to hold the screen in the raised position. The winches are modified with extended grooved drums for single layer operation, and explosion proof motors and limit switches due to the explosive environment.





Washington DC Aqueduct Project

The aqueduct project was for the US Army Corp of Engineers in Washington DC. The project required 15 constant tension dredge positioning winches and VFD control units.

Thern's fully programable "Smart Winch" technology utilized tensiometers to keep the lines at a constant tension. The winches are used to automatically position and control floating dredge systems on the 10+ acre ponds.





Dredge Positioning Constant Tension Winches

Thern winches position floating dredges for HCL removal at the Orange County, CA Water District facility.

Each lagoon has a winch station that connects the winch to floating dredge units to position and maneuver the dredge across the water, and effectively removes silt deposits.

This system required constant tension between the winches and the dredge. The new system was much easier to operate and maintain and was also much more economical than the previous system.

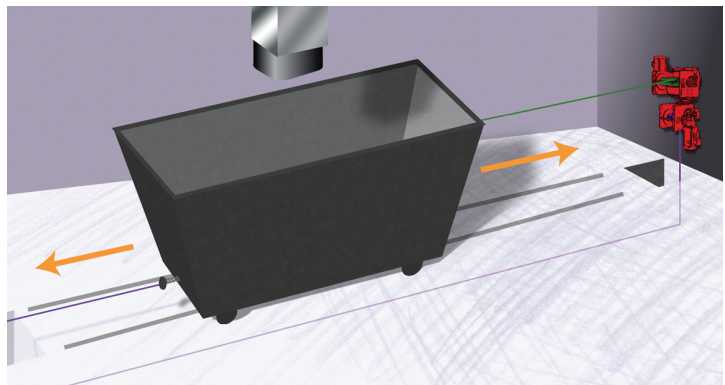
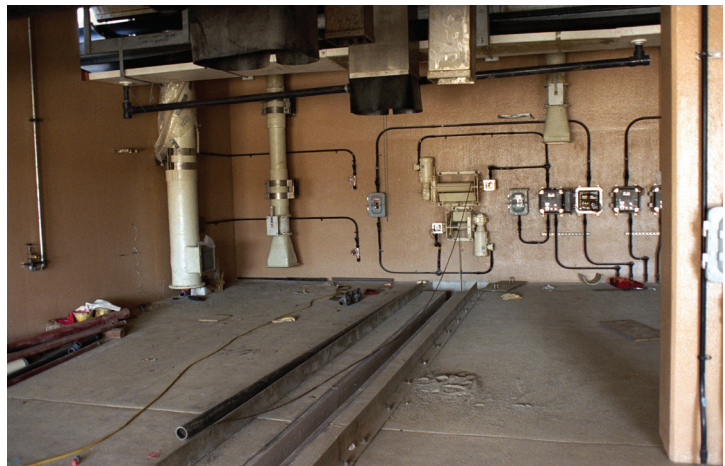




Hopper Cart Positioning Winches

Winches need to pull a hopper cart into position below a chute and then move it back and forth as the car is filled with waste materials. 3,100 pound line pull was required and up to 120 ft travel distance. One winch will be used as the retrieval winch to pull the car into position and then winches will be attached to either side of the car for back and forth movement. One winch was supplied with a longer drum to be used as the retrieval winch with a greater cable capacity.

Both winches equipped with manual clutches to allow for free spooling of the cable to load for attachment. Special epoxy paint finish supplied to customer's specifications. Control package allowed for both winches to be operated simultaneously with pay out/in capabilities.





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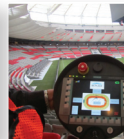
NASA Space Shuttle
Launch Pad



Mining District
In Australia



Land Based and
Off Shore Oil Rigs



BC Place Stadium
Reduction System




Ivanpah World's
Largest Solar GEN



Washington DC
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