

# Thern

## Product Application

Construction



### TA Series Air Winch Bridges the Gap

A key area of application for Thern air winches is the construction sector. The Thern TA series winches provide crucial capabilities that make them desirable for construction operations. One of these is the convenience of bringing air power to the job site instead of electric or hydraulic power.

In February 2005, representatives of Thern visited the site of the \$600 million Retrofit Project for Seismic Protection on the Richmond-San Rafael Bridge in San Francisco where two TA5 winches were being used. The operation provided an excellent opportunity for Thern to photograph and document the use of its winches in the construction sector.

The five-mile long bridge was undergoing structural restoration to address existing earthquake damage and provide it with additional structural



The Richmond-San Rafael Bridge

support for the future. The Thern winches were positioned just a few feet off the concrete base piers, mounted on iron cross beams at the bottom of the bridge's superstructure. Their application was to help lower old superstructure beams out of position and down onto barges waiting below and to lift new supports into position as part of the reinforcement process. The TA5 winches provided the level of precision and control needed to move the large steel beams safely in and out of position.



L to R: Gene Rosamilia of Koch Engineering, and Bill Sievers and Jim Abts of Thern inspect the setup of a TA series winch.

The Thern winches were brought on site as replacements for competitor winches, which proved unsuitable for the operation. Prior to the TA5's introduction to the project, the ironworkers and civil engineers had primary experience working with these rival winches. Their reaction to the Thern winches was phenomenal! One ironworker of 29 years said that the level of control offered by the TA5's ability to feather the air valve and position the loads was the best he had ever worked with. It surpassed anything competitor





**Above:** TA winches like the one shown above were positioned on the base piers, raising and lowering iron crossbeams during the refit.

winches could do based on his experience, a testament to the quality craftsmanship and design of the TA series winch.

The Richmond-San Rafael Bridge project was not only an excellent showcase for the capabilities and convenience of Thern air winches, but it also served as an important field test for future product development. In addition to the successful application of Thern winches on this project, the Thern team also researched and developed a new brake handle actuator design based on input they received from the ironworkers. The Thern TA series air winch was demonstrated to be a superior product as part of this project and has helped to position Thern as an industry leader in precision material handling equipment for the construction industry.



A utility barge works on the superstructure of one of the base piers of the bridge.

## APPLICATION DETAILS

Lifting or pulling:	Lifting
Line pull required:	10,000 lb
Line Speed required:	30 fpm
Travel distance of load:	175 feet
Power source:	Air
Environment:	Outdoor, corrosive

