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Tilt-Up Manual

THE MEADOW BURKE TILT-UP MANUAL

Forward

This Manual has been developed to provide a broad scope of technical information to the tilt-up Contractor/Erector. No publication, however comprehensive, is complete in every detail nor can one design for national use or account for local customs and practices. Consequently, when using this manual there is an absolute obligation to verify understandings or impressions with more experienced sales people, managers, engineering or other technical sources. We, at Meadow Burke, are confident you will find this manual an invaluable tool.

Notice

All of the Meadow Burke inserts and products have been fully tested for mechanical capabilities. In addition the inserts have been cast in concrete to test the actual pull-out capacities. Full size production braces have been tested in tension and compression to determine their failure loads. It is these loads, and not theoretical values determined from various equations that are published in this manual. Contact Meadow Burke Engineering for assistance in determining loads not listed.

Meadow Burke products must be properly used and maintained. Do not use any products that are worn, excessively corroded, deformed or altered. See the product maintenance manual for proper maintenance and inspection of rental hardware.

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GENERAL INFORMATION



Tilt-Up Manual

THE TILT-UP ADVANTAGE

Definition

Tilt-up is a method of casting walls horizontally on the floor slab area or on casting beds at the jobsite. Panels are erected using a mobile crane and temporarily held in place by steel braces. Panels are connected to the steel structure at the footing, slab and roof line to complete the building structure.

Historically

Tilt-up began in the early 1900's with a few projects that relied on tilting tables and other means to erect walls. Tilt-up did not become a viable system until the early 1950's when transit ready-mix trucks and heavy-duty mobile cranes became available to speed and economize the method.

Innovations

Meadow Burke, and its' predecessors pioneered the development of the first practical ground release lifting system. Meadow Burke Products also designed the first large diameter, thin-wall, fixed length pipe braces that are the standards in the industry today. These innovations eliminated excess labor and hardware, allowing faster and safer lifts.

Technical Support

Meadow Burke technical support assists customers not only in the proper use and application of tilt-up products, but also a number of other important areas. Meadow Burke manufacturing provides quality assurance on our manufactured goods through extensive testing. At the same time, Meadow Burke Engineers invent and thoroughly test new products to keep our customers on the cutting edge of tilt-up technology. Over the years Meadow Burke Engineers have helped design and erect over 4,000,000 tilt-up panels, some over 96 feet high and weighing 320,000 lbs.

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THE TILT-UP ADVANTAGE

Tilt-up vs. Other Construction Methods

Tilt-up has fewer types of operations requiring specialized crews. In most cases a tilt-up project uses semiskilled labor for most of the operations as compared to concrete block masonry.

Tilt-up requires less time to construct. The average sized tilt-up building can usually be completed within 90 days.

Tilt-up is less capital intensive. It requires less forming and placing equipment than other construction methods.

Tilt-up when compared to precast requires only transportation of raw materials, not finished goods. In addition, tilt-up requires fewer panels and the ability to use larger panels than precast. Consequently, Tilt-up costs less than other hardwall systems.

Tilt-up allows unlimited architectural treatment of color, texture, and shape.

Advantages of Meadow Burke in the Tilt-up

The Product: For years Meadow Burke and its predecessors have been recognized for providing the latest state of the art engineered tilt-up systems. From product design through manufacturing and engineering, Meadow Burke leads the tilt-up industry. You can be confident that Meadow Burke designs, engineers, and manufactures with a total quality and safety emphasis.

Tilt-up Distributors: Meadow Burke has a strong exclusive product relationship with several of the major regional construction material suppliers in the country. These exclusive tilt-up distributors have extensive inventory investments in Meadow Burke tilt-up hardware and Super Braces. Each can provide you with trained technical personnel for the products you will need for tilt-up projects; from bar supports, embeds, and chemicals to name a few. Please call Meadow Burke for the tilt-up distributor nearest you.

Advantages of Meadow Burke Engineering in the Tilt-up Process

Meadow Burke's complete tilt-up package includes comprehensive engineering services to assure a successful tilt-up from design through erection. A computer analyzes all the flexural and shear stresses from horizontal to vertical which a panel undergoes upon lifting and placement. This computer analysis of each panel gives precisely located insert placement to safely distribute the load. The result is detailed panel drawings for accurate insert placement in the field. These easy-to-read drawings include strongbacks or additional steel reinforcement where needed. Meadow Burke Engineering also provides bracing design for each panel shape. Rigging diagrams minimize crane time and assure safety.

The speed and accuracy of Meadow Burke's superior engineering service assures prompt delivery of essential information to the project. On complicated jobs, Meadow Burke engineers work closely with architects, engineers and contractors in the design, planning and construction stages.

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NOTES

A large grid area for taking notes, consisting of approximately 30 columns and 40 rows of small squares.