

IFAI BALLASTING STUDY RFP

Introduction:

There is a need among the Industrial Fabrics Association International – Tent Rental Division membership for guidelines in regards to ballasting rental tents. The need for ballasting is ever increasing with increasing limitations on staking rental tents. There is limited understanding in the industry how much ballast is needed and how this is best accomplished. The risks that some of the rental companies will take makes the more cautious renters less competitive, forcing everyone into a risk-taking position. Ultimately this may lead to serious incidents that can potentially negatively influence the whole tent rental industry and it certainly presents an increased liability for our members and their customers.

For large rental projects, especially industrial rentals, there is already an established process to determine the ballasting needed, by having individual ballast studies performed by specialized engineering firms, based on site-specific load requirements, a specific rental structure and a specific ballasting system. For smaller, shorter term rentals, it is cost-prohibitive to have individual studies done, and with the current knowledge they may be too conservative to be effective in the highly competitive, rental market.

Similar to how the staking guidelines were developed, we are proposing to develop ballasting guidelines. This effort will also be a combination of showing how to ballast a tent most effectively, combined with presenting diagrams and numbers to calculate the amount of ballast needed.

This will make our industry safer and put everyone on a more level playing field. It will provide the more risk-conscious renters with an opportunity to refer to the guidelines with customers and inspectors, so that their adherence to the guidelines can be recognized and turn into a competitive advantage.

The manufacturers are generally reluctant to provide guidelines for ballasting their rental tents. These guidelines will use the same approach as the staking guidelines, to utilize the manufacturer provided anchor loads as input to develop the required ballast. The usual IFAI disclaimers will apply to these guidelines.

Study overview:

Scope: Create a set of functional guidelines to assist members of the Tent Rental Division in the proper usage of ballasted installations of rental tents:

- 1) Qualitative results:
 - a. Determine best methodology for using ballast units to anchor frame tents and clear span structures. Includes guidelines for how to place ballast, where on the ballast to connect guy ropes or baseplates, for maximum effectiveness

- b. Determining the best materials and hardware to properly attach frame tents and clear span structures to ballast units. Include typical specifications and safety factors for commonly used hardware.
- c. Apply these criteria to water barrels, concrete ballast units in both block and barrel shapes, steel ballast.
- d. Determine the boundaries within which the guidelines are valid (size of tent, special circumstances,...)
- e. Provide guidelines for how to determine the resistance of a ballast setup based on reactions under windload given, type of ballast, surface friction coefficient, geometry of setup, connecting hardware, overall safety factor.
- f. Provide guidelines how the ballast requirement is influenced if horizontal sliding can be prevented through other means.

2) Quantitative Results:

- a. Determine the expected mean coefficient of friction for
 - i. water barrels
 - ii. concrete barrels
 - iii. concrete blocks
- b. Water barrels, concrete barrels and concrete blocks will be tested and a mean coefficient of friction will be used to determine the holding power for:
 - i. Dry asphalt
 - ii. Wet asphalt
 - iii. Dry Smooth Concrete
 - iv. Wet Smooth Concrete
 - v. Dry Rough Concrete
 - vi. Wet Rough Concrete
 - vii. grass
 - viii. dirt

ix. gravel

- 3) Deliver these results in a report and table format to be used as field guidelines for the members of the Tent Rental Division

Timeline: Budgets and proposals are to be submitted by March 18, 2011. Awarding of the study will be made on April 20, 2011. Completion of study and delivery of completed results will be submitted to the IFAI 90 days after award of contract.

The guidelines will be published by the Tent Rental Division of IFAI and sold as a paper-based or electronic publication to its members.

Submit proposals to Jan Schieffer, Managing Director, Tent Rental Division of IFAI, 1801 County Road B West, Roseville, MN 55113; email jmschieffer@ifai.com or fax +1 651 631 9334 by April 20, 2011.