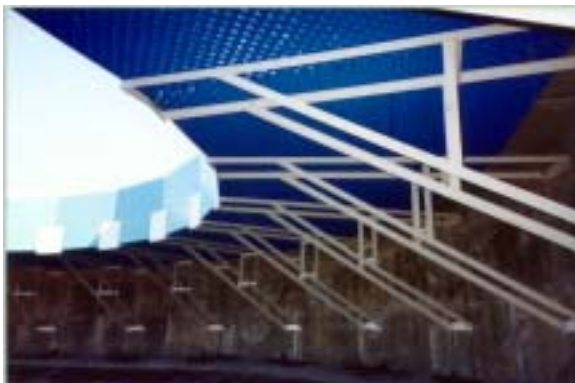


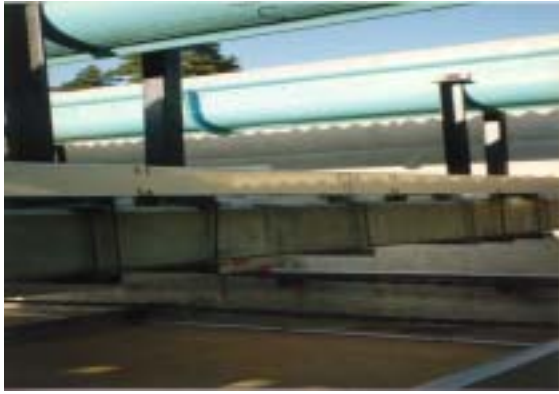
### **Brentwood Tube Settler Installation Guidelines**

This Installation Handbook was written by Brentwood Industries, Inc. with the express purpose of providing helpful hints and examples for contractors and others of the many varied methods of installing tube settler media. This Handbook is not to be construed as the only Brentwood approved methods for tube settler media installation or the final installation authority. The text and pictures are for illustrative purposes only, check with the tube settler owner/ project engineer for their contract/specification requirements.

#### **Examples of Tube Settler Media Support Structures:**

Pictured below are different width and material type support beams that have been used in other tube settler projects and are typical for many tanks:





### Media Rigging Methods:

Our tube settler media modules will arrive palletized on site in closed 48' or 53' trailers. The media will be delivered at the normal rate of 2 to 4 truckloads per day or as per a mutually acceptable schedule. Typically there are 12 or 16 modules on a pallet, resulting in a full pallet that has a 3 or 4 ft. width, 6, 8, 10 or 12 ft. length and an 8 ft. height. The pallets must be moved in some fashion to the back of the truck, a pallet jack or a skid puller and chain have been the most successful methods. From the back of the truck the pallets must be lifted by some sort of forklift/crane and lowered to the ground level. The media must then be conveyed to the tank and lifted into the basin, usually by hand or using a crane. There is no correct method or only "one way" to rig media into a tube settler basin/tank. Pictured below are tube settlers being off-loaded and moved to a tank for later installation.



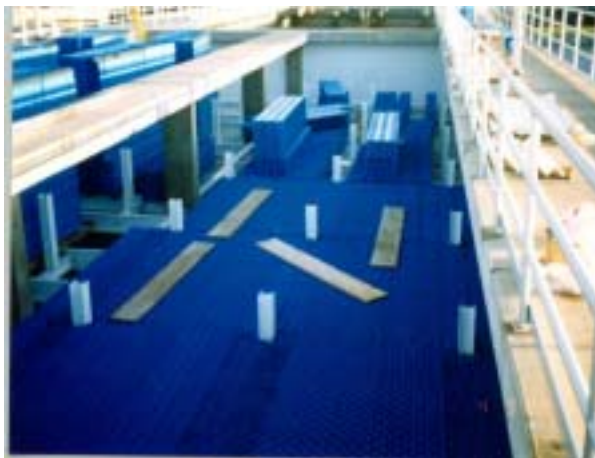
## Media Placement and Manpower:

The final placement of the media must be placed/installed by hand, and depending whether the installation is for a round or square/rectangle basin, this determines the starting point for tube placement. Normally, the tubes will be first placed at the center column of a round tank and at one end of a square/rectangle basin. The tube settler media modules shall be placed in the tank to provide the closest possible fit with adjacent modules without damaging the modules. The tube settler module packing arrangement shall be as recommended by the media manufacturer and shown on the engineer approved installation drawings. For estimating purposes a crew consisting of one crane operator, one forklift operator, one other worker to unload trucks and rig media pallets plus two to three inside tank workers, installing/cutting should be able to install from 200 to 300 or more modules per day. The following installation pictures illustrate proper media placement and module orientation.



## Tube Settler Media Cutting, Protection and Debris Containment:

All site tube settler module cutting is done with a chain saw, a 24” or 28” bar is preferable because it is long enough to make most of the cuts with one pass, yet manageable enough so as not to create any additional safety concerns. The media modules should be carefully measured and cut or trimmed to fit within 1/2 inch (or less, especially if specified by the project engineer) of the center column and/or the tank perimeter wall. The shaping, cutting and trimming of the media modules normally is done out side the tank to keep debris out of the basin. Walking on the installed tube settlers should be limited to prevent damage of modules and only after the Contractor places 4’ x 4’ x 3/4”plywood or other suitable temporary planking on top of the tube settler modules.. Following are pictorial examples of a cutting area and methods used to protect the tube settlers during installations.



All of the information, observations and recommendations provided in this handbook are being furnished only as a matter of general information and are not in any way intended as a guarantee on the part of Brentwood Ind., Inc., Reading, PA.