

TOWNSEND'S

INTERNATIONAL FIBERGLASS CORPORATION



POOL REPAIR
& REJUVENATION

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“The secret is knowing exactly which material and technique will perform the optimum service in a specific situation...”

James Townsend

The **TOWNSEND** Story

Townsend International Fiberglass Corporation (TIFCO), is a recognized pioneer in the research, development and technological advancements in pool repair and rejuvenation.

TIFCO is headed by James P. Townsend, well known for his innovative studies in the field of reinforced plastics, and direct involvement during the pioneering stages of the fiberglass industry. This included the development of application and technique for the actual manufacturing processes, as well as researching the handling characteristics, gelation times and "wet out" ability of various reinforcing materials.

As far back as 1955, Townsend was instrumental in the development of fiberglass swimming pool panels. Since then, he has been involved in the manufacture of more than 10,000 pools, not to mention a host of other related products such as water pollution control housings, pontoons, exterior/interior building panels, industrial linings and coating and storage tanks.

As an expert consultant in fiberglass, a relatively new field, Townsend was called upon to solve the problems of water soak and chemical and soil attack on fiberglass panels being used for residential pools. It was during this period that he developed the method of lining existing surfaces with fiberglass.

As a result of his vast experience and knowledge of the industry, Townsend organized TIFCO in 1965 as an in-house manufacturing facility specializing in custom reinforced products and several proprietary products he had developed. It was then that he became aware of the lack of qualified pool restoration services needed by pool owners. Townsend answered this need by developing a revolutionary service that specializes in the restoration of pools at a fraction of the cost of a new installation.

Townsend's "P.I.P." Stress Pool is a "pool in a pool." That is, the "pool in a pool" technique layers new material on the existing or new pool.

The material, of course, is "FIBERGLASS," a combination of glass mat and polyester resin that must be coupled with proper technique and surface preparation to insure a tight bond. "The secret is knowing exactly which material and technique will perform the optimum service in a specific situation," says James Townsend, unquestionably the pioneer in the field of reinforced plastics and fiberglass research.

TOWNSEND credits include:

- The development of the fiberglass underground storage tank of American Oil Company
- The development of the Excalibur sports car body for S.S. Automobiles
- The design and manufacturing of water cooling tanks for U.S. Gypsum
- The development and manufacturing of liquid flow meters for Badger Meter Manufacturing Company
- Manufacturing water pollution control items for Envirex Inc., Water Quality Control Division of Rexnord
- Consulting, development, tool development and manufacturing of fiberglass shower stalls for Kohler Company
- Setting up a fiberglass manufacturing plant (General Silo) in Milan, Italy and training their crew to manufacture fiberglass modules for silos.

CASE HISTORIES

Pictured below are various stages of pool repair and rejuvenation by **TOWNSEND'S INTERNATIONAL FIBERGLASS CORPORATION**. These particular projects were the Forest Park, Illinois public swimming pool and the Wicker Park pool located in Highland, Indiana.

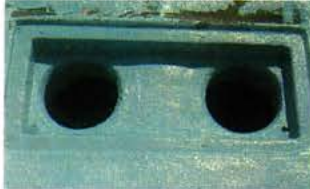
Drains—All drains 3" and over are completely laminated. All metal portions are sealed including the top 2"-4" inside the pipe, effectively preventing water seepage at this point.

All floor drains, metal or concrete casings and covers are sandblasted to remove paint build up, rust, scale and dirt.

Each cover is coated with polyester once the work is complete. (Left)

Cracks—Many pools have a multitude of fine cracks that are covered by paint each year. Leakage continues through these cracks as they open when the pool is filled. (Right)

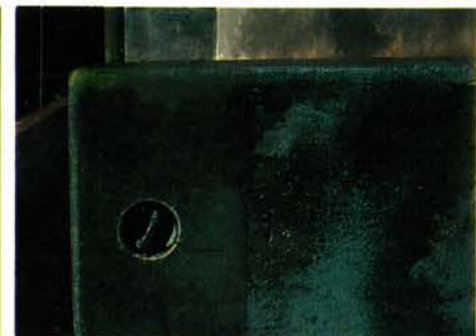
Many pools have been patched and repatched. Patched areas become visible once an area has been sandblasted.



Hand lay-up—The use of the hand lay-up technique is often used in the areas that require close detail work. Hand lay-up allows for more application control to avoid overspray of resins and fibers onto areas that will not be laminated.



Steps—State codes require that steps be in a contrasting color. In addition, all steps, ledges, and laminated decks are skid proofed.



Pool inlets, drains, lights, etc; are thoroughly cleaned to remove overspray of resins, fibers and gel coats. If taped, tape is removed and tape residue is removed. This picture also shows a section of fiberglass laminate against the concrete surface.

These projects represent the typical problems and resulting solutions encountered by TIFCO.



Forest Park was completed and filled after 24 hours of cure time, eliminating the 2-3 day wait that normally follows pool paints. (Above)

The final coat is sprayed on followed by a roll out to insure uniform and complete coverage. (Left)



"P.I.P." stress pool being sanded and finished prior to inspection. (Above)



Secondary walls are removed back to the original concrete. Old lights are removed; and new stainless steel, aluminum, or concrete overflow gutters may be added and tied to the existing structure with reinforcing rods and new concrete walls. (Above center and left)

90% of the "P.I.P." pool stress material is installed with the spray-up technique. All materials are installed from 1/8"-1/2" thick (concrete), 1/32"-3/16" thick over metals in a neutral color to insure maximum visual inspection. All laminate is rolled to insure complete resin coverage. (Above)

The **TOWNSEND** Method

INSPECTION. Since each pool must be treated individually, a thorough on-site inspection is made when the pool is emptied. Expansion/contraction of various sections, as well as expansion joints are noted; disintegrated areas are checked for filling with special polyester putty or replacement. The pool's history is discussed with both the maintenance personnel and park director. The total project of rehabilitation is also discussed in relation to what the park district is seeking, what it hopes to accomplish, etc.

EVALUATION. TIFCO's evaluation will be based on supplying the existing or new walls and floor to be constructed.

ESTIMATE. A proposal for the installation of such a pool can normally be submitted along with the evaluation. This aids financial committees in determining the total project cost and locating additional funds or having additional funds allocated for the project. The estimate gives a complete breakdown on all concrete repairs, surface preparation, laminating and finishing.

APPLICATION. The emptied pool is cleaned thoroughly. Holes and cracks over one inch are filled with a special polyester putty or water plug. Large disintegrated areas may be completely removed back to sound concrete. The pool bottom is investigated for hollow areas and designated as areas to receive additional layers of reinforcement.

Each pool is sandblasted to remove anywhere from 50 to 80% of the existing paint, rust scale or mill, dirt or oils that have accumulated on the surfaces.

After sandblasting, all sandblasted surfaces are coated with a polyester primer. Once the primer has reached proper curing stage, the "P.I.P." pool stress application process can begin. Depending on the type of "P.I.P." pool, the hand lay-up procedure may be used to lay-up the upper 6-8" vertical wall and overflow gutters or the entire section may be sprayed depending on the overflow gutter makeup. The "P.I.P." pool is insulated by spraying on a mixture of resin and chopped glass from 3/32" to 1/2" thick. The laminate is worked with special tools to eliminate air pockets under the reinforcement and to insure complete resin coverage.

Before, during, and after the laminate cures, it is visually inspected for imperfections. Defects are removed and repaired. The entire surface is checked for burrs, then smoothed and deburred where required.

The final color coat is a specially formulated polyester resin with color added, originally designed for the marine and shower stall industry. This color coat is applied in two or more passes, each being .015 to .020 mils thick.

All fittings, drains, inlets, etc. that are in the pool are cleaned to remove all overspray of resin, fibers and gel coat. Laminated surfaces immediately surrounding these areas are checked for imperfections. Drains are laminated inside the pipe forming a seamless funnel to prevent leakage at these points.

FOLLOWUP. Each pool is routinely checked by TIFCO's job managers periodically. Any signs of failure during the entire duration of the warranty as well as the maintenance agreement will be promptly referred to and acted upon by TIFCO's service department.

TOWNSEND'S Warranty

TOWNSEND'S INTERNATIONAL FIBERGLASS CORPORATION includes a 5-year warranty that guarantees to make repairs to any installation where faults or defects in workmanship occur, and will restore the pool to a watertight condition. A copy of the warranty is available upon request.

Wicker Park Swimming Pool located in Highland, Indiana. This 1.5 million gallon, "T" shaped pool received a "P.I.P." pool stress application up to but not including the stainless steel gutters. The material varied from 1/8" to 1/2" thick in high stress areas.



Suspended pool built over a hi-rise garage. Steps were prefabricated from fiberglass, set in place and laminated. The entire pool, including the overflow gutters and deck edge were laminated; overflow gutters and step risers were painted in a contrasting color.



Located on the 43rd floor, this high-rise (suspended) pool received a new "P.I.P." pool stress application up to but not including the stainless steel gutters. The "P.I.P." pools are produced to accommodate the shifting effects designed into high-rise buildings.

At
TOWNSEND
our pride
is second
only to
our skill.



Bessemer Park, a Chicago Park District pool, 50' x 100,' received a complete "P.I.P." pool stress application including the overflow gutters. All ladders, diving stands and life guard chairs were coated with polyester to prevent further corrosion. Racing lanes and deck markings, and depth markings were painted on with polyester.

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