

## AQUATICS CLIMBING WALL SPECIFICATIONS

### PART 1 – GENERAL

#### 1.1 SUMMARY

- A. This section includes the following
  - 1. Modular Climbing Wall for Swimming Pools
- B. Related Sections
  - 1. Division 5: Section “Structural Steel”
  - 2. Division 9: Finishes

#### 1.2 REFERENCES

- A. CEN/AFNOR – Standards for Artificial Climbing Walls
- B. Uniform Building Code (UBC) – 1994 Edition
- C. Manual of Steel Construction, Allowable Stress Design, 9<sup>th</sup> Edition, AISC

#### 1.3 SYSTEM DESCRIPTION

- A. Modular artificial climbing wall for swimming pools designed and installed to CEN/AFNOR Standards, manufactured off site. Designed to withstand chlorinated environments.

#### 1.4 Quality Assurance

- A. Panel manufacturer shall be as specified and have a minimum of 10 years experience in the manufacturing of artificial climbing walls. In addition, the climbing wall system must have a minimum of 3 years of public use in a chlorinated environment, and no less than 5 installations. No substitutions will be permitted.
- B. Fabricator / Installer shall be acceptable to the panel manufacturer.
- C. Installer shall have a minimum of two years experience with manufacturer’s materials or be supervised by manufacturer’s representative.

#### 1.5 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of the Contract and Division 1 Specifications
- B. Product data including panel manufacturer’s specifications, standard details, and installation drawings.
- C. Submit 1 sample at least 6 inches by 6 inches, showing color and finish.
- D. Shop drawings indicating layout of panels, dimensions of materials and parts, fastening and anchoring methods, and detail and location of joints.



1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect products during transit, delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Protect panel finish and edges in accordance with manufacturer's recommendations.
- C. Store panels in accordance with manufacturer's recommendations.

1.7 WARRANTY

- A. Panel manufacturer shall warrant to the original purchaser for one year from the date of substantial completion that its products are free from defects in material and workmanship.

1.8 COORDINATION

- A. Coordinate installation of primary support structure, climbing wall panels, and any other final details before final finishes to climbing wall area have been performed.

1.9 PROJECT CONDITIONS

- A. Pool deck shall be made of concrete at least 4 inches in thickness.
- B. Minimum pool depths for installation are as follows:
  - 1. AquaClimb® 2 panels high Minimum depth 5 feet
  - 2. AquaClimb® 3 panels high Minimum depth 7 feet
  - 3. AquaClimb® 4 to 6 panels high Minimum depth 12 feet
- C. Owner or General Contractor shall provide temporary power outlets (110V), at location where wall will be located for operation of power tools.

PART 2 – PRODUCTS

2.1 CLIMBING WALL MANUFACTURER (SOLE SOURCE)

- A. Pyramide USA, P.O. Box 878, Leesburg, VA 20178, Office (703) 579-1931, Fax (800) 736-6692

2.2 ARTIFICIAL CLIMBING WALL MATERIALS

- A. Modular, reconfigurable, AquaClimb® climbing wall system, manufactured by Pyramide.

2.3 CLIMBING WALL COMPONENTS

- A. AquaClimb® panels as manufactured by Pyramide.
  - 1. AquaClimb® panels are a gently textured surface, made of hand sculpted; hand carved high quality fiberglass reinforcing, polyester resin with protective UV additives, with a minimum hardness Barcol 45. Panels must be able to withstand UV and chlorinated environments.
  - 2. Panel system shall be compatible with modular structural support system (2.3B), and shall allow for total re-configuration of climbing surface topography. Panels can be relocated to anywhere on the wall. In addition each individual panel can be rotated 90° providing for a different degree of difficulty.

3. Panel system shall be attached to modular structural support structure (2.3B) using four 10mm stainless steel bolts bolted into corner brackets and secured with a lock-nut on the back.
4. Support structure must be customizable to fit many different guttering systems of pools. The system must include the capability of submersing bottom panel into the water and over the gutter system to avoid entrapment.
5. Panel system must have a negative incline, and a safety panel at the top with a greater negative incline, to allow for safe entry into the safety zone of the pool when falling.
6. Panel system shall provide integral, adjustable molded climbing holds as well as modular climbing hold attachment locations compatible with 10mm threaded fasteners for surface mount. Modular climbing holds will utilize anti-rotation pin to prevent hold from turning.
7. Thickness
  - a. Edge: 15mm + or – 1mm
  - b. Field: 6-8mm + or – 1mm
8. Panel system must be capable of being removed and reinstalled from pool deck in less than 1 hour.
9. Finishes
  - a. Hand laid fiberglass, gently textured, with climbing features occurring at random locations.
  - b. Color: Standard colors are Aqua (light blue, green, dark blue) and Sunset (red, orange, yellow). Additional colors can be chosen by owner or architect at an additional cost.

#### B. Primary Support Structure

1. The support structure shall be modular in nature and capable of transferring all applied design loads to the deck of the pool.
2. Integrated modular support structure shall be made of 316 grade stainless steel
3. Primary support members will be sized and detailed by engineering calculations carried out by structural engineering consultants and supplied by Pyramide USA. The calculations will take into consideration lateral forces including wind shear and live loading.
4. Finish on stainless steel will be powder-coated.

#### 2.4 AQUACLIMB® PANEL FABRICATION

##### A. Composition

5. Hand Sculpted, Hand Carved, Gently Textured, Non-Slip, AquaClimb® Panel system.

##### B. Resins: Iso polyester resins / UV stabilized

##### C. Reinforcing:

1. Glass Fiber Matting – 4.3 oz. / sq. ft.
2. Chopped Fiberglass – 5 oz. / sq. ft.

##### D. Average panel weight: 2.0 lbs. / sq. ft.

##### E. Projected AquaClimb® panel size: 1 meter x 1 meter, approx. 39 ¼ in. x 39 ¼ in.

#### 2.5 Primary Support Structure Fabrication

- A. General: All structural steel and structural steel work shall conform to Division 5 and to the specifications for design, fabrication and erection of structural steel for buildings of the American

Institute of Steel Construction (AISC) Code of Standard Practice, and to the requirements of local building codes.

1. Material: Steel for the primary structure shall conform to A.S.T.M. specification and be 316 grade Stainless Steel.
- B. Welding: All welding shall conform to AISC and the American Welding Society (AWS) Standard Code for Arc and Gas Welding in Building Construction. The technique of welding, the workmanship, appearance and quality of welds and the methods used in correcting nonconforming work shall be in accordance with "Section 3-Workmanship" and "Section 4-Technique" of the AWS Structural Welding Code-Steel, D1.1 Minimum size of welds shall be 1/8 inch. Minimum return shall be 1 inch. All welds are executed at the shop utilizing a Mig welder.
  1. Field Welding: Shop paint on surfaces adjacent to welds shall be wire-brushed to reduce paint film to a minimum.
  2. Alignment: No permanent welding shall be performed until as much of the structure has been properly supported to remove the dead load and thereby allow proper alignment.
  3. Surfaces Adjacent to Field Welds: Surfaces within 2 inch of any field weld location shall be free of materials that would prevent proper welding or produce toxic fumes during welding.
- C. Dimensions: Dimensions given in drawings prepared by Pyramide USA are final fabricated dimensions. Tolerances for member and plate dimensions shall not exceed 1/16 inch.

## 2.6 FASTENERS

### A. AquaClimb® Panel:

1. Through bolt: shall be 10mm, stainless steel, and countersunk flush to climbing surface.

### B. Modular Hand Hold:

1. Through bolt: shall be 10mm, stainless steel, and countersunk flush to climbing hold. Lengths vary depending on climbing hold.

### C. Modular Hand Hold Backer Plates:

1. Backer plates shall be made of purpose designed Copper-Aluminum alloy castings.

## 2.7 Anchoring

### A. Primary Support Structure:

1. Hilti 5/8 inch mechanical anchor. Anchor sleeve must be flush with pool deck when aquatics climbing wall is not attached.
2. Number of anchors will be determined by engineering consultants. Pyramide USA will provide details.

## PART 3 – EXECUTION

### 3.1 PRE-INSTALLATION INSPECTION

- A. Verify that all surfaces are ready to receive work and are within specified tolerances.

- B. Beginning of installation means installer accepts conditions of existing surfaces.

### 3.2 INSTALLATION

- A. Erection of the aquatics climbing wall system shall be in accordance with manufacturer's recommendations.
- B. Erection shall be accomplished by a fully trained, factory authorized erector in accordance with Section 1.4
- C. Complete wall shall comply with specified tolerances and shop drawing requirements.

### 3.3 TOLERANCES

#### A. Panel Tolerances

1. Panel bow: max 0.8% of panel dimension in width and length.
2. Panel dimensions: All panel dimensions shall be  $\pm 1/8"$  of dimensions show on shop drawings.
3. Panel edges shall be sharp, true and vary less than  $1/16"$  from a straight line.
4. Panels may show non-structural micro surface cracks, not greater than  $1/32"$ .

#### B. Stainless Steel Primary Support System

1. The stainless steel support system tolerances shall be no more than  $\pm 1/8$  inch.

### 3.4 CLEAN-UP

- A. Clean area of debris from installation of climbing panels.

### 3.5 INSPECTION

- A. The completed climbing wall shall undergo a full complete final inspection by a duly trained representative of the manufacturer and shall be certified by the manufacturer that the finished product has been manufactured and erected in accordance with the manufacturer's approved installation drawings and these contract documents.
- B. The completed climbing wall shall undergo a full and complete final inspection by the Owner or Contractor

### 3.6 PROTECTION

- A. Protect climbing wall from damage during erection and ensure that the climbing wall will be without damage or deterioration at time of substantial completion

END OF SECTION