

**SPECIFICATION FOR THE SUPPLY & INSTALLATION
OF PONTOON INTAKE**

Revised from 02.09.2017

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SPECIFICATION FOR THE SUPPLY & INSTALLATION OF PONTOON INTAKE

1.0 General Specifications

This specification shall cover the supply, fabricating & installation of pontoon intake including installation of pumps as specified in drawings. The pontoon shall be used for installation of submersible pumps and the pontoon intake shall be placed at Muthukandiya reservoir at Balagolla Intake at Muthukandiya. The pontoon intake floats according to fluctuation of water level of Muthukandiya reservoir, only in the vertical direction.

Drawings included in the Bidding Document shall show the major details of fabrication of pontoon intake and the installation of pumping system.

All materials incorporated in the works shall be suitable for the under water construction and shall be new and durable.

Contractor shall take all precaution to protect works and his employee's safety during the construction, transportation and installation of Pontoon Intake. Contractor shall provide all necessary materials, machinery and equipment for the proper construction, transport and installation of Pontoon Intake. Contractor shall take all precautions to protect the dame of the Muthukandiya Reservoir and to the Reservoir. Contractor shall be responsible for any damages to the dam and the reservoir and shall bear all cost for the remedying the damages as instructed by the Department of Irrigation. Contractor shall indemnify the National Water Supply & Drainage Board from any cost for damages and losses incurred by the such damages.

Pontoon intake shall be a floating object and construction shall be done such that no water seepage or infilling to the floating tanks of the Pontoon. Due care shall be paid for water tightness of the Pontoon Intake.

Contractor shall sand blast all metal parts of the pontoon intake and shall be painted with two coats of marine epoxy paint. All standard painting procedures and industry best practices for painting shall be used in the painting.

2.0 TECHNICAL SPECIFICATIONS

(2.1) Welding

All welding works shall be performed under the most convenient working condition, utilizing modern, effective equipment and techniques and latest welding technologies. All welding shall be performed by welders qualified and experienced in the particular type of welding required.

Welding procedure specification (WPS) for all type of joints to be submitted to NWSDB for approval & welders should be proper qualified (as per ASME sec IX previously qualified) welders.

All welding & testing shall be in accordance with **AWS** and **ASME** specifications & standard.

- a) Fillet welds shall be returned around corners for twice the leg length.
- b) In lap length shall not be less than four times the thickness of the thinner plate.
- c) In end connections the length of weld shall not be less than the transverse spacing between the welds.
- d) The weld strength shall not be less than that of the plate.
- e) The sum of the throat thickness of the weld shall be greater than the plate thickness.
- f) AWS E -7018 electrodes should be used.

(2.2) Bolts, Nuts & Washers

The hexagon head bolts with Nuts & washers shall be **stainless steel**.

(2.3) Painting and Metal Protection.

Paint shall be food grade marine epoxy type which should prevent corrosion completely. Contractor shall provide a certificate to confirm the paint for food grade marine epoxy and Paint shall be approved by the Engineer.

Painting shall be done only in the dry weather conditions. Before painting, all metal parts shall be sand blasted. Contractor shall submit details of paints and test certificates to the Engineer for approval. Contractor shall submit a details work programme and the method statement for painting to the Engineer for approval. Contractor shall not carry out any painting works without approval of the Engineer.

After surface preparation is approved, as soon as possible the first coat of primary paint shall be applied. Before next layer applied, each layer of paint shall be allowed to dry for a period prescribed by paint manufacturer.

Paint schedule

Primer -175 microns

Finish Paint - (thickness)

2.4) Inspection & testing

All fabrication, welding, weld tests, paint etc shall be inspect by the Engineers .So each stage should be approved. NWSDB reserved the right to reject materials, work or services of works not measuring up to skills required or standard.

(2.5) Safety procedure

The contractor shall carry out all safety precaution, introduced by Department of Labour in Sri Lanka.

(2.7) Submittals

The information listed below shall be submitted to the Engineer for review. The submittals shall include:

1. Shop drawing s to describe and shows each part construction and materials.
2. Method state for welding, fabrication, transporation and installation.
3. Method statement for sand blasting

4. Method statement for painting
5. Printed literature-supporting details for food grade epoxy paints.

(2.8) Maintenance Manual and As Built Drawings

The contractor shall provide the following in two copies at least **14 days** before handing over.

1. Maintenance manuals of pontoon Intake.
2. As built drawings.

(2.9) Warranty Period

The supplier shall provide comprehensive warranty for one year period for the Pontoon Intake and accessories supplied under the contract.

The warranty period shall commence from the date of acceptance of the Pontoon Intake.

Any part of the unit which fails or does not give satisfactory performance during the defect liability period shall be replaced within a day from the date the Contractor has been notified to do so. All expenses involved under such circumstances shall be borne by the Contractor.

If the fault is not attended within the time specified as above, the Engineer shall rectify the fault and claim the cost thus incurred from the contractor.

(2.10) Testing

Non destructive tests, sand for blast cleaning, paints and all the other necessary materials for construction, drilling works, fabrication & testing pontoon .

Carry out 100% dye penetration test for weldings in tanks & 20% of dye of penetration test for steel structure.

After the completion of work each tank shall hydro tested to check leak.

Any additional costs that may have to be incurred due to non-performance of the any work shall be recovered from the contractor.

Contractor shall provide all necessary instruments & facilities for testing & commissioning.