

# ACIDIC CONDENSATE TREATMENT SPECIFICATION

~ Condensing Boilers, Furnaces, Hot Water Heaters, Flue Economizers, Flue Drains~

## Part 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications, apply to this Section.

### 1.2 SUMMARY

A. This section includes Fireside acidic condensate treatment.

B. Related Sections include the following:

1. Division 23 Section "Breeching, Chimney, and Stack Drains.

2. Division 23 Section "Acidic condensate collection and treatment.

3. Division 23 Section for control wiring for automatic pH treatment control of acidic condensate.

### 1.3 SUBMITTALS

A. Product Data: Include rated capacities; shipping; installed, and operating weights; furnished specialties and accessories for each model indicated.

B. Shop Drawings: Detailed equipment assemblies and indicated dimensions, required clearances, and method of field assembly, components, and location and size of each field connection.

C. Maintenance Data: Include in the maintenance manuals specified in division 1. Include parts list, and maintenance guide.

## 1.6 QUALITY ASSURANCE

A. All components shall be rated at a minimum of 140F constant.

## 1.7 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Installing contractor shall provide one year of warranty parts and labor.

B. Special Warranty: Submit a written warranty, executed by the contractor for the tank pH treatment kit.

C. Warranty Period: Shall be one year from date of Commissioning the TCB series tanks.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURES

A. Available Manufactures: Manufacturer shall be a company specializing in the manufacturing of the products specified in this section with minimum five (5) years experience.

B. Service Access: Shall be a removable cover.

C. Testing: Contractor shall test pH level at the outlet of the tank with a digital pH meter and submit a report to the design Engineer.

## 1.4 Manufactures

A. Manufacturers: JJM BOILER WORKS, INC. is the basis of design. Listed acceptable manufacturers shall be subject to compliance with the requirements.

Provide pH treatment Tank or Tanks by one of the following:

MODEL: **TCP-32000** Acidic Condensate pH Treatment Pumps/ Tanks.

1. JJM Boiler Works, Inc.

2. Viessmann, USA

3. Nu-Con Company

**The active ingredient shall be Magnesium Hydroxide Pellets, limestone or marble chips will not be accepted on this project.**

## 1.5 COMPONENTS: **GRAVITY RECEIVING TANK**

A. Six Gallon Polypropylene Receiving Tank with Mounted Pumps

B. One to Three 1.4 GPM Self Priming Pumps / 60' Head / 120/1/60 .7 amps

C. Two 1-1/4" Inlet Ports

D. One 3/4" Vent

E. The six gallon tank shall be factory packaged and wired.

F. One 4" x 4" Electrical Junction Box.

G. Three 24 Volt Horizontal Float Switch Factory Mounted and wired.

H. One 50 Mesh inlet SS inlet filter for each pump.

I. One 110 volt service switch

J. The six gallon gravity receiving tank shall be packaged with the 75 Gallon neutralizing treatment tank.

H. All packing material shall be recyclable paper and cardboard. No foam shall be used in packing.

## 2.2 Product Rating:

A. Shall be rated up to 32,000 MBH

B. Flow rate shall be up to 256.0 GPH

C. Floor Mounted.

## 2.3 Acidic Condensate Treatment Tank Components:

1. One 75 Gallon Polypropylene Factory Welded Tank.

2. The tank wall thickness shall be no less than .25".

3. The tank shall have four separate but, equal condensate receiving Cells, each receiving cell shall be connected through 1-1/4" flow holes.

4. Each cell shall have a 7" x 32", 800 micron filter bag for hold the Magnesium Hydroxide Pellets.

5. Cell #1, 2, &3 Shall have an acidic condensate 3/4" PVC porous pipe positioned down the center of the 800 micron filter and surrounded by the pellet media with a minimum of 33 pounds of pellets each. All four cells shall be fed acidic condensate via the three self priming pumps. Cell #4 is the outlet to drain cell and shall have 33 pounds of media pellets encased in 800 micron bags and placed at the bottom of the cell.

6. The outlet ports shall be on two different plains of the tank and be 1-1/4" minimum.

7. The tank shall be provided with a removable cover and secured with bolts & nuts.

## 2.4 PUMP CONTROL:

1. Three stage pump switching relay Model Taco SR-503 or equal. 120/1/60

## **2.5 pH Monitor & Sensor:**

1. Provide pH Monitor with sensor, low pH alarm.

Model: AquaMetrix 2250

## **2.6 COMMISSIONING:**

1. Contractor shall engage a Factory-authorized service representative to provide startup service or commissioning may be done by the contractor. Start up to be performed only after complete boiler room operation is field verified by the installing contractor. One Year labor and parts warranty shall be provided by the contractor.