



AERGRID™/AERSPARGE™ EQUIPMENT SPECIFICATION WITH YOKE, TETHER, AND ANCHOR BLOCK

GENERAL

The contractor shall furnish, install, and field-test the AERGRID™/AERSPARGE™ equipment, piping and appurtenances as herein specified.

CONDITIONS OF OPERATION

Air shall be conveyed from the blowers to the AERGRID™/AERSPARGE™ equipment through an air distribution piping network comprising the aeration and mixing system. The AERGRID™/AERSPARGE™ equipment shall diffuse the air uniformly into the tank or basin in which it is installed.

Each AERSPARGE™ Station shall operate at a design airflow rate of _____ SCFM/ unit, and shall have a Standard Oxygen Transfer Rate (SOTR) of _____ lbs. O₂/ hr./unit at the design airflow rate. The design

airflow operating range shall be from _____ SCFM/ unit to _____ SCFM/unit.

AIR DISTRIBUTION PIPE

The submerged air distribution pipe shall be _____-inch diameter, ultra violet stabilized, high density polyethylene pipe with a minimum thickness rating conforming to SD-11 (ASTM 2239-67).

The resin shall be high density polyethylene with the following properties:

density	0.955 g/cm ³
melt index	0.14 g/10 min.
tensile strength	3,550 psi
elongation	>800 percent
modulus of elasticity	110,000 psi
flexural modulus	133,000 psi

A simple and positive connection shall be made at the main air header. A flange-to-flange connection or a plastic pipe manufacturer's transition fitting shall be acceptable. Flexible couplings, dresser type fitting, and gear hose clamps are not acceptable.

The air distribution pipe shall be installed through the pipe support openings. Air distribution pipe orifices shall be sized and located per the Drawings.



Air distribution pipe fusion weld beads, within 12 inches of the centerline of a pipe support, shall be removed by an acceptable method.

AERGRID™ SUPPORTS

The AERGRID™ support shall consist of a 300-lb. concrete anchor, HDPE yoke pipe support, and installation and leveling tether assembly. The AERGRID™ support assemblies shall be secured to the basin floor by a concrete anchor using a ½-inch diameter combination polypropylene core/polyester jacket tether. Concrete anchors shall be reinforced concrete with a minimum compression strength of 3,500 psi. All surfaces in contact with the tether shall be of high density polyethylene. The tether shall be fastened to the pipe and tether stop with an approved knot.

The resin for manufacturing the yoke pipe support shall be high density polyethylene with the following properties:

density	0.95 g/cm ³
melt index	10 HLMI (Condition F)
tensile strength	3,800 psi
elongation	>600 percent
flexural modulus	175,000 psi

Gear clamps, metal pipe clamps, plastic ties, or other types of rigid clamps shall not be allowed as pipe supports.

Pipe supports shall permit thermal expansion and contraction of the air distribution pipe during operation.

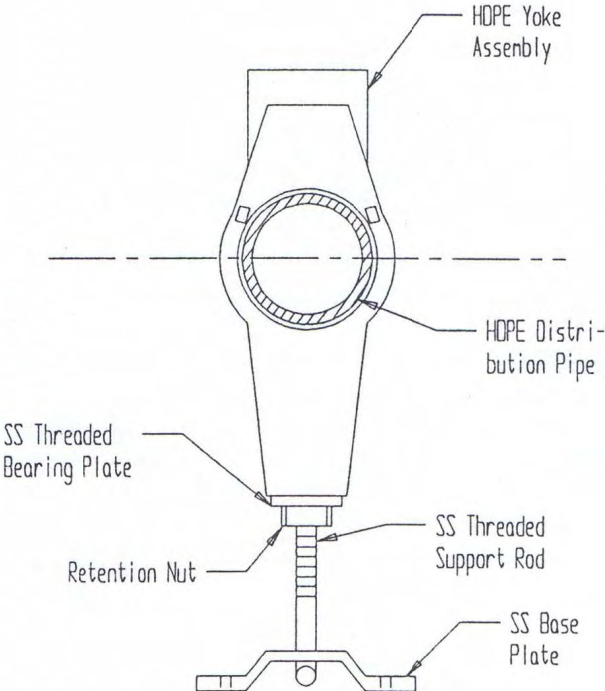
Smooth surfaces shall exist wherever polyethylene piping comes in contact with the pipe support assembly in order to insure a non-abrasive contact.

All yoke pipe support assemblies shall be checked or tested for:

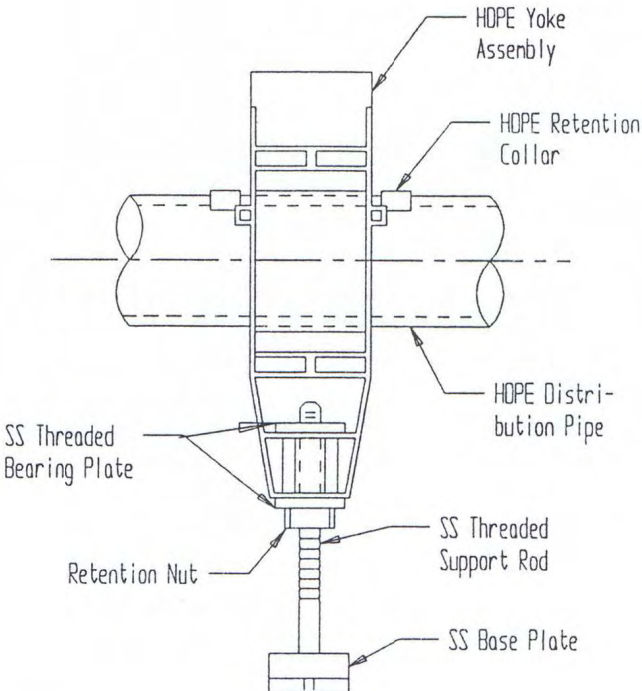
- a. Dimensional conformation to Drawings.
- b. Proof tested to withstand a minimum 2,000 pound tensile force to verify integrity of the assembly.
- c. Destructive testing shall be performed on one assembly in fifty (50) to verify its ultimate strength.

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YOKE PIPE SUPPORT DETAIL, NTS

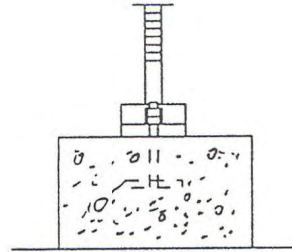
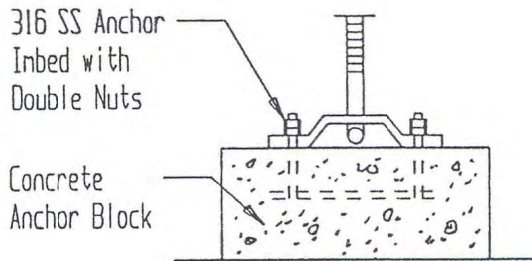


FRONT VIEW

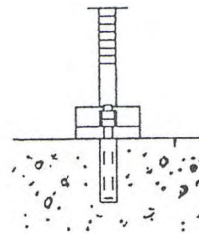
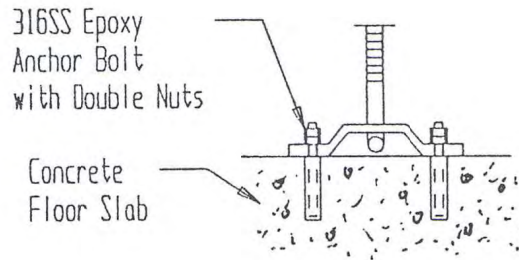


SIDE VIEW

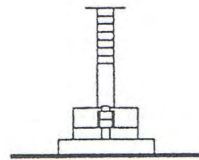
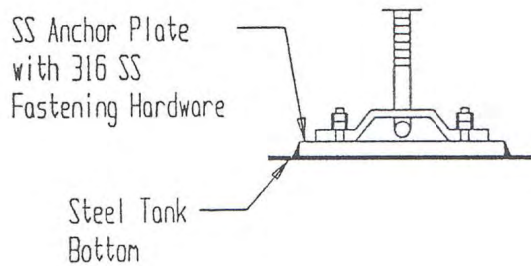
MOUNTING OPTIONS



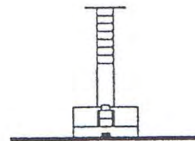
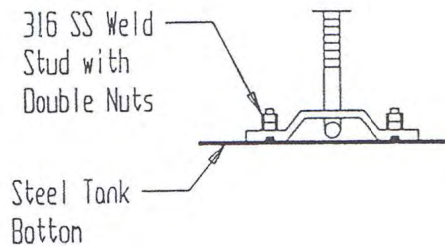
CONCRETE
ANCHOR



CONCRETE
FLOOR



WELD PLATE



WELD STUD

FRONT VIEW

SIDE VIEW