1 The making of the filter media bar and the sprinkling weir

The inner handicrafts of STP must be made and dried in addition to the body construction.

1 The filter media support (bar)

The filter media support must be made toughly because it supports heavy filter media (stones) in the 2nd anaerobic tank and the aerobic tank. So, the structure must be RC-type. The most simple shape of the support is bar.

Structure of inner reinforced steel bar

- steel wire (3~5 mm φ)
- Deformed steel bar (construction material) (10 mm φ)

2 The sprinkling weir

The sprinkling weir is made in the next order.

1) Decision the type, the length and the number of sprinkling weir
2) Making several molds of sprinkling weir
3) Making the inner support by deformed steel bar (construction material)
4) Making the sprinkling weir by mortar

1) Decision the type, the length and the number of sprinkling weir

The length of sprinkling weir is decided according to plan. The planned number of sprinkling weir is decided according to plan. But it needs to make several weirs as spare weirs. There are several types of weirs (cross section).

Straight type

- Those types are made by the mortar or concrete.
- It is easy to make those weirs by using the mold.
- Straight type is simple and made easily.

Slope type

- The material of thin type must be hard, tough (steel etc.).
- The water leakage occurs easily because it is difficult to connect with the mortar.

2) Making several molds of sprinkling weir (Fig.1)

The fundamental plan of Mold is shown in Fig.1. The straight or slope type is made in this mold. The material of mold is steel, stainless steel or plastic. But it must be care of the transformation in the plastic. The max length of this Mold is 1.6 m. It is able to make a more long mold. But it is fear that those sprinkling weirs are bent by own weight. If there are many same molds, the time of making many sprinkling weirs gets short.
Fig. 1  the Mold of sprinkling weir (example)

- Mold made of stainless steel (the length = 1.6 m)
- Wooden Model

Side View
- Interval between each V-notch = 100 mm
- Several holes for screwing to wooden base are opened

Unit: mm
3) Making the inner support by deformed steel bar (construction material)

※1 The length between the bottom of V-notch and the inner steel is over 5 mm.
Because the bottom of V-notch is shaved at adjusting the sprinkling state of water.

4) Making the sprinkling weir by mortar
a Fix the mold to the wooden plate(base) by several screws.

b Make several wooden plates for partation, edge and side.
The thickness of those plates is about 5~10mm.
c Asemble those plates (example)

Note: Those plates are assembled without screws. Plates are fixed using several clamps.

d Settle the inner support in this and put in mortar fully. Bubble in mortar must be take off.

e Decompose plates after drying mortar.

f Continue from c to e until required numbers are made.

If there are many same molds, many weirs can be made at the same time.