

受験番号 : 32IPM020

[1]

[0001]

The present invention relates to washing a bathwater heater using water pressure of tap water and a washing tool.

[0002]

To wash a bathwater heater, there have been only two methods. One method includes removing a hot water cover in a bathtub, and strongly flushing water into the bathwater heater with a plastic hose to wash the bathwater heater. The other method includes washing the bathwater heater using a carbonic-acid-based chemical agent on the market.

[0003]

The two methods involve the following disadvantages.
(i) Although water is strongly flushed into the bathwater heater with the plastic hose, sludge is not completely removed and is accumulated soon.
(ii) It is difficult to use the chemical agent to wash the bathwater heater.
(iii) Washing with the chemical agent costs for one time use.
(iv) Washing with the chemical agent causes water pollution.
(v) In particular, milky bathwater contaminates the bathwater heater. When a user taking a bath reheats the water using the bathwater heater, rattling sound is generated, and sludge comes out from the outlet of the hot water, resulting in very dirty and insanitary conditions.

The present invention is made to address these disadvantages.

[0004]

A bathwater heater is washed by providing a stepped pipe (1) made of resin, a nozzle portion (2), and a sponge (3) disposed at a tip end of the nozzle portion (2) and configured to remove contamination, and by using water pressure of tap water. The present invention is a washing tool for a bathwater heater having the above-described configuration.

[2]

[0016]

Fig. 2 is a plan view illustrating a type-1 jig 2a. Fig. 2 illustrates a jigsaw main body 1 in a transparent manner to describe the details, and illustrates a positional relationship among a base plate 1a, a circular guide 8, a jigsaw blade 10 that is a cutting blade, and the type-1 jig 2a.

[0017]

An oblique slider 4 that is slidable on the half-angle 45-degree line of a right angle portion of a plate material is held on an upper surface of the type-1 jig 2a made of metal using two guide blocks 7 each having a setscrew in a state whether the oblique slider 4 is fixed or slides is selectable. The type-1 jig 2a includes metal securing tools 3 at both ends thereof on the side of the back surface thereof. The oblique slider 4 has an arrow-shaped tip end portion 5. A rotation bearing 6 is provided in the tip end portion 5. A coupling end of the circular guide 8 dedicated to the jigsaw main body 1 is rotatably coupled to the rotation bearing 6.

[0018]

Fig. 3 is a front view of the type-1 jig 2a. The metal securing tools 3 are disposed to support the plate material on the side of back surface portions close to a side A and a side B of the right angle portion of the plate material subjected to quadrant processing on the corner of the plate material. Fig. 3 also indicates a coupling condition between the rotation bearing 6 of the tip end portion 5 and the circular guide 8.

[0019]

When the type-1 jig 2a is installed on the plate material, the arrow-shaped tip end portion 5 of the oblique slider 4 is slid to be aligned with a vertex point G of the right angle portion of the plate material, and then the two screw-type metal securing tools 3 on the back surface side of the plate material are secured to the plate material. Since the position of the rotation bearing 6 disposed in the tip end portion 5 of the

oblique slider 4 normally moves on the 45-degree line in a slidable region, the distances from the rotation bearing 6 to the side A and the side B are the same at any position of the rotation bearing 6. A side surface of the jigsaw blade 10 that is the cutting blade of the jigsaw main body 1 is set at a cutting start position of the side A or the side B, and the plate material is cut while the jigsaw main body 1 is moved to the other side along the rotation radius of the circular guide 8 in a state where the setscrews of the guide blocks 7 for the oblique slider 4 and a setscrew 9 of a guide block for the circular guide 8 are locked. Thus, quadrant processing with a high degree of perfection is completed by one time cutting.

FIG. 2

45度線 45-DEGREE LINE

[3]

1. A fertilizer splaying device, comprising:
a device body (F) that travels in a self-propelled manner or a towed manner;

an impeller case (C) that accommodates an impeller (4) that rotates about an axial line extending in a vertical direction;

a hopper (H) having an inner hollow portion in which an agitator (5) that rotates about the axial line extending in the vertical direction is mounted, the hopper (H) being vertically stacked on the impeller case (C),

wherein a rotation shaft (20) of the agitator (5) in the hopper (H) is coupled to a central driving shaft (2) via a clutch (K) that is able to be switched between transmission and non-transmission, the central driving shaft (2) being pivotally installed in the device body (F) such that an upper end portion of the central driving shaft (2) protrudes into the hopper (H),

wherein a shaft core portion of the impeller (4) in the impeller case (C) is fitted onto an outer periphery of a lower end portion of the central driving shaft (2) and is coupled to

an outer cylindrical shaft (3) pivotally installed in the device body (F), and

wherein the central driving shaft (2) is coupled to an input shaft (1) via a transmission mechanism (d1) and the outer cylindrical shaft (3) is coupled to the input shaft (1) via a transmission mechanism (d2) to drive the impeller (4) and the agitator (5) to rotate at different rotation speeds.