

受験番号 : 321PM005

問 1

[0001] The present invention relates to cleaning of a bathwater heater using tap water pressure and a cleaning tool.

[0002] Conventionally, the bathwater heater is cleaned by such methods as removing an attachment from a hot water port and then injecting pressurized water from a vinyl hose into the bathwater heater or using commercially available carbonate chemicals.

[0003] The above methods may have downsides as listed below.

(i) It is difficult to completely clean off sludge by injecting pressurized water; the remaining sludge may result in rapid accumulation of sludge when the bathwater heater is used again.

(ii) Chemical cleaning is difficult to perform.

(iii) Chemical cleaning is expensive; the cost for performing a single chemical cleaning is high.

(iv) These cleaning methods may cause water pollution.

(v) For a bath using milky bathwater, in particular, the bathwater heater easily becomes dirty, and these cleaning methods may not prevent the noise and sludge coming out of a hot water port when bath water is reheated while bathing, which is very unsanitary.

The present invention is made to solve these problems.

[0004] An aspect of the present invention is a bathwater heater cleaning tool including a resin-made-stepped pipe (1), a nozzle (2), and a sponge cleaning tool (3) provided on the distal end of the nozzle (2). The bathwater heater cleaning tool is used with tap water having a certain pressure to clean the bathwater heater.

問 2

[0016] FIG. 2 is a plan view of a type-1 jig 2a. FIG. 2 illustrates the positional relationship between the type-1 jig 2a and a base plate 1a, a circular guide 8, and a jigsaw blade 10 for cutting, where the jigsaw 1 is not shown in the drawing.

[0017] A diagonal slider 4 is held by two screw-equipped guiding blocks 7 on the front face of the metal type-1 jig 2a. Fixing attachments 3 are provided at both ends on the rear side of the type-1 jig 2a. The screw-equipped guiding blocks 7 selectively fix the diagonal slider 4 or allow the diagonal slider 4 to slide along a 45-degree line of which angle to a side of a plate member is 45 degrees, which is half the angle of a right-angle corner of the plate member. The distal end 5 of the diagonal slider 4 has an arrowhead shape. A bearing 6 is provided in the distal end 5. A joint end of the circular guide 8 dedicated for the jigsaw 1 is rotatably joined to the bearing 6.

[0018] FIG. 3 is a front view of the type-1 jig 2a. The type-1 jig 2a is attached to the plate member so as to hold the plate member with the fixing attachments 3 pushed against the rear face portions near a side A and a side B of the plate member. The side A and the side B join each other at the right-angle corner which is to be processed into a quadrant round corner. In FIG. 3, the state of the bearing 6 in the distal end 5 joined to the circular guide 8 is illustrated.

[0019] When attaching the type-1 jig 2a to the plate member, first, the distal end 5, having an arrowhead shape, of the diagonal slider 4 is positioned at a vertex G of the right-angle corner by sliding the diagonal slider 4, and then, the two fixing attachments 3 are screwed to fix the plate member on the rear side of the plate member. In this state, the bearing 6 in the distal end 5 of the diagonal slider 4 is always on the 45-degree line when moved within the sliding range of the diagonal slider 4. Thus, the distance from the side A to the bearing 6 is the same as the distance from the side B to the bearing 6, regardless of the position of the bearing 6. Now, a quadrant round corner can be made with high accuracy by a single cut by the following procedure: positioning a side face of the jigsaw blade 10 of the jigsaw 1 at a start point of cutting the side A or the side B; fastening the screws of the screw-equipped guiding blocks 7 of the diagonal slider 4 and a screw of a circular guiding block 9; and moving the jigsaw 1 along with the rotating circular guide 8 to the other one among the side A and side B, thereby cutting the plate member.

45度線

45-degree line

コメント

- ・「板材」の符号はCと思われませんが、原文通り符号は付けずに訳出しました。
- ・【0016】「ジグソー本体1」は、後述の記載に合わせて「ジグソー1」と訳出しました。
- ・【0018】1行目の「1型治具」は「1型治具2 a」と訳出しました。
- ・【0019】3行目の「ネジ式固定金具3を板材に固定すれば」は「固定金具3をねじこみ板材に固定すれば」と訳出しました。
- ・【0019】6行目の「切断用ブレード10」は、「ジグソーブレード10」と訳出しました。
- ・【0019】下から4行目の「案内ガイドブロックの止めネジ7」は、「案内ガイドブロック7の止めネジ」と訳出しました。(図2, 3より)
- ・【0019】下から4行目の「円ガイド用ガイドブロックの止めネジ9」は「円ガイド用ガイドブロック9の止めネジ」と訳出しました。(図3より)

問 3

CLAIM

1. A fertilizer spreader comprising:
  - a machine body F that travels by itself or by towing;
  - a fan wheel case C housing a fan wheel 4 configured to rotate about a vertical axis;
  - a hopper H including an agitator 5 including a shaft 20, the agitator being provided inside the hopper and configured to rotate about a vertical axis, the hopper being stacked above the fan wheel case C;
  - an input shaft 1;
  - a central drive shaft 2 supported by the machine body F, an upper end of the central drive shaft 2 protruding in the hopper H;
  - an outer sleeve shaft 3 supported by the machine body F and provided so as to surround an outer circumference of a lower end portion of the central drive shaft 2;
  - a transmission mechanism d1 configured to transmit rotation between the central drive shaft 2 and the input shaft 1;
  - a transmission mechanism d2 configured to transmit rotation between the outer sleeve shaft 3 and the input shaft 1; and
  - a clutch K configured to selectively transmit or not transmit rotation between the shaft 20 and the central drive shaft 2, wherein
  - an axially central portion of the fan wheel 4 in the fan wheel case C is connected to the outer sleeve shaft 3 so as the fan wheel 4 and the agitator 5 to be driven to rotate at different rotational speeds.