

CLAIMS

What is claimed is:

1. A valve clamping device, wherein the valve clamping device comprises: a first
5 clamping component, a second clamping component, and a fixing component for fixing
the first clamping component and the second clamping component; the first clamping
component comprises at least two first clamping arms, the second clamping component
comprises a corresponding number of second clamping arms, each first clamping arm
and the corresponding second clamping arm are combined into a pair of clamps, distal
10 ends of at least one part of the first clamping arms are outwardly provided with first
protrusions and inwardly provided with second protrusions along a clamping direction
of the first clamping arms, and the first clamping arms and the second clamping arms
respectively have a plurality of clamping teeth matched with each other.
- 15 2. The valve clamping device of claim 1, wherein the fixing component is a closed
ring.
3. The valve clamping device of claim 1, wherein a setting direction of the clamping
tooth of the first clamping arm is inclined toward a proximal end of the first clamping
20 arm.
4. The valve clamping device of claim 1, wherein a distal end of the first clamping
arm is configured as a curved surface, a plane surface having a rounded transition at a
corner, or a combination of the above two having a smooth transition.
- 25 5. The valve clamping device of claim 1, wherein a clamping surface of a distal
end of the first clamping arm is configured as a fan-shaped surface.

6. The valve clamping device of claim 1, wherein the plurality of clamping teeth of the first clamping arm are discretely arranged along a direction from a proximal end to a distal end of the first clamping arm, and the length of each of the clamping teeth gradually increases along the direction from the proximal end to the distal end.

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7. The valve clamping device of claim 1, wherein the fixing component comprises a lantern ring region internally provided with a plurality of first fixed teeth; the second clamping arm comprises a plurality of second fixed teeth matched with the first fixed teeth; and the opening angle of the second clamping component is changed by changing the depth of the lantern ring region sleeving the second clamping component, and a fixation is achieved by a cooperation of the first fixed teeth and the second fixed teeth.

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8. The valve clamping device of claim 7, wherein the first fixed tooth disposed inside the lantern ring region is an internal thread structure, and a proximal end of the second clamping component is further provided with an external thread matched with the internal thread structure.

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9. The valve clamping device of claim 7, wherein the fixing component is substantially a sleeve structure, and the wall at the proximal end thereof is thinner than a wall at a distal end adjacent thereto.

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10. The valve clamping device of claim 1, wherein the distal end of the second clamping component is configured into a spherical shape, an ellipsoid shape, a cube shape having a rounded transition or a combination of any two or more above shapes having a smooth transition.

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11. The valve clamping device of claim 1, wherein, the second clamping component further comprises a second extending arm, and the second extending arm is at an angle of 110 - 150 degrees with the second clamping arm and expands outwards.

12. The valve clamping device of claim 1, wherein the second clamping arm has a structure in which the distal end is wide and the proximal end is narrow.

5 13. The valve clamping device of claim 1, wherein the first clamping arms are at an angle of 115 - 140 degrees with each other, and the angle between the second clamping arms is 10 - 30 degrees smaller than the angle between the first clamping arms.

10 14. The valve clamping device of claim 1, wherein, the clamping teeth of the first clamping arm are long sharp teeth, and the clamping teeth of the second clamping arm are short blunt teeth.