CLAIMS

1. A fluid connector, being formed by injection molding of an engineering plastic, wherein the fluid connector comprises a male end joint and a female end joint, and wherein

the male end joint comprises a male end body and a valve head assembly, and the valve head assembly is configured to block the male end body;

the female end joint comprises a female end body and a valve core assembly, and the valve core assembly is configured to block the female end body;

the male end body is plug-connected with the female end body, and in a case that the male end body and the female end body are plugged in place, both the valve head assembly and the valve core assembly are opened, to allow communication between the male end joint and the female end joint;

the valve core assembly comprises a valve core, the valve core comprises a first valve core sleeve and a second valve core sleeve connected to each other, a sealing groove is provided on an inner wall of the second valve core sleeve at a position where the inner wall of the second valve core sleeve is connected to the first valve core sleeve, and a sealing ring configured for sealing an outer wall of the male end body is installed in the sealing groove in a sealed manner.

2. The fluid connector according to claim 1, wherein the male end joint further comprises a first reset member, the first reset member is installed in an inner cavity of the male end body, and is configured to drive the valve head assembly to reset and close.

3. The fluid connector according to claim 2, wherein the valve head assembly comprises a valve head and a first sealing ring, and wherein

the valve head comprises a valve head blocking portion and an abutting portion, a first sealing groove is provided on an inner wall of the male end body, the first sealing ring is installed in the first sealing groove to provide sealing between the valve head blocking portion and the male end body, and the abutting portion is fixed on the valve head blocking portion and is configured to abut against the first reset member.

4. The fluid connector according to claim 3, wherein

a cross-section of the abutting portion gradually decreases along a direction approaching the first reset member.

5. The fluid connector according to claim 1, wherein the female end joint further comprises a second reset member, and the second reset member is installed in an inner cavity of the female end body and is configured to drive the valve core assembly to reset and close.

6. The fluid connector according to claim 5, wherein a valve stem is installed in the inner cavity of the female end body, and the valve stem is configured to abut against the valve head assembly, to push the valve head assembly to open; and wherein

a communication cavity is provided inside the valve stem, and the communication cavity is in communication with a first opening of the female end body for connecting a pipe to be connected, and a communication hole being in communication with the communication cavity is provided on a side wall of the valve stem;

the valve core assembly is slidably sleeved on the valve stem in a sealed manner, and is also slidably sleeved inside the female end body in a sealed manner, to isolate openings at two ends of the female end body; and

in a case that the male end body and the female end body are plugged in place, the male end body is configured to push the valve core assembly to slide to expose the communication hole, to make the communication hole be in communication with a second opening of the female end body.

7. The fluid connector according to claim 6, wherein the valve core assembly further comprises a second sealing ring, and wherein

a second sealing groove configured for installing the second sealing ring is provided on an inner wall of the valve core, and the second sealing ring is configured to provide sealing between the valve stem and the valve core.

8. The fluid connector according to claim 1, further comprising a locking assembly for locking the female end joint and the male end joint.

9. The fluid connector according to claim 8, wherein the locking assembly comprises a sliding sleeve, a locking ball and an elastic member, and wherein

the sliding sleeve is connected to an outer side of the female end body in a slidable manner, one end of the elastic member is connected to or abuts against the female end body, and the other end of the elastic member abuts against or is connected to the sliding sleeve;

a side wall of the female end body is provided with a receiving through hole for receiving the locking ball, when the male end body and the female end body are in a separated state, the elastic member is in a compressed state, and an outer wall of a valve core supports the locking ball, to make at least a part of the locking ball extend from the receiving through hole and abuts against the sliding sleeve in a limiting manner; and

the outer wall of the male end body is provided with a receiving groove for receiving the locking ball, and in a case that the male end body and the female end body are plugged in place, the sliding sleeve is configured to push the locking ball into the receiving groove, a pushing portion of the sliding sleeve for limiting and abutting against the locking ball is allowed to pass over the locking ball, and a constant-diameter surface of an inner wall of the sliding sleeve is configured to press the locking ball into the receiving groove.

10. The fluid connector according to claim 3, wherein the valve head further comprises a protruding rod arranged at an end of the abutting portion away from the valve head blocking portion, and an end of the protruding rod away from a conical portion is provided with a conical protrusion.

11. The fluid connector according to claim 1, wherein a first limiting protrusion is provided on an outer wall of the valve core, and a second limiting protrusion configured to abut against the first limiting protrusion is provided on the inner wall of the female end body; and

the second valve core sleeve extends, at a position of the sealing groove, from the inner wall of the second valve core sleeve to an outer wall of the second valve core sleeve, to form the first limiting protrusion.

12. An energy storage heat dissipation system, comprising a first pipe to be connected, a second pipe to be connected, and the fluid connector according to any one of claims 1 to 11, wherein the male end joint of the fluid connector is connected to the first pipe to be connected, and the female end joint of the fluid connector is connected to the second pipe to be connected.