The invention relates to a connection according to the preamble of claim 1.

A connection of this type is disclosed in US-A-4,522,435, which demonstrates a connection for a multi-layered composite tube having a cylindrical connection piece. It is necessary in addition to the connection piece to provide a sleeve which is compressed. The connection piece comprises on the outer side two circumferential ribs, over which the sleeve and the tube are compressed.

A connection, which is intended for connecting tubes to each other and to connection pieces and which connection is suitable for home installation, must guarantee a permanent and full sealing effect. It should also be possible to manufacture the connection in a rapid and convenient manner even when working blind and the connection must also provide an immediate sealing effect. It should not be necessary to carry out continuous checks on the sealing effect of such a connection. The known screw and bayonet connections are therefore especially not suitable, because they mainly comprise a plurality of parts and are expensive.

The object of the invention is to produce a connection of the specified type, which complies with the above-mentioned requirements and which connection is still inexpensive and simple to produce.

The object is achieved by virtue of the invention in accordance with the claim 1. Advantageous embodiments are evident in the subordinate claims.

Embodiments of the invention are further explained hereinunder with reference to the drawings, in which:

Fig. 1a and 1b each illustrate a longitudinal sectional view through a part of the connection in accordance with the

invention prior to and subsequently to being compressed,

Fig. 2a and 2b each illustrate a longitudinal sectional view through a further embodiment of the connection, prior to and subsequently to being compressed, and

Fig. 3 illustrates a longitudinal sectional view through a further embodiment of a connection in accordance with the invention.

Figs. 1a and 1b illustrate a connection piece 40 preferably manufactured from metal, which comprises on the outer side two circumferential grooves 41 which are disposed parallel to and at a distance from each other. A tube, which is pushed onto the connection 43, is formed using a pincer-shaped tool 61, which tool comprises projections 61a which are formed complementary to the grooves 41. The tube 4 is a composite tube and, after having being removed from the tool 61, still permanently retains the corrugations 42 which engage in the grooves 41.

In the case of the two embodiments as shown in Figs. 2a, 2b and 3, a sealing ring 70, 80 is inserted in a groove 73, 83 of an elevated region 71, 81. The composite tube 72, 82 is pushed with one end onto the connection piece 74, 84 and is compressed using a pincer 90 both in advance of and after the elevated region 71, 81. The pincer 90 is designed in such a way that the composite tube 72, 82 is octagonal in advance of the sealing ring 70, 80 and is radially compressed after the sealing ring. By virtue of compressing the tube, multi-sided recesses 85, 86 and circular recesses 87, 88 are formed therein, which help the composite tube on the connection piece in an especially firm manner. As illustrated in Fig. 3, it is also possible to form the connection with a double connection piece.

It thus follows from the above statement, that the connections can be produced with relatively few, convenient and robust components. By reason of their simple and robust design, the connections are inexpensive and operationally extremely reliable.

Claims

1. Sealing connection for a multi-layered composite tube (4, 72, 82) having a cylindrical connection piece (40, 74, 84), with which the composite tube (4, 72, 82), which is pushed over the connection piece (40, 74, 84), is non-releasably and rigidly connected, wherein the connection piece (40, 74, 84) comprises a circumferential stop for the front face of the connected composite tube (4, 72, 82) as well as at least one circumferential groove (41) or elevated region (71, 81) in advance of the stop and wherein the composite tube (4, 72, 82) is pushed onto the connection piece (40, 74, 84) substantially as far as the stop and is shaped in advance of the stop, characterised in that the composite tube (4, 72, 82) is permanently shaped and compressed corresponding to the groove (41) and/or elevated region (71, 81) and the shaping of the composite tube (4, 72, 82) also corresponds on the external side to the contour of the connection piece (40, 74, 84), wherein a connection is provided, which comprises clamping means such as, for example, sleeves or rings.

2. Connection according to claim 1, characterised in that the elevated region (71, 81) comprises a groove (73, 83), into which a sealing ring (70, 80) is inserted.

3. Connection according to claim 1 or 2, characterised in that the composite tube (72, 82) is multi-sided towards the tube end in advance of the elevated region (71, 81) and is radially compressed after the elevated region (71, 81).

4. Connection according to claim 1, characterised in that the connection piece (40) comprises two grooves (41) which are spaced apart and the composite tube is pressed into these grooves.

* C L M S *

5. Connection according to claim 1, characterised in that the composite tube (72, 82) comprises multi-sided recesses (85, 86) and circular recesses (87, 88) on its external side.

* C L M S *