Claims

1. A method for lining an inside of an existing pipe ~~on the inside~~, comprising:

forming an inner lining pipe ~~(7)~~ of mainly polyvinyl chloride with a certain original outer dimension that is smaller than ~~the~~ an inner circumference of an existing pipe ~~(8)~~ to be lined,

placing the inner lining pipe ~~(7)~~ inside the existing pipe ~~(8)~~ to be lined, and

expanding the inner lining pipe ~~(7)~~ in such a manner that the original outer dimension becomes larger by causing a radial orientation into the wall material of the inner lining pipe ~~(7)~~, thereby increasing an inside pressure resistance of the inner lining pipe.

2. The method of claim 1, c h a r a c t e r i s e d by

forming the inner lining pipe ~~(7)~~ originally into a round cross-sectional shape,

decreasing ~~the~~ an outer dimensions of the inner lining pipe ~~(7)~~ having a round cross-sectional shape and said original outer dimension at a temperature, ~~in~~ at which the inner lining pipe ~~(7)~~ material keeps a material memory of the original round shape and size, before the inner lining pipe ~~(7)~~ is installed inside the existing pipe ~~(8)~~, and

heating the inner lining pipe ~~(7)~~ when it is inside the existing pipe ~~(8) to be lined~~ in such a manner that, under the influence of the material memory, the inner lining pipe ~~(7)~~ returns essentially to its original round cross-sectional shape and size.

3. A method as claimed in claim 1 or 2, c h a r a c t e r i s e d by

pre-heating the inner lining pipe ~~(7)~~ before installing it inside the existing pipe ~~(8)~~ to facilitate ~~the~~ handling of the inner lining pipe ~~(7)~~.

4. A method as claimed in any one of the preceding claims, c h a r a c t e r i s e d by

expanding the inner lining pipe ~~(7)~~ from its original outer dimension by at least 10%~~, preferably by at least 20%~~.

5. A method as claimed in any one of the preceding claims, c h a r a c t e r i s e d by

forming the wall material of the inner lining pipe ~~(7) in such a manner~~ that the wall material it has eight parts or less plasticizer to 100 parts polyvinyl chloride.

6. A method as claimed in any one of the preceding claims, c h a r a c t e r i s e d by

forming the wall material of the inner lining pipe ~~(7)~~ by using a plasticizer that is one or more of the following: urethane, acryl, nitrile, chlorinated polyethylene, synthetic rubber, ethyl vinyl acetate copolymer, acryl nitrile / butadiene polymer, nitrile butyl rubber, ethylene propylene diene monomer rubber, phthalate plasticizer, adipate plasticizer, and citrate plasticizer.

7. A method as claimed in any one of claims 1 to 5, c h a r a c t e r i s e d by

forming the wall material of the inner lining pipe ~~(7)~~ by using a plasticizer that is one or more of the following: urethane, nitrile, chlorinated polyethylene, synthetic rubber, ethyl vinyl acetate copolymer, acryl nitrile / butadiene polymer, nitrile butyl rubber, ethylene propylene diene monomer rubber, phthalate plasticizer, adipate plasticizer, and citrate plasticizer.

8. A method as claimed in ~~any of the preceding claims~~claim 6, c h a r a c t e r i s e d by forming the wall material of the inner lining pipe (7) such that the total amount of acryl is less than 3 parts to 100 parts polyvinyl chloride.

9. A method as claimed in any claim 4, c h a r a c t e r i s e d by

expanding the inner lining pipe from its original outer dimension by at least 20%.

~~9~~10. An inner lining pipe of mainly polyvinyl chloride that is intended to be arranged inside an existing pipe ~~(8)~~, wherein the inner lining pipe ~~(7)~~ has an original outer dimension that is smaller than ~~the~~ an inner circumference of the existing pipe ~~(8)~~ to be lined, and the inner lining pipe ~~(7)~~ is expandable to have a larger outer dimension than ~~its~~ the original outer dimension so that a radial orientation is formed in ~~the~~a wall material of the inner lining pipe ~~(7)~~ such that an inside pressure resistance of the inner lining pipe is increased.

~~10~~11. An inner lining pipe as claimed in claim ~~9~~10, c h a r a c t e r i s e d in that

the wall material of the inner lining pipe ~~(7)~~ has eight parts or less plasticizer to 100 parts polyvinyl chloride.

~~11~~12. An inner lining pipe as claimed in claim ~~9 or 10~~10 or 11, c h a r a c t e r i s e d in that

the wall material of the inner lining pipe ~~(7)~~ has a plasticizer that is one or more of the following: urethane, acryl, nitrile, chlorinated polyethylene,

synthetic rubber, ethyl vinyl acetate copolymer, acryl nitrile / butadiene polymer, nitrile butyl rubber, ethylene propylene diene monomer rubber, phthalate plasticizer, adipate plasticizer, and citrate plasticizer.

~~12~~13. An inner lining pipe as claimed in claim ~~9 or 10~~10 or 11, characterised in that

the wall material of the inner lining pipe ~~(7)~~ has a plasticizer that is one or more of the following: urethane, nitrile, chlorinated polyethylene, synthetic rubber, ethyl vinyl acetate copolymer, acryl nitrile / butadiene polymer, nitrile butyl rubber, ethylene propylene diene monomer rubber, phthalate plasticizer, adipate plasticizer, and citrate plasticizer.

~~13~~14. An inner lining pipe as claimed in any one of claims ~~9 to~~ 12, characterised in that

in the wall material of the inner lining pipe ~~(7)~~ the total amount of acryl is less than 3 parts to 100 parts polyvinyl chloride.