CLAIMS

1. A fire extinguishing system for distributing an extinguishing medium, at least comprising:

- means (1) for providing the extinguishing medium,
- at least one means (2) for applying the extinguishing medium,
- transport means (3) for connecting the means (1) for providing the extinguishing medium to the at least one means (2) for applying the extinguishing medium,

wherein the transport means (3) are at least partially in the form of mild steel metal pipe,

wherein the pipe friction loss in pipes is defined in accordance with the Hazen-Williams formula (1) with

$$P = 6.05 \bullet 10^5 \bullet L \bullet Q^{1.85} \bullet C^{(-1.85)} \bullet d^{(-4.87)}$$

wherein:

P = pressure drop in the pipe, in bars,

Q = through-flow rate through the pipe, in l/min,

d = mean inside diameter of the pipe, in mm,

C = constant for type and condition of the pipe, and

L = equivalent length of pipe and shaped portions, in m,

characterised in that

- the transport means (3) which are at least partially in the form of mild steel metal pipe have an at least inwardly disposed corrosion protection coating, and
- the inwardly disposed corrosion protection coating is adapted to ensure a value for C in a range of 125 to 150 when the fire extinguishing system is commissioned.

2. A fire extinguishing system according to claim 1 characterised in that the inwardly disposed corrosion protection coating is adapted to ensure a value for C in a range of 125 to 150 within a period of use of 5 years.

3. A fire extinguishing system according to one of claims 1 and 2 characterised in that the inwardly disposed corrosion protection coating is adapted to ensure a value for C in a range of 135 to 150 upon commissioning of the fire extinguishing system.

4. A fire extinguishing system according to one of claims 1 to 3 characterised in that the inwardly disposed corrosion protection coating is adapted to ensure a value for C in a range of 135 to 150 within a period of use of 5 years.

5. A fire extinguishing system according to one of claims 1 to 4 characterised in that the inwardly disposed corrosion protection coating is produced by means of the Aquence™ method.

6. A fire extinguishing system according to one of claims 1 to 5 characterised in that the mild steel metal pipe for forming the transport means (3) is of a nominal width in a range of DN 32 to DN 250.

7. A fire extinguishing system according to claim 6 characterised in that the mild steel metal pipe for forming the transport means (3) is of a nominal width in a range of DN 32 to DN 65.

8. A fire extinguishing system according to one of claims 6 and 7 characterised in that the mild steel metal pipe for forming the transport means (3) is of a wall thickness in a range of 2.0 mm to 2.5 mm.

9. A fire extinguishing system according to one of claims 1 to 8 characterised in that the extinguishing medium is a medium selected from the list including: water, foam, water-foam mixture, gas, chemical extinguishing agents.

10. A fire extinguishing system according to one of claims 1 to 9 characterised in that the means (1) for providing the extinguishing medium

include at least one storage component for the extinguishing medium, wherein the at least one storage component is selected from the list including: open reservoir, high-level tank, intermediate and supply container.

11. A fire extinguishing system according to claim 10 characterised in that the at least one storage component selected from the list including: high-level tank and intermediate and supply container, has an inwardly disposed corrosion protection coating of concrete and/or plastic.

12. A fire extinguishing system according to one of claims 1 to 11 characterised in that the water for providing the extinguishing media, selected from the list including: water and water-foam mixture, is from a single water supply.

13. A fire extinguishing system according to one of claims 1 to 8 characterised in that the water for providing the extinguishing media, selected from the list including: water and water-foam mixture, is from a double water supply.

14. A fire extinguishing system according to one of claims 1 to 13 characterised in that frost protection agent is added to the extinguishing medium selected from the list including: water and water-foam mixture.

CLAIMS

1. A fire extinguishing system for distributing an extinguishing medium, at least comprising:

- means for providing the extinguishing medium,
- at least one means for applying the extinguishing medium,
- transport means for connecting the means for providing the extinguishing medium to the at least one means for applying the extinguishing medium,

wherein the transport means are at least partially in the form of mild steel metal

pipe,

wherein the pipe friction loss in pipes is defined in accordance with the Hazen-Williams formula with

$$P = 6.05 \cdot 10^5 \cdot L \cdot Q^{1.85} \cdot C^{(-1.85)} \cdot d^{(-4.87)}$$

wherein:

P = pressure drop in the pipe, in bars,

Q = through-flow rate through the pipe, in l/min,

d = mean inside diameter of the pipe, in mm,

C = constant for type and condition of the pipe, and

L = equivalent length of pipe and shaped portions, in m,

wherein

- the transport means which are at least partially in the form of mild steel metal pipe have an at least inwardly disposed corrosion protection coating,

- the inwardly disposed corrosion protection coating is adapted to ensure a value for C in a range of 125 to 150 when the fire extinguishing system is commissioned, and

the inwardly disposed coating is composed of paint particles supplied in a solution, said particles being deposited at the inside surface of the metal pipes under liberation of Fe^{2+} ions by supplying FeF_3, iron fluoride in a solution.

2. A fire extinguishing system according to claim 1,

wherein the inwardly disposed corrosion protection coating is adapted to ensure a value for C in a range of 125 to 150 within a period of use of 5 years.

3. A fire extinguishing system according to one of claims claim 1 and 2,

wherein the inwardly disposed corrosion protection coating is adapted to ensure a value for C in a range of 135 to 150 upon commissioning of the fire extinguishing system.

4. A fire extinguishing system according to one of claims claim 1 to 3,

wherein the inwardly disposed corrosion protection coating is adapted to ensure a value for C in a range of 135 to 150 within a period of use of 5 years.

5. A fire extinguishing system according to one of claims claim 1 to 4,

wherein the mild steel metal pipe for forming the transport means is of a nominal width in a range of DN 32 to DN 250.

6. A fire extinguishing system according to claim 5,

wherein the mild steel metal pipe for forming the transport means is of a nominal width in a range of DN 32 to DN 65.

7. A fire extinguishing system according to claim 5,

wherein the mild steel metal pipe for forming the transport means is of a wall thickness in a range of 2.0 mm to 2.5 mm.

8. A fire extinguishing system according to claim 1,

wherein the extinguishing medium is a medium selected from the list including: water, foam, water-foam mixture, gas, chemical extinguishing agents.

9. A fire extinguishing system according to claim 1,

wherein the means for providing the extinguishing medium include at least one storage component for the extinguishing medium,

wherein the at least one storage component is selected from the list including: open reservoir, high-level tank, intermediate and supply container.

10. A fire extinguishing system according to claim 9,

wherein the at least one storage component selected from the list including: high-level tank and intermediate and supply container, has an inwardly disposed corrosion protection coating of concrete and/or plastic.

11. A fire extinguishing system according to claim 1,

wherein the water for providing the extinguishing media, selected from the list including: water and water-foam mixture, is from a single water supply.

12. A fire extinguishing system according to claim 1,

wherein the water for providing the extinguishing media, selected from the list including: water and water-foam mixture, is from a double water supply.

13. A fire extinguishing system according to claim 1,

wherein frost protection agent is added to the extinguishing medium selected from the list including: water and water-foam mixture.