POLIFIL

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TECHNICAL NOTE N° 1

Polyphosphates in crystals

These salts are formed by the combination of several high alkaline glassy state polymerization metaphosphate transparent, white or shiny blue in hermetic containers are kept indefinitely, while outdoors tricomponent a white coating of orthophosphate, slowly absorbing moisture; in aqueous solution instead, degenerate to orthophosphate much slower

Up to 100° C anti-encrusting Effectiveness

Up to 180° C non-corrosive Effectiveness

THE RANGE OF POLYPHOSPHATES INCLUDES:

1. Polyphosphate crystal White Big

2. Polyphosphate crystal White Fine

3. Polyphosphate crystal Green Big

4. Polyphosphate crystal Grenn fine

5. Silicopolyphospahte Blue Big

6. Silicopolyphospahte Blue Fine

7. Polyphosphate White Super fine

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The doses of Polyphosphates

The doses of polyphosphates are obtained by passing the water through a mass solution of salts according to the following formula:

$$C = Q \times D / V$$

1

Where: C = mass of salts in kg.

Q = water flow rate to be measured in m3/h

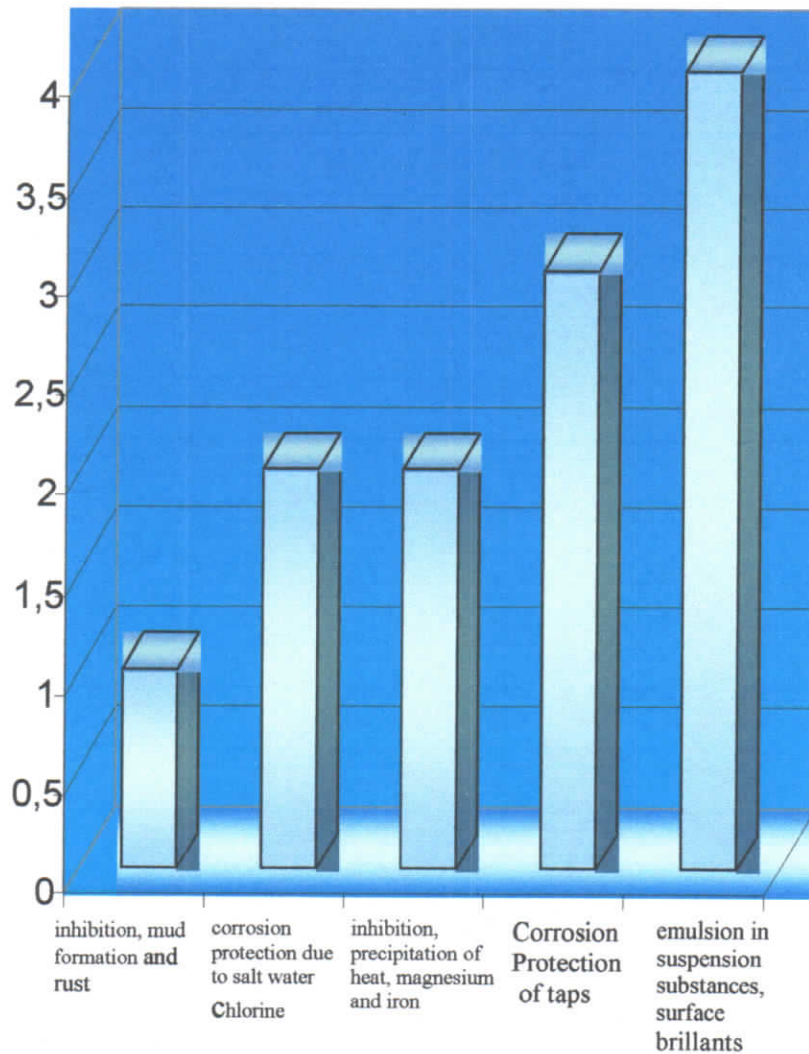V = velocity of dissolution of salts in gr/kg/h

D = required dosage of Polyphosphate in gr/m3.

$$V = Q / C \times D$$

Which means the dosage of polyphosphates and dissolution rate are directly proportional.

This means that the determination of polyphosphates PPM water (g/m3) depends on the speed of dissolution (V).
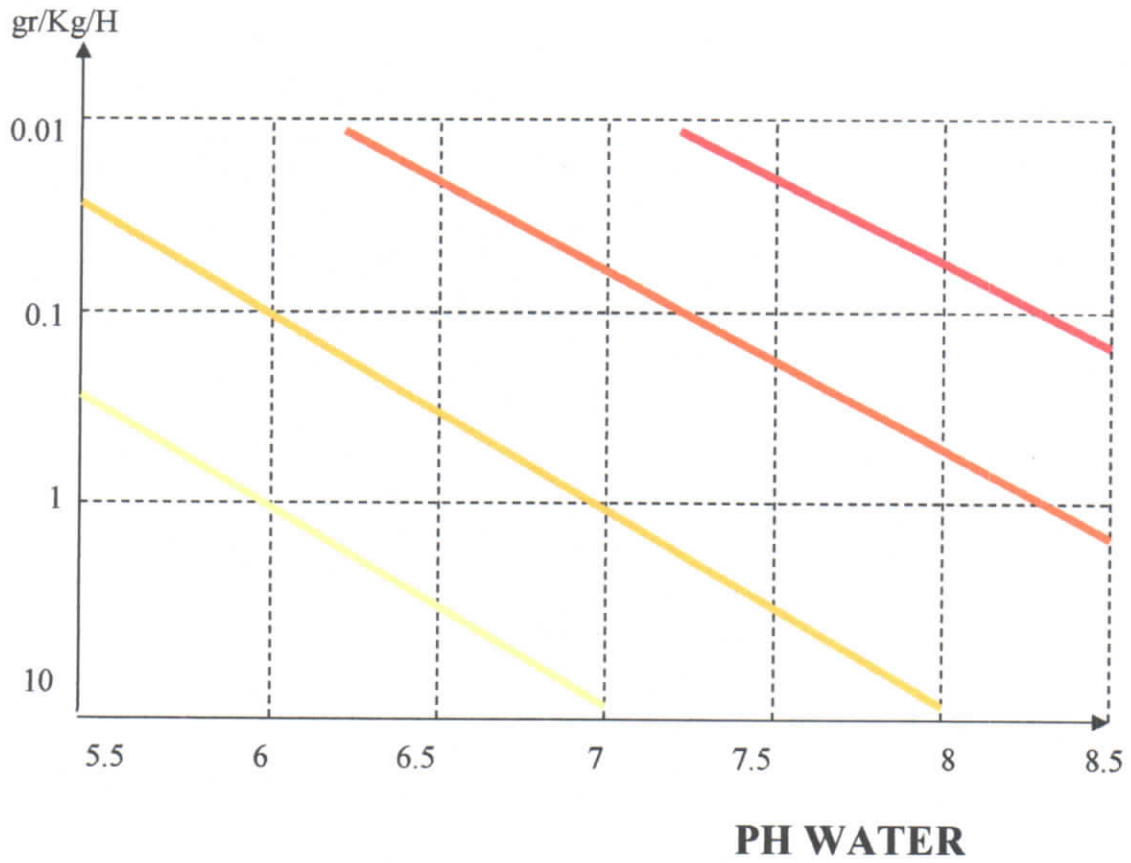
DOSAGE AND USED POLYPHOSPHATE

Chart axis values: 0, 0,5, 1, 1,5, 2, 2,5, 3, 3,5, 4

Categories along Property axis:
- inhibition, mud formation and rust
- corrosion protection due to salt water Chlorine
- inhibition, precipitation of heat, magnesium and iron
- Corrosion Protection of taps
- emulsion in suspension substances, surface brillants

Property

Legend: □ Dosage Polyphospate In PPM

SPEED DISSOLUTION VS ph

gr/Kg/H

0.01

0.1

1

10

5.5 6 6.5 7 7.5 8 8.5

PH WATER

- 0°F
- 10°F
- 100°F
- 600°F

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TECHNICAL NOTE

Amount compared to the flow at standard conditions:

Flow lt/ h	Quantity polyphosphate kg
100	1
200	2
300	3
400	4
500	5
600	6
700	7
800	8
900	9
1000	10

Standard date:

ph	= 7.0
hardness	= 20°F
temperature	= 17.5° C
particle size	= 12/25 mm

from the graph it is therefore, for example, that the same amount of Polyphosphates used and water flow without liquid water pH= 7 and 10° F will have a rate of about 0.7, while at the same flow rate and quantity, if hardness goes to 100° F, the speed becomes 0,07, that is, the dosage will be ten times lower. This requires that the dosages of polyphosphates are always defined under standard conditions, quantity, hardness, pH, temperature and grain size.

It should be pointed out that the particle size of the salt and watare temperature influence the dissolution rate.

In particular the dissolution rate of grain size smaller than 6/10 mm is approximately twice that 10/20 mm