

Zinc Phosphate Conditions

1. Zinc phosphate temperature: 80 to 90 °C
2. Dip time: 5 to 7 minutes
3. Relations with Iron and total acidity which should be maintained

Iron (Point)	Total acidity (Point)	Evaluation
1.0 to 1.9	16.0 to 19.0	-
2.0 to 2.9	17.0 to 20.0	Effective range (Possible to process)
3.0 to 3.9	18.0 to 21.0	
4.0 to 4.9	19.0 to 22.0	
5.0 to 5.9	20.0 to 23.0	
6.0 to 6.9	21.0 to 24.0	
7.0 to 7.9	23.0 to 25.0	
8.0 to 8.9	24.0 to 26.0	-
9.0 to 9.9	25.0 to 27.0	-

4. Evaluation method

4.1 Measurement of iron (Fe)

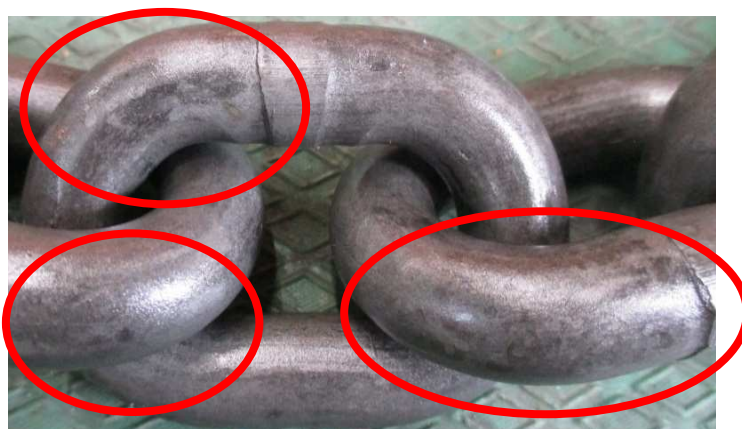
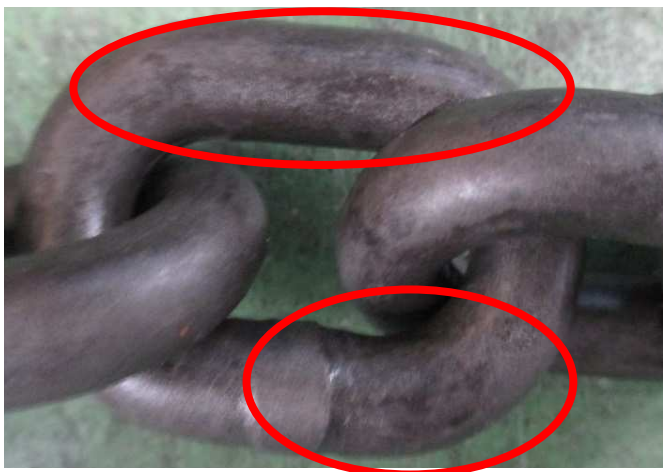
- (1) Objects: a) 10 milliliters sample of Zinc phosphate solution
b) Reagent of 50% Sulfuric acid
c) Titrant of 1% or less normal Potassium permanganate
- (2) Cool 10 milliliters sample in a room temperature level
- (3) Add reagent 12 to 14 drops
- (4) Titrate the titrant
- (5) Evaluate the point number (=milliliter value for reduction) to keep the pinkness color for ten seconds

4.2 Measurement of total acidity (TA)

- (1) Objects: a) 5 milliliters sample of Zinc phosphate solution
b) Reagent of Phenolphthalein
c) Titrant of 2.5 to 3.5% normal Sodium hydroxide
- (2) Cool 5 milliliters sample in a room temperature level
- (3) Add reagent 5 drops
- (4) Titrate the titrant
- (5) Evaluate the point number (=milliliter value for reduction) to turn into the pinkness color

Surface Appearance (oiled chain → put enough oil on the surface)

Final surface (after oiling) shall be free of the defects showed below.



Revision: added wording "put enough oil on the surface".

Date of creation 02.10.2017	Prepared T. Della Mea	Checked M. Peternel	Approved M. Cortelazzo	Date of revision 05.03.2018
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