Corrugated Steel Pipe and Steel Structural Plate

The base metallic coating data provided in this section are limited to the following values for galvanized metals:

- $6 \leq pH \leq 8$
- resistivity ≥ 2,000 ohm-cm
- soft waters considered hostile when resistivity ≥ 7,500 ohm-cm

The next two subsections discuss interior coating and exterior coating.

Interior Coating

For aluminized type 2, the following values apply:

- $5.0 \leq pH \leq 9.0$; Resistivity ≥ 1,500 ohm-cm
- soft waters not considered to be a problem

Estimate the service life for the interior base metallic coating using Equation 14-3.

Equation 14-3: SL_{BMCI} = (basic interior service life) × (thickness multiplier)

The basic interior service life for 18-gage corrugated galvanized metal pipe is provided in the table following Equation 14-4 for pH values of 7.3 and lower and using the equation for pH values in excess of 7.3.

Equation 14-4: $L_i = (1.25)(1.47)R^{0.41}$

where:

L_i = interior years

R = resistivity (ohm-cm)

Interior Durability for 18-Gage CMP (years)

pH	Resistivity (ohm-cm)								
	1,000	1,500	2,000	2,500	3,000	4,000	5,000	7,500	10,000
7.3	34.2	37.3	39.4	41.1	42.5	44.6	46.3	49.3	51.5
7.0	21.6	24.7	26.8	28.5	29.8	32.0	33.7	36.7	38.9
6.5	14.9	18.0	20.1	21.8	23.2	25.3	27.0	30.0	32.2
6.0	11.3	14.3	16.4	18.1	19.5	21.6	23.3	26.3	28.5
5.8	10.1	13.1	15.3	17.0	18.3	20.5	22.2	25.2	27.3
5.5	8.6	11.6	13.8	15.5	16.8	19.0	20.7	23.7	25.8
5.0	6.5	9.5	11.7	13.4	14.7	16.9	18.6	21.6	23.7