



# Test method T1013

## Average thickness of cadmium coatings on small parts

NOVEMBER 2012



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## Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		Reformatted and Revision Summary Added	D.Dash	June 2001
Ed 2/ Rev 0	All	Reformatted RMS template	J Friedrich	November 2012

Note that Roads and Maritime Services is hereafter referred to as 'RMS'.

The most recent revision to Test method T1013 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

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# Test method T1013

## Average thickness of cadmium coatings on small parts

### 1. Scope

This test method sets out the procedure for the rapid determination of the average thickness of Cadmium Coatings on Small Parts. The method is derived from the British Standard 1706-1960, Appendix C.

### 2. Reagent

Nickel Sulphate solution.

Dissolve ten grammes of nickel sulphate crystals ( $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ ) in 100 mL of hydrochloric acid density 1.16 g/mL.

### 3. Apparatus

Glass reaction vessels such as beakers, measuring cylinders, etc.

### 4. Procedure

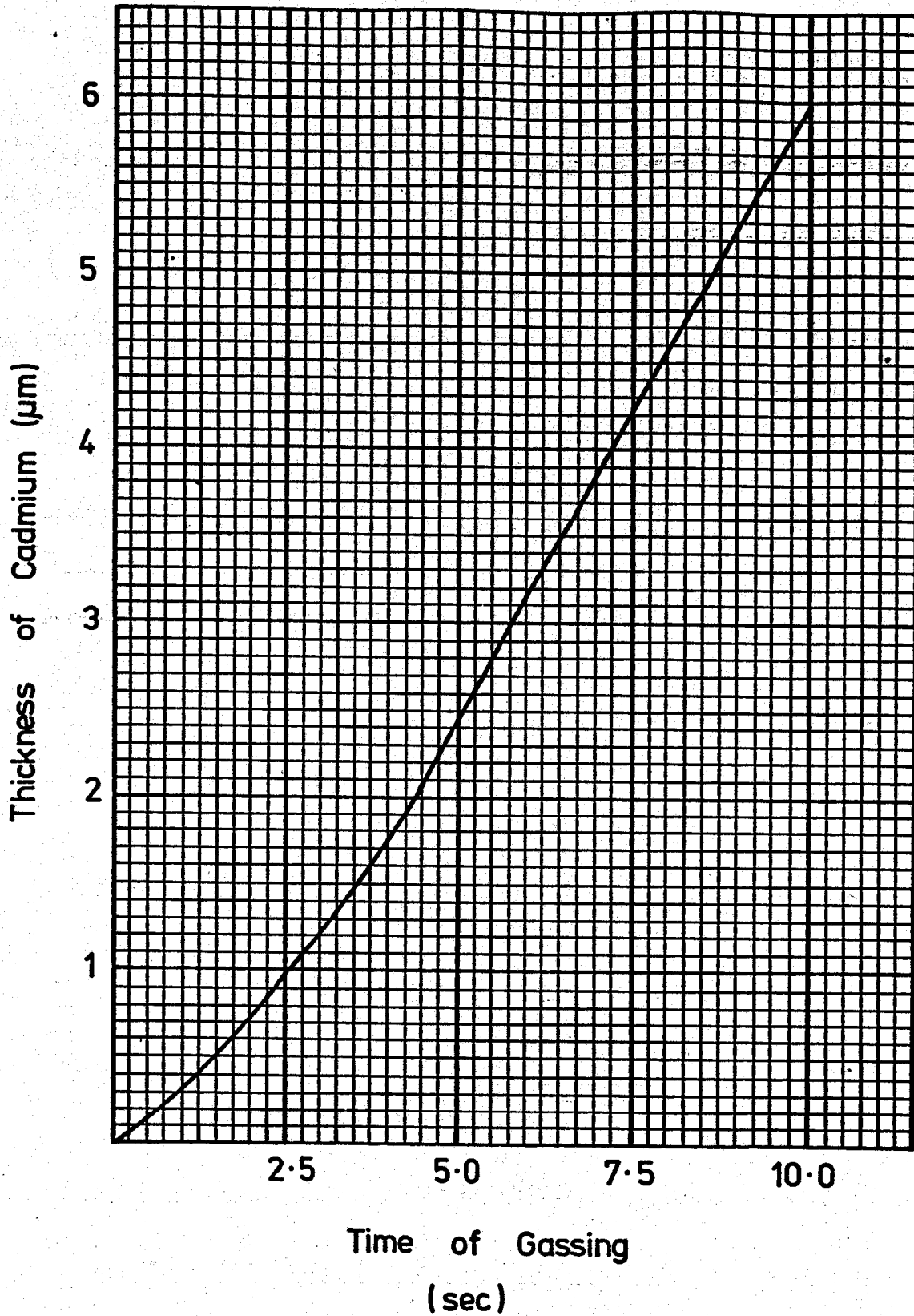
- (a) Free the article from grease by means of an organic degreasing solvent which does not attack the coating.
- (b) Immerse the article to be tested in a sufficient quantity of the reagent at a temperature between 15 and 25°C.
- (c) Note the time which is taken from the time gassing starts (usually the moment of immersion) until there is a marked decrease in the rate of gassing, by a stop-watch.
- (d) Take the temperature of the reagent.

### 5. Interpretation and Reporting

Obtain the thickness of coating either by reference to the accompanying curve, or by multiplying the time in seconds by 0.65 giving the thickness in microns. The curve should be used when the time is below 10 seconds to avoid inaccuracy due to the non-linear relationship in this area.

No correction is necessary when the temperature of the liquid is 20°C or subtract for each degree C below 20°C.

Report as the average thickness of cadmium plating in microns.



Cadmium Average Thickness Determination Chart