# GDT 45

## A. Scope

For a complete list of GDTs, see the Table of Contents.

Use this test method to determine the weight of spelter coating on zinc-coated iron or steel.

## B. Apparatus

The apparatus consists of the following:

1. Magnetic Gage: Use a gage such as the “Elcometer” (WG-06-1).
2. Calibration
    a. Before using the magnetic gage, calibrate it with shims of known thickness.
        1) Place the shims on a base of uncoated material similar to the base material being measured.
        2) Calibrate the gage according to the manufacturer's recommendations.
        3) Calibrate the gage to a permissible error of ± 15 percent.

## C. Sample Size and Preparation

No special sample preparation is required for this test.

## D. Procedures

1. Determine the thickness of the coating at 12 points taken at random on the sheet, plate, strip, pipe, or completed culvert.
    a. Do not take any measurements within 2 in (50 mm) of the edge of the metal.
    b. For corrugated metal, perform six tests on the crests and six in the valleys.
2. The test thickness will be the average thicknesses obtained at the 12 points.

## E. Calculations

Obtain the weight of coating as follows:

W = 1189 T where:

W = Weight of coating in ounces per square foot (grams per square meter), total for both sides

T = Thickness of coating in inches, as measured on one side

**NOTE: The formula assumes equal weight of coating on both sides of the material being tested.**

## F. Report

Report the weight of the coating on Form 168.