



## Model 3300 Tin Tester



The Model 3300 Tin Tester is an advanced instrument for measuring tin coating weights for electrolytic tin and TFS according to ASTM Standard A630-03 and ISO 2177. The Model 3300 is based on the constant current, electrolytic method. By controlling the diameter of the area to be stripped, and the use of a precision constant current source, The Model 3300 can accurately calculate tin, alloy and TFS coating weights.

Donart Electronics™, a leader in measurement systems, was made aware by its many steel producing customers of a need for an automated, accurate, cost effective, and user-friendly means for measuring tin/alloy and chrome (TFS). Listening to its customers concerns regarding reliability, cost and accuracy of systems currently in use led to the design of the Model 3300.

The Model 3300 is designed so that both sides of the sample are tested automatically. Differential coatings can be automatically tested at different stripping currents. Cell maintenance is easy due to the design of the cells. The cells are interchangeable and can be maintained with the use of simple hand tools. Cathodes and anodes are designed so that they can be easily replaced if needed. Sealing gaskets were designed to eliminate premature gasket wear, which helps maintain the accuracy of the measurements. Gaskets can also be easily replaced. A custom 4-way control valve is used for the filling of the cells, and for complete cell isolation during testing.

The System comes complete with all solution containers, tubing, and valves. The system also comes with a Windows™ based computer, monitor, ink jet printer, and custom software. The included software is user-friendly and was developed according to customer suggestions, ensuring quick operator setup and control. The software comes with a graphing package which displays the deplating curve while testing. When the test cycle is finished, all test data and graphs are displayed on the screen. Test results and graphs can then be saved and/or printed. A unique feature to the Model 3300 is that test data is also saved to an excel spreadsheet. The spreadsheet contains all measurement and time arrays for secondary research evaluation.

## Model 3300 Tin Tester Features

- Dual Cell System
- Windows™ Operating Environment
- 14 Bit A/D Converter
- First system with an automatic shutoff upon test completion (User will not have to enter predicted coating weights prior to testing, and no more premature stoppages of the test)
- User selectable measurement units ( $\text{g/m}^2$ , lb/bb or  $\text{mg/ft}^2$ )
- Data reports saved as text files, and Excel spreadsheets on the local drive and/or to a network location
- Six user-selectable stripping rates
- Capability of having a different stripping rate for each cell, which increases accuracy when running differential coatings
- Prior to each test a clean cycle can be run ensuring that the electrode is clean
- Transition points automatically detected (requires no manual manipulation by the user)
- All measurements and charts saved in Excel
- Excel data report can contain one sample, or a full profile of samples
- User-friendly software, tests can be run quickly without entering any information
- Plots Voltage vs Time while the test is running (transition points can be viewed as they occur)
- Charts are large and easy to read (transition points can be seen clearly)
- Charts have an auto-scaling feature that adjusts the scale of each chart as the test is running
- Print all charts and test data
- Test parameters can be saved and loaded, allowing a simplistic way to customize tin/alloy tests
- Software can be customized according to user specifications
- Easy to setup and maintain
- System comes complete with all holding vessels and tubing required to operate
- Test cells were designed to be interchangeable
- Test cells can be repaired with simply a screwdriver and appropriate wrenches
- System is equipped with a custom 4-way valve which isolates test cells electrically for improved measurement accuracy

## Model 3300 Tin Tester Specifications

- Coatings Tested: Tin, Tin-Alloy, Chromium
- Tin Ranges: .0005 to 5.0 lb/bb OR .05 to 60 g/m<sup>2</sup>
- Chrome Ranges: .05 to 60 mg/ft<sup>2</sup>
- Stripping Rate: 6 User Selectable Rates
- Stripping Area: 1 Square Inch (645 mm<sup>2</sup>)
- Test Method: Coulometric (ASTM A630-03)

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