

ABB MEASUREMENT & ANALYTICS

An affordable high precision wet bath monitoring analyzer

TALYS ADP300 series



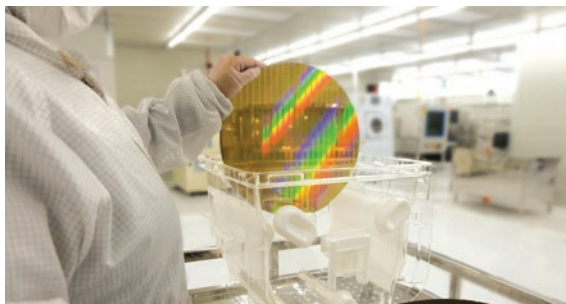
Measurement made easy

TALYS ADP300 series, the dual channel analysis system is a state-of-the-art analyzer suited for real-time, batch-type, or single-wafer tool monitoring of wet etching, cleaning, or photoresist (PR) removal processes.

This low cost, high-performance wet bath monitor allows real-time end-of-bath alerts and enables effective bath dosing.

Meeting today's manufacturing needs

—
01 Wafer manufactured in
a semiconductor factory



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01

State-of-the-art analyzer

The TALYS ADP300 system is an evolution of the well known TALYS ASP300 single-channel analysis system, but with improved key performances and two simultaneous measurements.

Its unique technology allows for monitoring of multiple components within two different chemical baths simultaneously, thus providing reliable end-of-bath alerts and enabling bath life extension through individual bath component dosing. Retrievable prediction routines for monitoring multiple bath chemistries are stored within TALYS.

The prediction routines will permit the same analyzer to be used when a bath's chemistry changes.

The traditional high-precision, low-maintenance, and hands-free ABB approach has been carried forward into the TALYS analytical system enabling reliable end-of-bath alerts and bath life extension through dosing of individual bath components.

TALYS provides semiconductor, FPD, and solar-cell manufacturers an analyzer that delivers superior performance at a cost suitable for today's tightening budgets.

Flexibility and performance

This reliable analyzer offers the standard RCA cleaning suite bath prediction configuration. Its flexibility permits bath configuration changes for monitoring chemistry from solar-cell, FPD, and semiconductor manufacturing.

TALYS performance permits equipment operators and engineers to reduce chemical usage and minimize excursion events with real-time bath component predictions.

Reduce chemical usage and minimize excursion events

A reliable and simple solution

Configured for wet cleaning, etching and PR removal baths, TALYS provides a low-cost and simple-to-use dependable solution.

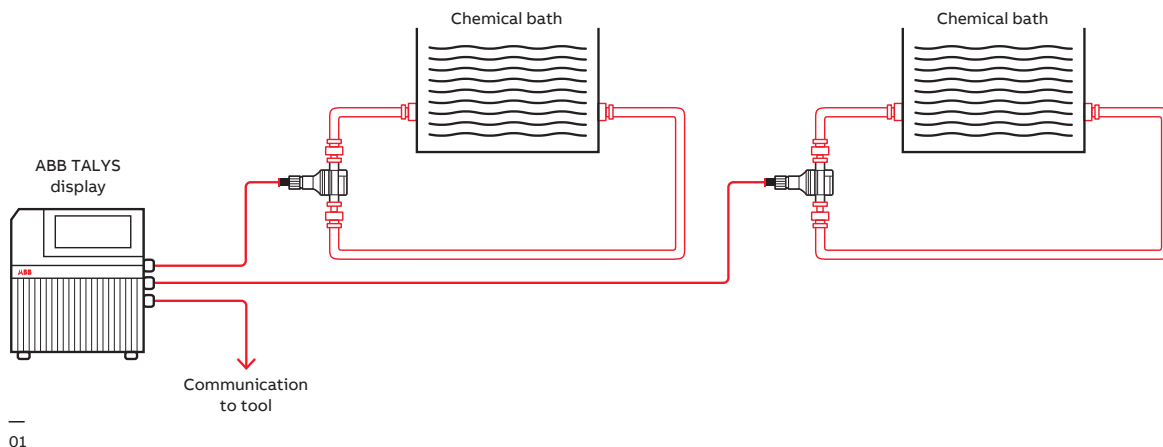
Excursion prevention and trend analysis

The TALYS ADP300 system enables real-time trend analysis for bath life extension through dosing. This leads to a reduction in chemical usage. In addition, real-time, end-of-bath alerts will minimize the possibility of process excursions.

Key features

- Simplicity of operation, no need for analyzer experts, runs 24/7 with data displayed on tool monitor.
- Reagent-free operation reduces cost of ownership.
- No wetted parts sampling eliminates the need for tubing modifications and ensures contamination control.
- Flexibility allows the analyzer's electronic configuration file to be uploaded from email for additional bath monitoring routines.
- Multiple bath chemistries monitored at two sample points simultaneously, reducing the number of analyzers required.
- Pin in place and easily accessed internal components permits simple field servicing.

Multiple chemistries at two sample points



Monitoring two recirculation baths

As the industry moves to on-the-fly chemical delivery, TALYS meets the need for a single analyzer to measure multiple chemistries for two sampling points.

The TALYS ADP300 analyzer can quickly measure multiple chemistries for two sample points simultaneously. Automatic bath selection via Modbus TCP outputs from the tool permits real-time selection of the desired bath chemistry prediction routine.

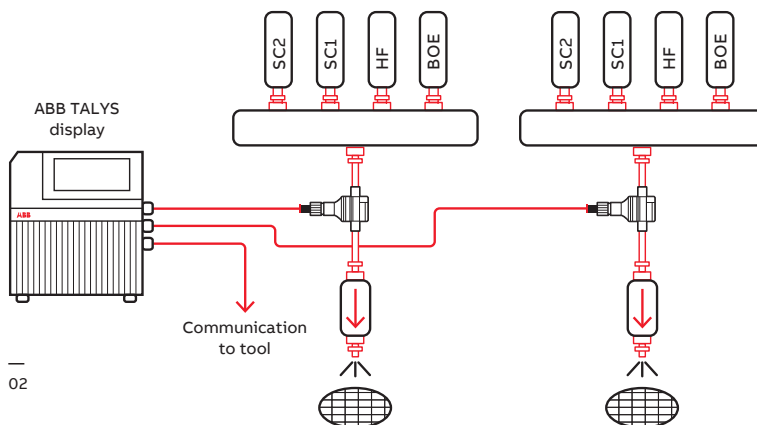
When monitoring more than one bath chemistry on a tool, there is no need for a hardware change, no need for multiple analyzers and there is no need for manual intervention resulting in a sizable cost

savings at the FAB. Imagine one analyzer measuring a delivery tube for SC1, SC2, BOE, BHF, DHF and ST-250 without manual intervention, all controlled by the tool PC.

Recirculation bath

The TALYS ADP300 brings the same robust, reliable and precise measurement that the wet process analyzer (WPA) and the single channel (ASP300) bring into the FAB. Designed for use when two sample points need monitoring, the TALYS analyzer reduces the cost of analyzer purchases.

If a technology update requires a new chemistry on the same production tool, TALYS can be upgraded in the FAB via a file received in your email.



— 01 Monitoring a recirculation bath

— 02 Monitoring on-the-fly chemical usage

Unique sample cell with no wetted parts



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01 The patented Clipp/R
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02 Screw cap in place

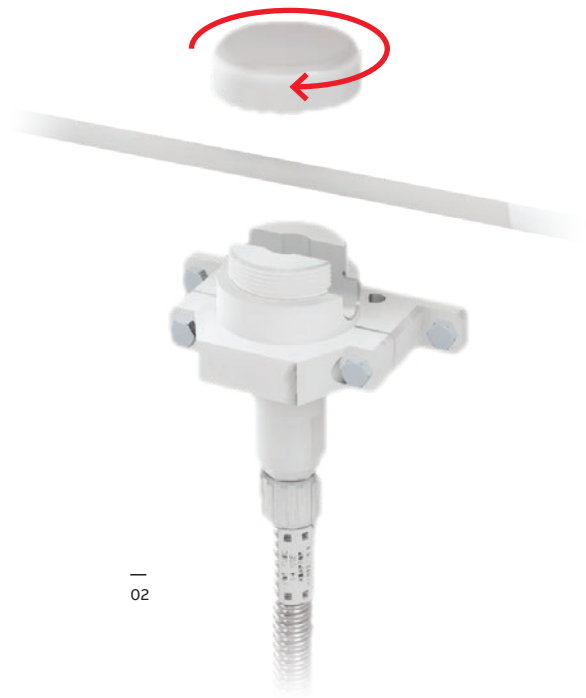
The patented Clipp/R

The ABB sample interface is a unique cell that has no wetted parts. It is easy to install. Just clip it on to an existing 1", 3/4", 1/2" or 3/8" PFA tube.

The Clipp/R is constructed of Teflon™ and connected to TALYS via Teflon™ protected fiber-optic cables. The bath cannot be contaminated.

The Clipp/R can be installed on an operating tool, with no need to shut down production.

Simply unscrew the cap, place tubing in the groove, screw cap in place and it's installed.



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Ease of use

— 01 The TALYS ADP300 analyzer
— 02 SC1 mixing chart

The TALYS analyzer is a complex system that is simple to use. With a minimal footprint, wall or shelf mounting capability and fiber-optic interface to the sample point, this computer-less analyzer is easy to mount in space limited areas.

ABB's Clipp/I_R probe aids in simplifying the installation because it is not necessary to shut down the tool, existing tubing does not require any modifications and the no-wetted parts sampling eliminates the risk of contamination. Unlike titrators, there are no reagent vessels to fill or routine analyzer "zeroing" procedures.

When updating a process to a new chemistry, the TALYS prediction configuration can be uploaded electronically. There is no need to send the analyzer back to the factory for refurbishing, and no need to purchase a new analyzer.

A simple electronic file received via email is uploaded and the analyzer will be reconfigured for new chemistries. When a set of chemistries is rotated on a regular basis, such as in foundries, the multiple configurations can be saved and used on demand.

The analyzer lifetime is extended well beyond industry standards. TALYS is designed for field serviceability of all components to eliminate the need of a spare analyzer in the FAB.

Standard package includes

- One (1) TALYS
- Two sets of five (5) meter fiber-optic cables
- Configuration for SC1, SC2, BOE, BHF, DHF and ST-250
- Two (2) Clipp/I_R sample probes
- ModBus TCP (Ethernet) communication to PC tool
- Touchscreen display

Options include

- Additional lengths of fiber-optic cable
- Additional bath monitoring configurations

Specification

- Overall dimensions: (H × W × D): 369 × 350 × 255.5 mm
- Weight: 20 kg (primary analyzer enclosure)
1 kg (per Clipp/I_R and fiber-optic cable combined)
- Communications: ModBus TCP
- Mounting: Wall or shelf mounted
- Electrical: <100 watts consumption in routine operation
- Environmental: 15 to 35°C
General purpose area classification

Approvals

- cTÜVus, CE, FCC, laser safety FDA/IEC/EN 60825-1, RoHS 3, China RoHS, WEEE

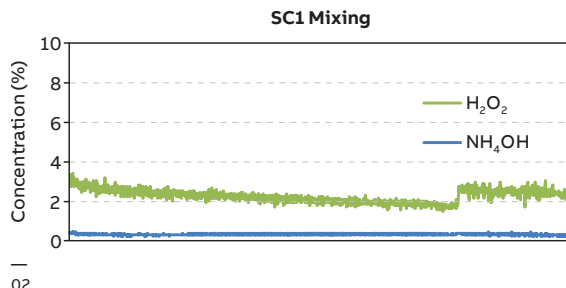




ABB Inc.**Measurement & Analytics**

3400, rue Pierre-Ardouin

Québec (Québec) G1P 0B2

Canada

Tel.: +1 418-877-2944 (worldwide)

1 800-858-3847 (North America)

Email: ftir@ca.abb.com

abb.com/analytical

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