

- Software and hardware solution for process tracking, alarming, and reporting of manual anodizing and plating lines.
- Operator action recording using remote, wireless PocketPC terminals.
- Process monitoring of tank temperatures, rectifiers, and other sensors with optional I/O hardware.
- Acquisition and reporting to meet NADCAP and ISO requirements.



INTRODUCTION

AnoTrack™ is a software and hardware solution designed to address the process monitoring and operational needs of anodizers and platers whose lines are currently operating manually and/or with limited automation. **AnoTrack™** is an easy to use system that tracks, records, and reports on all relevant tank/station sensors as well as operator-initiated actions (LIFT, DROP, etc).

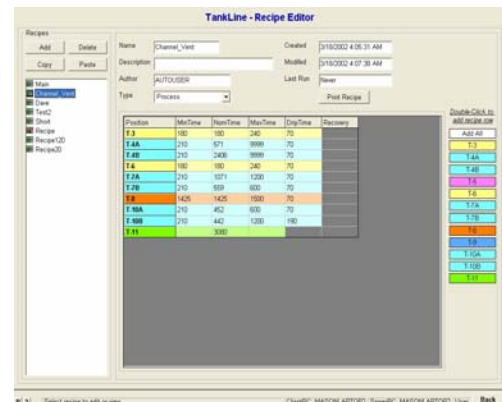
FEATURES & CAPABILITIES

ON-SHORE SYSTEM FOR RECIPE AND PART GENERATION

AnoTrack™ utilizes a Pentium PC base-station which provides the ability to setup multiple recipes that will be used in the anodizing or plating line.

The recipes can include min/max/nominal times, min/max temperatures, and desired rectification settings.

Recipes can also include custom, remote prompts which are used to instruct the operator via wireless link to operator PocketPC. These prompts can instruct the operator to set a rectifier, adjust a temperature setting, or perform some other process step.



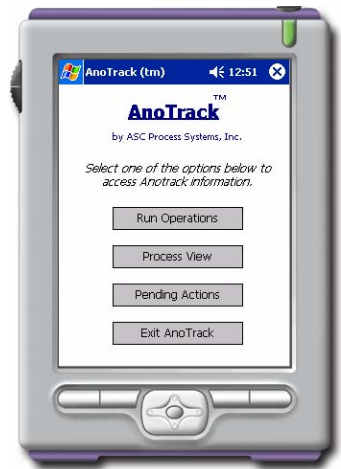
AnoTrack—Recipe Editing Screen

ANOTRACK™ TERMINAL

AnoTrack™ includes one or multiple operator terminals which are used by the operator during tankline operations.

The AnoTrack terminal fits easily into your pocket and communicates to the main base-station via 802.11B wireless band.

The AnoTrack terminal is used to setup and start a run, view process data (temperature, rectification, etc.), and communicate operator initiated actions back to the main base-station system.



AnoTrack Terminal— Main Screen

ACTION VIEW AND TRIGGERS

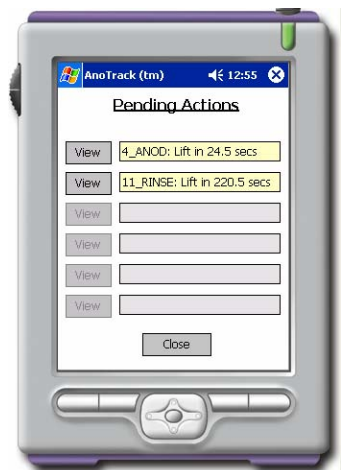
AnoTrack™ is not only a data-acquisition system, but it also manages and tracks the operator initiated actions at each station or tank.

Pending Actions

The Pending Actions screen shows all pending operator actions, including the time at which the operator should carry out the action. AnoTrack automatically maintains a “road map” of the process and displays the next step in the process.

This data is updated continuously and provides instruction to the operator to perform required actions at specific tanks (ie. 4_ANOD). For example:

- “4_ANOD: Lift in 24.5 secs.”
- “13_RINSE: Drop for 10 secs.”
- “MOVE to 14_CWR now.
- “Set RECT to 400 amps now.”
- Or any customized operator prompt (via Recipe)



AnoTrack Terminal— Pending Actions View

OPERATOR RESPONSE

When the operator performs a specific action, the NEXT ACTION screen is used to indicate completion of the requested action. For example, if the terminal requests a LIFT of a flight-bar, the operator would press the LIFT button upon completing that action. Following this response, the terminal will display the next action to be performed (ie. DRIP for 5 secs.)

Each response by the operator is automatically beamed back to the base-station for recording, acquisition, and reporting purposes. A complete audit-trail will be generated at the end of a specific run.



AnoTrack Terminal— Setup & Start

PROCESS ACQUISITION & VIEWING

AnoTrack™ includes screens designed to provide immediate viewing of tank immersion times, time settings, temperatures, rectification feedback (ie. Current), and alarm indications.

Alarm acknowledgement and silencing is also provided via the AnoTrack terminal.

All data relating to a process will be acquired and stored to the audit report at the beginning and end of the specific tank's immersion time.



AnoTrack Terminal— Tank Process Views

MULTIPLE CONCURRENT PROCESSES

AnoTrack™ can monitor and direct multiple flight-bars in the tank line. Each flight-bar is tagged with a part number and recipe, and can be easily viewed via the RUN OPERATIONS screen.

PART AND LOAD INFORMATION

AnoTrack™ can be configured so that at the commencement of an anodizing or plating run, the operator is queried to select a part, recipe, and enter customizable information which will be tracked with the part.

The information tracked with a load can include Part Name, Part Type, Serial Number, Lot Number, and any user-definable fields.

The part and load information will be automatically logged and saved with the audit trail and data for reporting and future database queries at the base-station.



AnoTrack Terminal— Pending Actions View



AnoTrack Terminal— Setup & Start a Run

TANK PROCESS ACQUISITION

AnoTrack™ can be purchased with remote-I/O hardware for easy connection to tank sensors. Once connected to I/O hardware, AnoTrack™ can acquire temperature, voltage, current, PH, ORP, and many other signals to provide a complete QA/QC record of the part processing run.

The AnoTrack™ base-station software includes configuration and setup screens to add or reconfigure sensors, calibrate, and certify readings.

AnoTrack™ I/O hardware can be connected to the base-station with Ethernet cable (100M distance) or can be mounted remotely and communicate in a wireless fashion.



AnoTrack I/O Hardware

METALAST DISTRIBUTION

AnoTrack™ is designed and manufactured by ASC Process Systems for distribution by Metalast Inc. (www.metalast.com)

Metalast is the nation's leading supplier of process control solutions for the plating and anodizing markets.



Metalast JobPro™ terminal