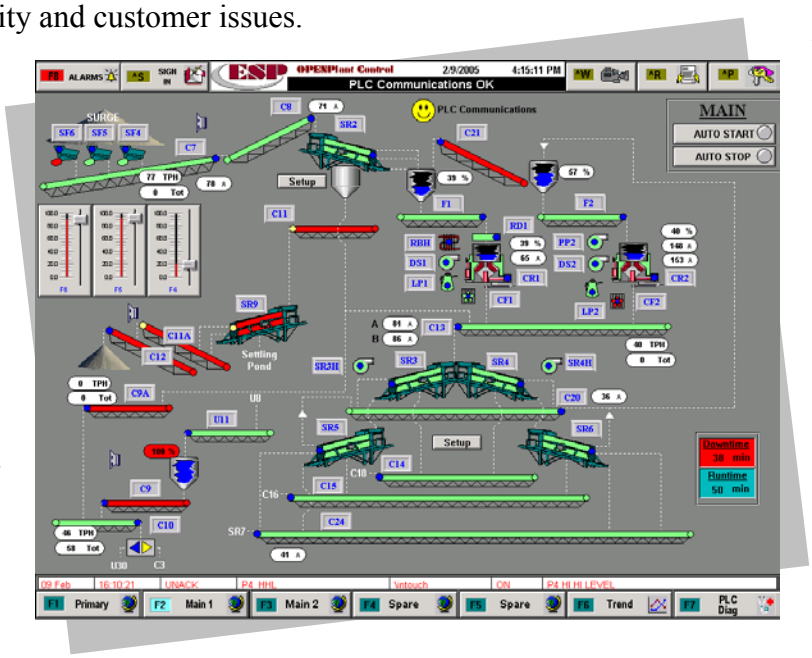
OPENPlant Control®

Open Up the Possibilities of Your Aggregate Plant

The challenge to meet current market demands is ever increasing. Every day aggregate plants are faced with tougher competition, more stringent government guidelines and demands for higher quality and better customer service. The challenge is to respond to these issues with an efficient and cost-effective approach. Automation has proven to have a significant impact on product quality, production rates, operating costs and customer service.

In response to this, ESP has developed an automation solution specifically for the aggregate industry. Since the late 1980's, we have gained valuable experience automating aggregate plants. Now we have taken a revolutionary step – packaging a low cost automation solution that addresses production, operation, quality and customer issues. Our solution uses standard off-the-shelf hardware and software modules to provide an open architecture solution that is always expandable.



Our innovative solution is the result of implementing over 150 automation systems for our aggregate clients. We have packaged into a standard product: crusher optimization, blending/loadout methods, web based reporting, quality control, maintenance tracking and diagnostic tools. With our solution you get the advantage of our vast experience and proven track record. We have assembled a team of engineers within our organization dedicated to the support of our aggregate clients. Our standard modular concept is easily upgradeable as new features and technologies become available. This insures that your plant control system will always remain on the leading edge.

In order to provide our packaged solution at a competitive price and offer more features, we have developed a toolkit of functions based on standardized software and hardware components. Our standard system uses either Wonderware InTouch or Rockwell Software RSView as the Human Machine Interface (HMI). The HMI resides on standard office grade PC's and can be housed in sealed NEMA enclosures if required. We use Microsoft Windows XP Pro operating system. The control system can be configured with Allen Bradley SLC, ControlLogix, CompactLogix PLCs or GE Faunc 90-30 PLCs. Because no two aggregate plants are identical, neither is the final form of our packaged solutions. Each system is customized to meet the requirements of each individual plant.

We deliver the PLC(s) fully assembled and pre-wired to I/O terminals in NEMA 12 enclosures ready for installation in the Electrical houses. Our electrical design relies on standards proven in dozens of installations. Our design is optimized for ease of installation and allows rapid troubleshooting of faults.

Our experience in aggregate plant automation includes projects that range in scope from existing plant retrofits to complete green-field plant control systems. Our packaged solution includes all of the engineering and component hardware and software required to implement your automation system. We also oversee the installation and startup of our system. Our engineers are as qualified in the field as they are in developing software code.

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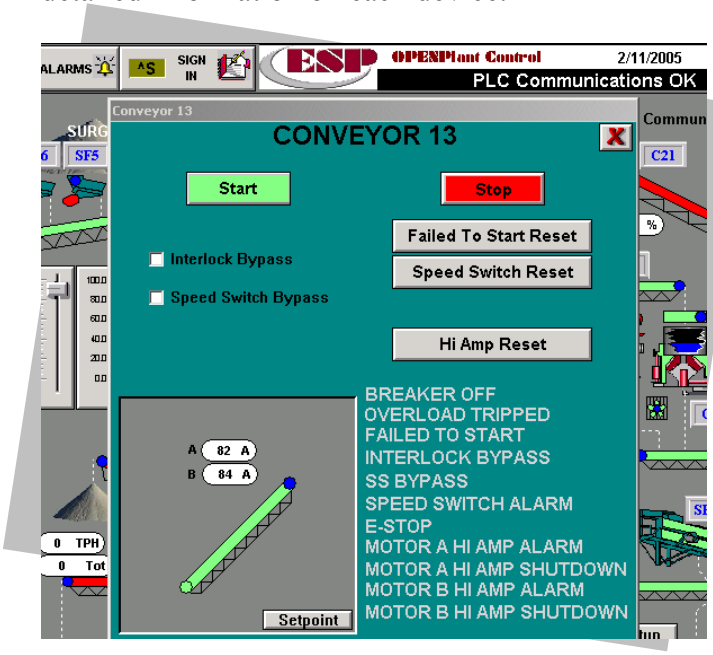
HMI Overview Screens: Critical information required to monitor an area is achieved by a quick glance at the screen. For example, we use color animation to determine device status: stopped, running, alarm, critical alarm and interlock satisfied or not satisfied.

User-Friendly HMI: Operators with few or no computer skills can be trained to use the HMI effectively in just a few hours. We use two to three overview screens, depending on the plant, to monitor each area and pop-up screens for control and detailed information on each device.



Plant Configuration (Optional): Captures plant setup information for later comparison against production and quality results.

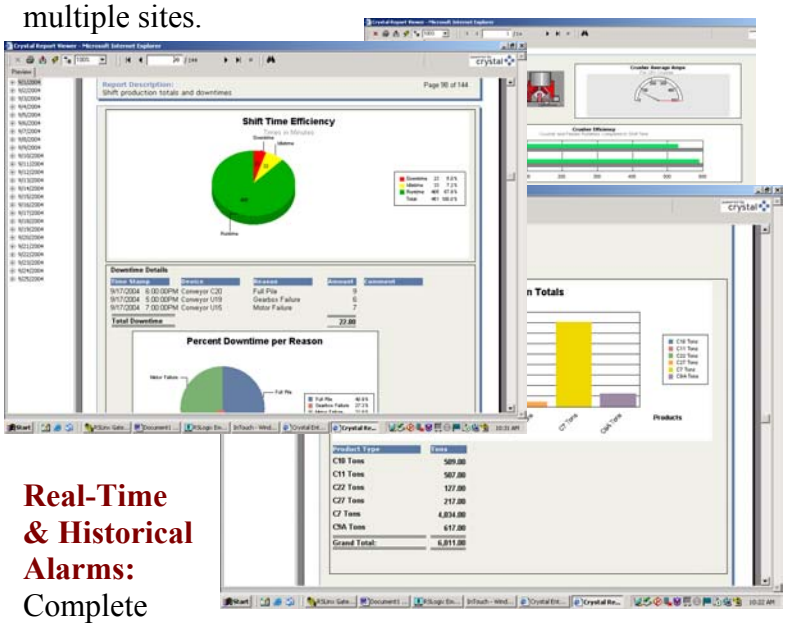
Real-Time and Historical Trending: Key process parameters (real-time or historical) such as motor amps, crusher bowl levels and lube oil temperatures can be selected for trending by the operator on the same chart. Six pre-configured trends are provided.

Downtime/Idle Log: Automatically prompts the operator to log the reason for downtime. Specific care has been given to making the downtime logging easy, quick yet accurate.

Maintenance Tracking Log (Optional): Tracks maintenance activities such as screen deck replacement and bearing lubrication. Monitors device runtimes and prompts the operator when the task is due.

Diagnostics: Control system diagnostic information is displayed to provide detailed troubleshooting assistance. This in-depth and thorough diagnostics and alarming will help the maintenance technicians identify and correct problems quickly to improve uptime performance.

Reports: Our reporting module offers production, downtime and maintenance reports and is viewable with a standard web browser from any PC on the control system network. No client access licenses are required. Reporting can be set up over company intranets to provide a consolidated report covering multiple sites.



Real-Time & Historical Alarms: Complete alarm annunciation and reporting system.

Security: Built-in security provides password levels that enable changes to control parameters such as blend recipes, crusher loop tuning and access to the operating system.

Remote Engineering Support (RES): ESP can provide programming and troubleshooting support over a variety of media. Telephone connection provides a low-cost and secure connection while faster connections such as VPNs can allow real-time access to the system remotely.

1075 Progress Circle
Lawrenceville, GA 30043
ph: 770-682-8259
fax: 770-277-5524
web: www.espatl.com

ESP
ENGINEERED SOFTWARE PRODUCTS