



SMICOMPANIES

Smart-Iron Technologies™

Part I Overview

1456 Hwy. 317 South Franklin, LA – USA
Phone: 800-264-9894 Website: www.smicompanies.com



SMI COMPANIES

Smart-Iron Technologies™

Thank you for your interest in our products and services. They come with our commitment to be the very best. The design, manufacture, installation, automation and support for these cement bulk plants comes entirely from the employees of SMI Companies.

We've named the technology Smart-Iron because it does a lot of the thinking for you. What we've done is committed the time to write twenty-five years of knowledge and experience into software language. We've been fortunate to have many opportunities to put it in service and work all the bugs out. Smart-Iron is now a mature, stable operating system. We see it run everyday and listen to what our customers say to make it better.

As new upgrades to the operating system come out they are made available to all our customers.

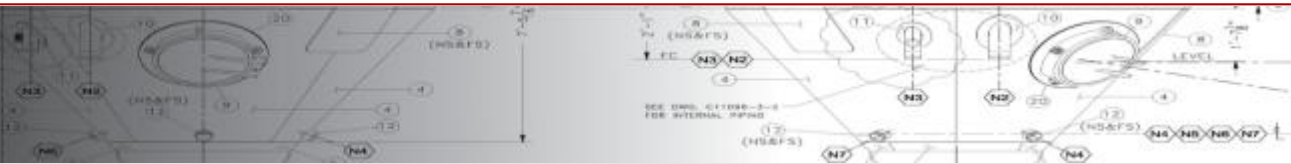
SMI engineers write the Smart-Iron software. They are experienced, licensed integrators fluent in Allan Bradley/Rockwell hardware and software applications. They can answer any question and resolve almost any issue. Their support is 24/7 and they are never far away via telephone and the internet.

As you will see, these plants really do think for themselves. They make your job easier and more profitable.

We look forward to a call from you. A fast courteous response is guaranteed.

1456 Hwy. 317 South Franklin, LA – USA
Phone: 800-264-9894 Website: www.smicompanies.com

From Design

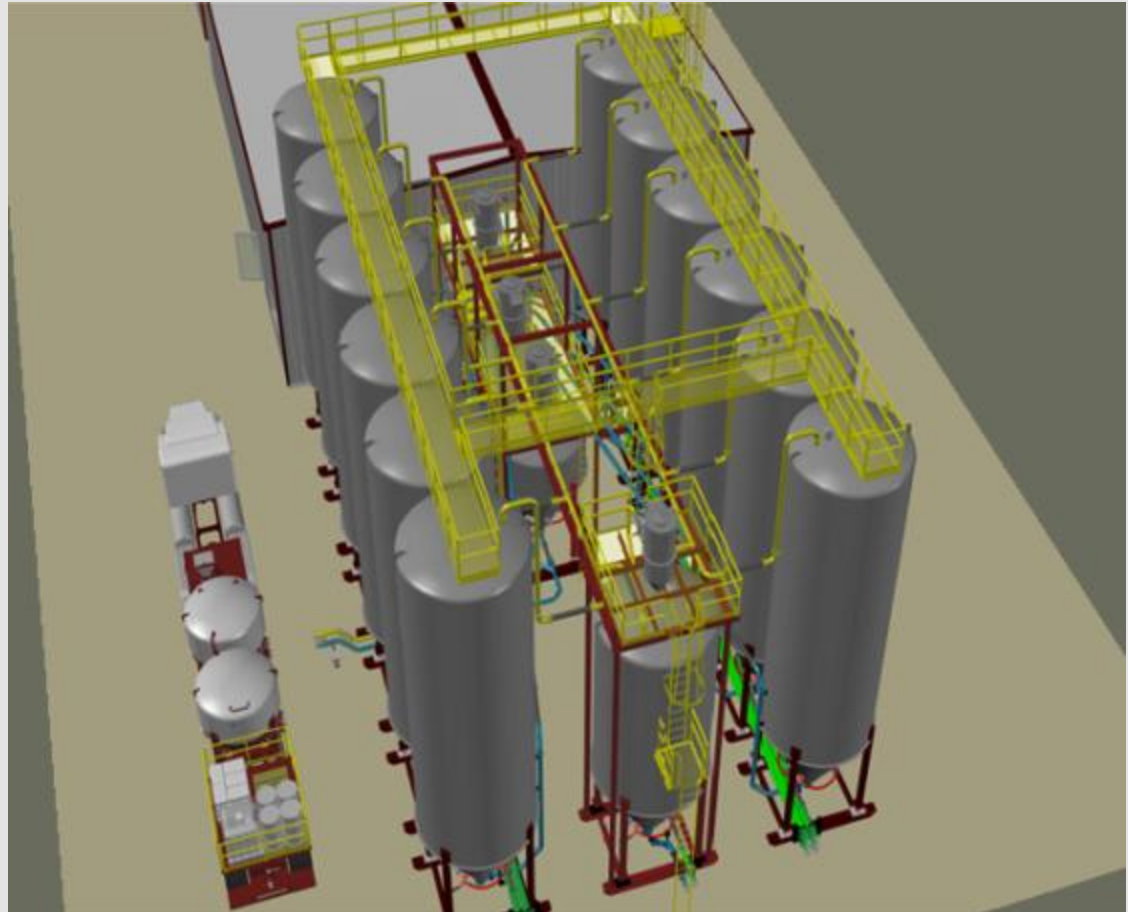


Utilizing 3D design software each plant is laid out in exacting detail and reviewed with the client to insure all process conditions and client expectations are met before manufacturing begins.

Smart-Iron Technologies™

The 3D environment allows us to optimize the design in many ways.

- All walkways and work platforms are integrated allowing operator access to any area of the plant from a single ladder climb.
- Multiple ingress and egress points are provided. All ladder cages, platforms and handrails meet OSHA requirements.
- All piping and electrical is neatly routed using a rack system creating easy access and leaving aisles clear for walking.



To Return on Investment

We understand things have to move quickly in the oil and gas industry. Responsive service and attention to detail are the name of the game. “You don’t make money building bulk plants, you make money blending cement”.

When your plant arrives on site it’s ready to go. All the thinking has been done and erection is easy:

Simply stand the vessels on centerline, follow the piece marking sequence for the structural, piping and controls and bolt it together. It’s a full scale model of the original design in kit form.



We’re not the biggest, but we **are** the best!

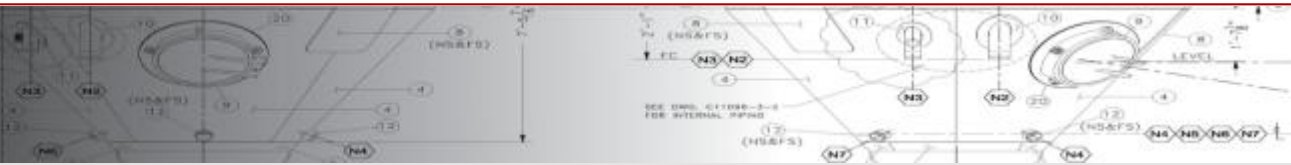
Here’s what customers say:

“ I’ve run bulk plants for 17 years. This is the best one I’ve ever had.”

*Michael Koster
Bulk Plant Manager
Cibolo, TX*

Automation

Smart-Iron Technologies™



The Smart-Iron cement bulk plant process is fully automated. Batch recipes are written from pre-programmed menu screens containing all the products in the plant. Quantities for each ingredient are selected by weight. The system displays the batch as it was written for review and approval before the batch is placed in queue. When you are ready to pull, blend and load the batch you simply press the start button. The real time graphics and lighted push buttons on the desktop PFD (process flow diagram) show you what the plant is doing during the computer controlled process. The process is recorded and the shipping papers are generated automatically.

There is also a manual mode for operating the plant. It is there primarily for training purposes. In manual mode operators will know immediately how to run the plant and they will be very confident. The lighted push buttons on the PFD and touch screens resemble what they are used to seeing. It's a simple but powerful interface.

In the first phase of training we let the operators run the plant in manual mode and they really like it, in fact they like it so much that they don't want to run in auto because they have to use the pull out key boards to write the batch recipes. This is new to them and depending on their lifestyle (whether they are familiar with computers or not) tells us how to proceed.

Here's a typical case history:

We have an "old school" operator running in manual mode and he doesn't see why he should run in auto because he's doing a fine job. Someone walks in the door and asks him a question while he's pulling a silo ingredient to the weigh batcher. He turns to answer the question and when he looks back at the weigh batcher scale he has overrun the ingredient by 10 sacks (Cement is moving at 50 sacks per minute. This happens in 12 seconds). He immediately closes the silo discharge valve and now has to purge the line from this silo to the weigh batcher, maybe another 5 sacks. He shrugs his shoulders and says, "well, it's a 400 sack blend, this won't matter".

This happens all too often in manual plants. We ask him if the bulk plant manager would agree that it doesn't matter and he doesn't answer. We tell him that data acquisition has recorded the event and the system is running on his password. The guy is old school but he's not dumb. The next few words he says aren't worth mentioning but now he's ready to learn auto mode.

Auto is easy. The average operator will have no problem learning how to do it. It's just different.... but no more mistakes, everyone wins.

Now when he sees 6 or 8 valves open and close at the same time as the process shifts from the weigh batcher to blend one and the next batch in queue immediately begins to enter the weigh batcher he and the bulk plant manager both watch in amazement. We just tell them, "that's Smart-Iron".

Control Room

Smart-Iron Technologies™

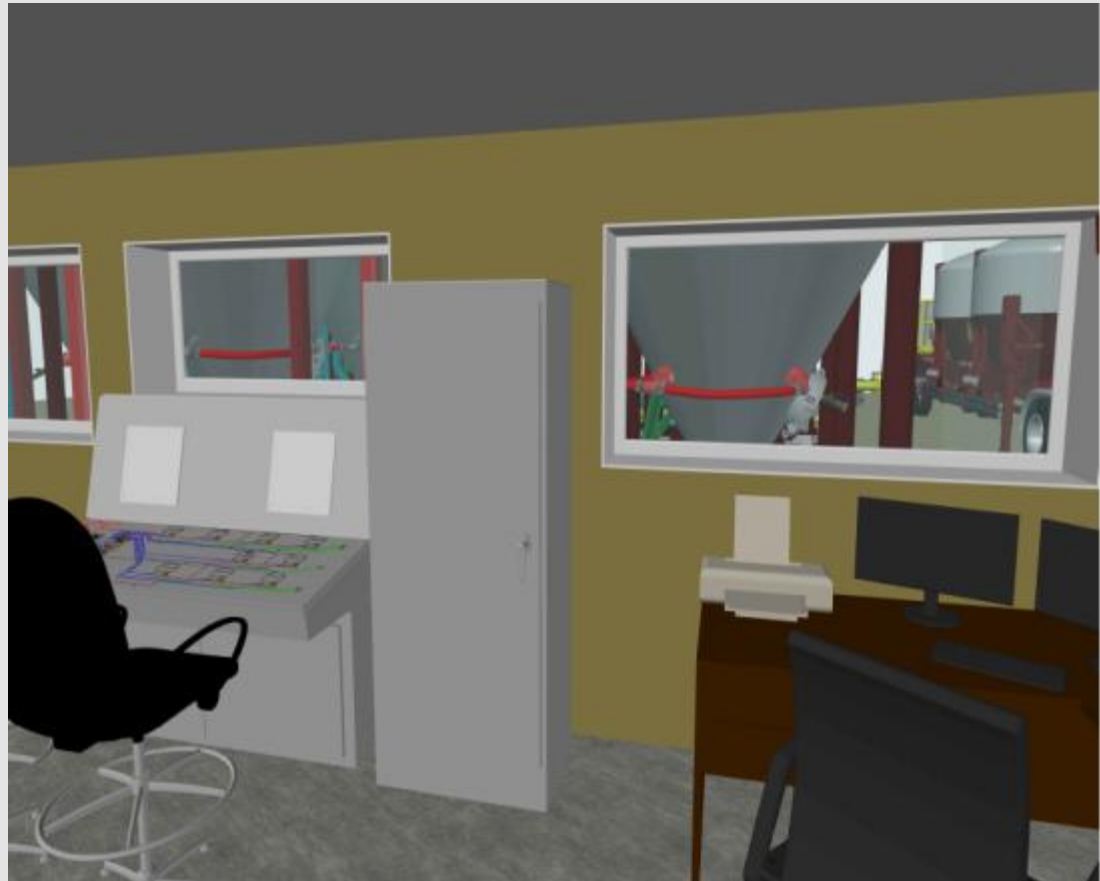
The control room is the center piece of the plant. Everyone tends to gravitate to it including your customers. We want you to make a good impression.

Our control rooms are spacious, approximately 24' wide and 20' in depth, clean and well lighted. The windows are positioned to give clear line of sight to all the operations of the plant.

From the PLC console the operator can see his silos and blend train, additive station, truck loading, sample catching and raw material deliveries.

Pull out keyboards on the console allow him to write batch recipes and edit them if necessary before printing. The shipping documents are recorded automatically and print on the printer to his right.

On busy days ticket printing can be done at this desktop work station by a second operator to increase productivity.



PLC Console

Smart-Iron Technologies™

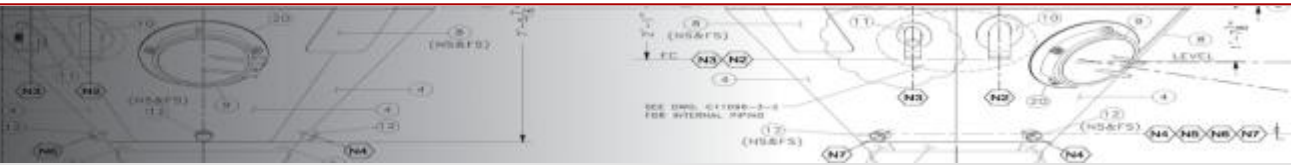
Our consoles and PLC cabinets are manufactured from the finest quality components available. Each one is custom built to represent the actual plant process it controls.

The lighted push buttons and touch screen monitors control the plant in Manual mode. Pull out keyboards are used to write batches or recall them from previous orders in Auto mode.

Auto, Manual and Pause modes can be selected with the switch indicated by the red arrow. In either case all transactions are recorded including operator ID.

Weights, pressures, compressor status and sampling are displayed and recorded in real time.





Here are three things to consider before upgrading your process controls:

1. Choose your controls company carefully. Some integrators can only support certain hardware and software products.

We use Allan Bradley PLC's with Rockwell Control Logix software because it is an American made product and best performs to SMI requirements. We are not reps. for any manufacturer's products. We are able to select the best components available for each process application.

2. Think about how you will use the information from the system throughout your company. Systems integration allows access and visibility to information that can make your organization more aware, responsive and efficient.
 - Managers will be able to see product movement by customer and real time inventories. This can be done from a computer or with any smart device such as iPads and smart phones.
 - Batch recipes can be written remotely and downloaded to the PLC at the plant for processing.
 - Vendors can see the product inventory levels they are responsible for and get reminders when more is needed. This is called VMI (vendor managed inventory). These are just a few examples of what process integration can do.

The transaction information coming from the plant can be programmed to upload to your corporate file server at a convenient time and on a daily basis. The information is compatible with all major operating systems.

3. Think about security. What levels of access do you want your personnel and managers to have on the system?

We will show and guide you through the decision making process with your new system. Process integration mapping is unique to every business.