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## Examples of Industries Served

- Centrifuge Manufacturers
- Pellet Mill Manufacturers
- Heavy Machine Manufacturers
- Irrigation Equipment Manufacturers
- Tool and Die Manufacturers
- Food Service Companies
- Medical Equipment Manufacturers
- Medical Researchers



# Case Study

## Opportunity:

A irrigation equipment manufacturer had a tube mill with an obsolete control system. The 100 feet long mill takes a roll of flat steel and passes it through a series of rollers, welders and saws to make tubes of various



lengths. The controls included three Nematron industrial control computers, a main control computer in a cool room, and a Reliance DCS PLC. The computers were running an outdated version of Wonder Ware software and communicating with the DCS network through an Ethernet loop. Because of this loop, if any one of the

computers failed, then the entire system would crash. Since all the components were of an increasing age these breakdowns occurred with greater frequency. The manufacturer wanted to upgrade the control system, but they also wanted the upgrade to be seamless. The replacement had to take place during a scheduled shutdown and require no training to the operators. The controls had to look and act as if no changes had been made. For a solution, the manufacturer came to CMDI.

## Solution:

CMDI proposed a solution to meet the customer's needs by starting with the replacement of the existing Nematron industrial control computers with new Nematron computers in the same style. To the operator, these stations would look identical.

CMDI also proposed replacing the clean room computer with a new unit to include a faster processor and larger memory.

A new gateway device would be used



to interface the new Ethernet communication with the older Reliance DCS network. This change would provide an added benefit of allowing the mill to continue to function even if one of the computers shut down. In one of the computers shut down, the mill could still be run from the remaining stations.

Finally an upgrade the version of Wonder Ware software to the latest version needed to occur. The Wonder Ware software had to be downloaded from the existing system. It then had to be converted to the latest version of Wonder Ware. This upgrade involved changing every control tag in the existing system to a new protocol that would communicate with the new gateway device. The gateway device then would communicate with the existing Reliance DCS network. This entire process was completed before the scheduled shutdown date.

Once the shutdown date arrived, CMDI had one day to complete the change over. The first step was to make sure the new computers would communicate with each other and also with the Reliance DCS network. After this, the operator station computers were replaced, the mill went through a dry run to check operation and correct any problems. At the end of the day the mill was returned to operation.

The customer now has a control system that is more reliable, easily upgradeable and communicates faster than before. Controlled Motion Dynamics' customer continues to be very happy with the results of this upgrade.

