

System Report

Customer: Wausau Papers
Location: Brokaw, Wisconsin
Equipment: 7 Fork-style AGVs
 ▪ 68" wide x 148" long
 ▪ 6500 pound capacity
1 Flatbed AGV
 ▪ 94" wide x 200" long
 ▪ 24,000 pound capacity
Installed: 1999
Guidance: Inertial
Battery: 48 Volt
 ▪ Sealed Lead-Acid
 ▪ Automatic Charging
Guidepath
Length: 1400 Feet

System Description

The Automated Guided Vehicle System for the Wausau Papers facility in Brokaw, Wisconsin has one battery-powered Egemin Automation Model S701 C350 flatbed AGV and seven battery-powered Egemin Automation Model S701-C565 fork-style AGVs.

The AGVs follow a virtual guidepath as they move paper rolls within the facility. The fork-style AGVs automatically move paper rolls from winding to either broken roll storage or one of the intermediate roll storage areas. The flatbed AGV moves paper rolls between four winders. The flatbed AGV is manually loaded and unloaded by an operator and overhead hoist.

Each AGV has an on-board microprocessor that controls the AGV and communicates with an external control system. This processor determines the AGV's location by



**6500 pound
capacity forked
AGV**



**24,000 pound
capacity flatbed
AGV**

taking input from encoders, a gyroscope and a magnet reader. The AGV routes itself to destinations determined by Schlafhorst's external control system, called the Vehicle-Facility Manager (VFM). The VFM determines what product movements are necessary by monitoring hand-held input devices. The operators use these devices to dispatch the vehicle to the correct pickup point and delivery point. Using spread spectrum communication media, the VFM receives information from the hand-held devices and transmits these movement requests to the vehicles.

The fork-style AGV is powered by a 480 AH, 48 volt, sealed lead-acid battery. The flatbed AGV is powered by two 540 AH, 24-volt, sealed lead-acid batteries wired in series to supply 48 volts. An automatic charge system on board allows the AGV to automatically interface with one of the external battery chargers when necessary.

Special Features

- Deep-lane storage functionality
- Side IR sensor to check lane storage availability

