



Application Story: Maus / Webb Wheel

WEBB WHEEL "TURNING" OUT MORE DRUMS AND HUBS AT NEW FACILITY

At the OEM Trailer Business Unit of Webb Wheel Products, Inc., a new 100,000 sq. ft. facility in Tell City, Indiana, they manufacture brake drums and hubs for the heavy-duty trailer market. Founded in 1946, the company is a major supplier to OEM trailer manufacturers, serving its customers nationwide. At the heart of the Tell City plant are 16 Maus machining centers, used for turning, drilling, grinding and marking ductile iron and gray iron into the brake drums and hubs produced here. Maus is an Italian machine builder, represented in the United States by the ReichCompanies of Trussville, Alabama.

In designing the plant, according to Webb Wheel's David Link, vice president of manufacturing, there was great emphasis placed on total control of the overall metal machining process. Plus, Webb Wheel utilizes a unique material handling system, which needed to be linked to the machining center control panels for integrated part movement.

Webb Wheel's products include cast brake drums in over 400 styles, ranging in sizes from 12.25" x 6.00" to 18.00" x 8.00"; transit drums, both vented and ribbed design; BTS (Brake Turbine System) drums up to 16.50" x 8.62" for use with Lynnfin brake turbines; trailer, drive and steering axle hubs; standard and ABS rotors, plus spoke wheels of many types. Drums and hubs are manufactured at the Tell City plant, opened at year-end 2004 and headed by Kent Finkbiner, president, to suit the high-volume requirements of Webb's OEM business. The facility is organizing to achieve ISO 9001:2000 certification.

The Maus machining cells are all controlled by Siemens SINUMERIK 840D CNCs, where each is used to monitor axis movement, spindle movement, rotary table positions, transfer lines, ancillary robotics, CMM probing and

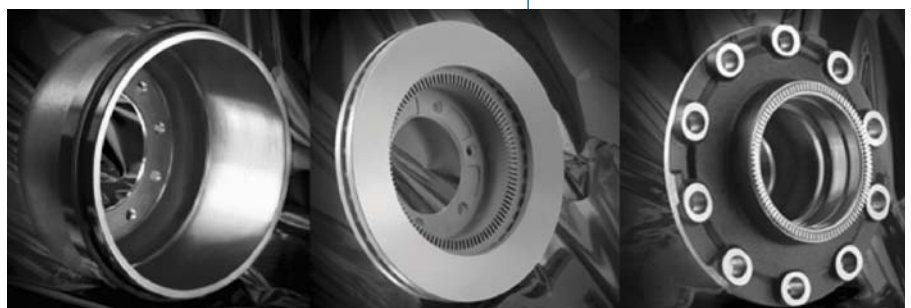
laser detection orientations. The 840D is a sophisticated CNC system that offers a wide range of specialized functions for milling, drilling, turning, grinding and material handling technologies. Its control capabilities also include nibbling, punching and laser-machining processes. The SINUMERIK 840D offers users innovative features that increase productivity on the manufacturing floor, especially the challenging segments of high-speed and five-axis machining. These features include the ability to assign various axes and spindles to one CNC in sequence and link to multiple inline operator panels. Also, a Windows XP or Windows NT operating system can be utilized, plus the CNC can run ancillary robotics, transfer lines, even unattended, lights-out mode laser detection devices.

At Webb Wheel, each machining cell can be programmed with the entire work cycle program for the particular hub or brake drum being produced, sequentially. When a changeover is required, the process has distinct advantages in time and movement efficiencies, as Sandra Selwan, marketing manager for Maus, explains. "When we change production on the cell, we simply create screens for the operator. On these screens, the operator can answer "yes" or "no", in most cases. The standard program on the

Above left: Maus MTV high-volume for Webb's OEM trailer manufacturing customers.

Above right: Maus MTC vertical turning centers feature 36-position tool changers for fast response and machining flexibility.

Below: Typical Webb Wheel products include brake drums, hubs and rotors.





Siemens CNC interprets the answers and pre-disposes the cell for the new part." Further, in terms of logistics, David Link makes special mention of the remote controller, used with the CNC. "The Siemens HT6 handheld device allows the operator to interact with the host control panel from various locations on the cell. This is extremely helpful."

Webb utilizes both the Maus MTV high-volume machining cells and the Maus MTC vertical turning centers with 36-position tool changers, for its hub and brake drum production. According to Webb sources, this gives the Tell City plant great flexibility, while reducing its response times for special orders.

In commenting on the Maus machines and Siemens controls specifically, David Link observed, "The large, user-friendly control panels are a real plus for our operators. The SINUMERIK 840D gives us great versatility for advanced programming right at the control and the large memory capacity is ideal for managing the multi-function work cells especially. We utilize a gantry system to move product from one operation to the next in our work cell. The Siemens CNCs are controlling and calculating the functions of both the work cells and the material handling system." He also noted the end-user support Webb Wheel received onsite from Siemens in their training classes "has proven very instrumental in the development of our Tell City workforce."

Webb Wheel uses other controls on the machining cells and work centers in its other facilities, but chose Siemens, after a thorough review, done in partnership with Maus, the machine builder.

Maus vertical lathes are built as single-station, dedicated operation machines, intermediate work cells and turnkey production lines. The builder currently utilizes Siemens controls on all machines built. Maus was founded in 1986 and also supplies fettling machines to the foundry industry, as well as special-purpose equipment of many types. ■



Tell City, IN facility of Webb Wheel houses the OEM Trailer Business Unit.

Siemens SINUMERIK 840D is the CNC onboard all Maus machines at Webb's Tell City facility. Control all aspects of machining, plus transfer lines, ancillary robotics, CMM probing and laser detection orientation.

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