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Press Release

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IMMEDIATE

MTA Metro-North Railroad Shows First Tandem Wheel Truing Lathe in North America

A new machine that keeps train wheels perfectly round for a safe, smooth ride has been installed at the Harmon Shop, Metro-North Railroad's largest maintenance facility located in Croton-on-Hudson, NY.

The tandem, underfloor wheel truing lathe was demonstrated today to representatives from transit agencies all over the country eager to see the new, state-of-the-art technology. It "trues" two axles at once, twice as fast as existing machines and the first of its kind in North America.

"This state-of-the-art wheel true will greatly increase our ability to service the fleet all year long and allow us to service wheels before defects develop," said William G. Duke, Metro-North's Assistant Vice President for Maintenance of Equipment.

Wheels must be "trued" when a defect is found during scheduled inspections or when an engineer reports a defect during operation. The most common defect is flat spots, which occur during emergency braking or in autumn when wet, fallen leaves create slippery rail conditions that cause wheels to skid. In addition to flat spots, wheels can develop thermal cracks on treads, flange defects and "shelling" spots, or flaking of the wheel tread. All these conditions require a wheel to be trued.

Because propulsion and braking systems on the newest M-7 trains are so much more sophisticated than on old rail equipment, the diameters of all four wheels on a "truck" must match. (A truck is a pair of axles that function as a single unit.) Even if just one wheel is flat or has another defect, the other axle wheel set also has to be trued to maintain consistent diameters. The new lathe rounds all four wheels at once within extremely close tolerances so that their diameters are all precisely the same and no extra steel is lost in the process. (A lathe is a rotating machine with a hardened metal cutter that slices steel off the wheel.) A wheel lasts 2-to-3 years before it is too worn for use and it is sent to the steel recyclers.

Experts from the railroad and the wheel true manufacturer, Simmons Machine Tool Corp., of Albany, NY, were on hand to explain features and performance characteristics.

The machine, housed in a new building at the 100-acre rail yard, is capable of simultaneously measuring and then truing all four wheels on a "truck" at once. All wheels are cut to a common dimension. "Truing" is necessary for a safe, smooth ride.

The machine will supplement two, existing single wheel-true machines at Harmon.

The tandem machine employs both moveable and stationary parts and can operate on all sizes of wheel sets and trucks. The machines operate in tandem via state-of-the-art microprocessor controls and communicate with each other so that cuts are made uniformly and synchronously. The machine's computer automatically checks the wheel profile data, eliminating the need for manual measurements with a micrometer or wheel gauge.

The new, \$4.2 million tandem wheel true is housed in a pre-engineered steel building long enough to hold a pair of rail cars with an added 100 foot canopy for additional weather protection. The building is equipped with a 30-foot inspection pit and a 3-ton crane. So while the wheels are being trued, which takes about 90 minutes per truck, related calibrations, tests and adjustments can be accomplished. The building, which was completed in September at a cost of \$14.7 million, has skylights to maximize natural daylight to reduce energy costs and improve work ambiance.

The demonstration was sponsored jointly by the railroad and the National Transportation Quality Consortium (NTQC), an organization of public transportation agencies formed about 15 years ago with the purpose of sharing information and improving the quality level of service providers - manufacturers, contractors and consultants.

The Consortium consists of volunteers from; MTA New York City Transit, San Francisco Bay Area Rapid Transit, Los Angeles County Metropolitan Transportation Authority, MTA Long Island Rail Road, Washington Metropolitan Area Transit Authority, MTA Bridges and Tunnels, Massachusetts Bay Transit Authority, Amtrak, NJTransit and MTA Metro-North Railroad.

The NTQC, chaired by Robert Stumberger, Metro-North's Senior Quality Systems Administrator, is currently talking with the American Public Transit Association about establishing the first quality technical committee within APTA.