

# NSH USA & NSH Group

## NSH USA and the NSH Group: Dedicated to Continuous Improvement

### Railway Wheel Boring and Machining



NSH USA Corporation (Albany, New York and Sterling Heights, Michigan) and our partner companies in the NSH Group (Niles-Simmons-Hegenscheidt) understand that ‘good enough’ is never good enough. Consequently, we regularly update our machinery to better meet customer needs as well as ever-evolving industry safety, production and environmental requirements.

One example of this process is evident in our wheel boring and machining product line. Over several decades aspects of the design have evolved to increase performance. For instance, the cutting tool in our previous wheel borer, the Simmons WMC-200, utilised an electronic boring bar. The current machine, the Simmons WTC-250, employs single-point tooling with an automatic tool changer for increased versatility. The

cutting tool is clamped in a vertical ram mounted on a bridge which straddles the wheel for optimal stiffness.

The table for holding or ‘chucking’ the wheel during machining is another enhancement. Our design automatically chucks a wide range of wheel diameters (roughly 300mm) without manually changing the chuck jaws. Older versions of the machine required the

operator to manually reposition heavy chuck jaws if the wheel diameter exceeded the narrow chucking range of the previous jaw setup.

With the evolving landscape of operator safety concerns, our modern designs prioritise chip management and containment. Our guarding and covers keep the operator safely removed from the machining operation while also keeping the flying metal chips inside the machine.

The addition of integrated measurement and probing is also a recent development – it allows for a more precise machining process while also allowing better access to wheel set data.

Despite these innovations, the purpose-built design for railway wheels remains a constant. All computer controls are GUIs (graphic user interfaces) that are easy to understand and do not require an extensive knowledge of machine tool programming language.

The Simmons wheel boring and machining product line will continue to be improved while maintaining a robust and dependable reputation that Simmons machines are known for.

## Automated Material Handling for Maintenance Depots

Increasing safety in railway wheelset maintenance facilities means decreasing the shop personnel's direct interaction with the work pieces such as wheelsets, wheels, axles and bearings. Not only does this change have safety benefits, but modern material handling processes are often more efficient than old technologies such as fork trucks or manual overhead cranes.

NSH USA employs a wide range of automated material

handling solutions tailored to best meet a facility's production, safety and budgetary goals. This is not a 'one size fits all' offering – facility layout, personnel quantity and capabilities, and work piece variety must all be considered when designing automated systems.

Elements of our design have evolved over time to match advancements in technology and to incorporate lessons learned during practical implementation. Updates in end effector design as well as changes to the design footprint have all positively impacted the process.

Another benefit of utilising automated material handling is that they can often be seamlessly integrated with the machine tools performing the work, allowing work piece information, measurement data and other vital data to transfer digitally throughout the shop. This decreases the chance for operator error, associated with entering the data manually. It also allows easier access to the data for analysing production data and work piece trends.

NSH USA is a turnkey, 100% integrated partner on the project. All phases of the turnkey process (design, manufacture, install, commission, train and post-sales support) are handled with NSH USA as the single point of contact.

From fully automated overhead gantries to conveyors and rotating loaders, NSH USA has an automated material handling solution tailored to fit your facility.

[nsh-usa.com](http://nsh-usa.com)

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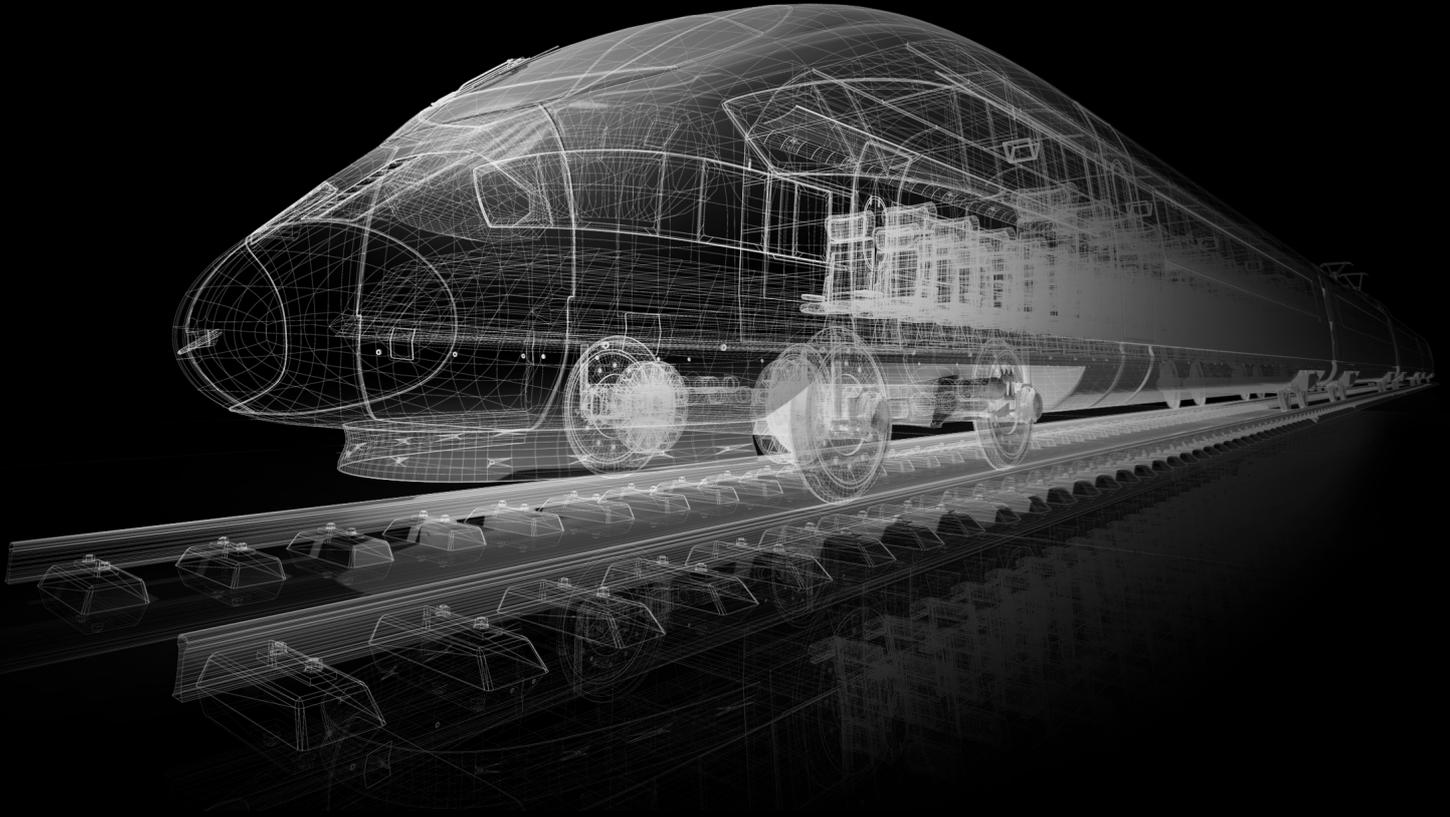
[sales@nsh-usa.com](mailto:sales@nsh-usa.com)



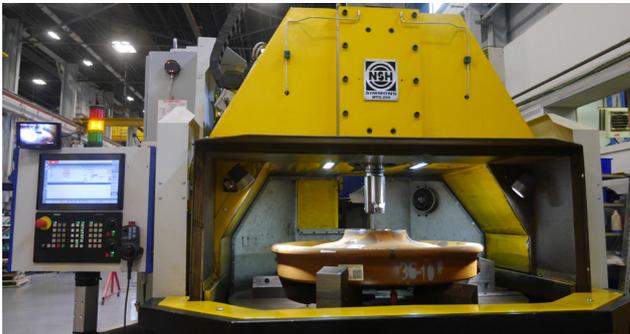


# NILES-SIMMONS-HEGENSCHEIDT

## MACHINE TOOL MANUFACTURING

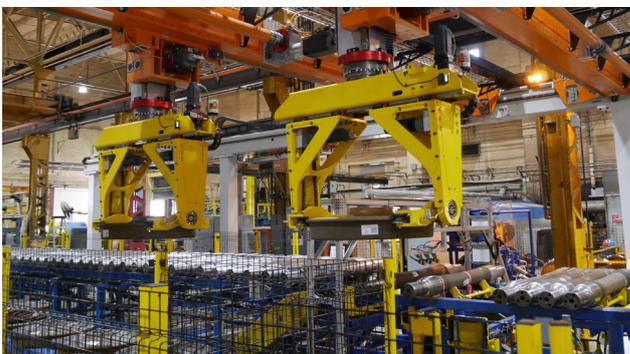


## Industry Leaders in Wheel Set Production, Maintenance & Automation



### Railway Wheel Boring and Machining

- Purpose-built for railway wheel boring and machining
- Integrated measurement for increased precision and decreased misfits
- Automatically chucks wide range of wheel diameters without operator intervention



### Automated Material Handling for Maintenance Depots

- Custom designed to meet safety, production, and budget goals
- Can be configured for new or existing facilities
- Capable of heavy payload automation