

CASE STUDY



World leading producer of copper-based alloys selects Doerfer's Wheelift Transporters for

use within their 1,700 acre complex producing sheet & strip products for U.S. coins, automotive, electronics, and even musical instruments.

Challenge: To perform 5-minute swap-outs of a matched mill roll set in a plant environment challenged with oily floor buildup, concrete heaves, and floor debris.

First time - every time - 365 days/year.

Solution: Provide a man-aboard 120-ton GVW Wheelift Transporter with dual load extractors. One position is to extract worn roller set on. The other position has a new roller set staged for press insertion once the Transporter crabs sideways approx. 52" from its roller unload position to its roller load position.

Benefit:

- 5-minute roller set swap-out
- Increased mill line efficiency
- Controlled work process





A Doerfer Companies' Technology

In 1992, a major corporation built a new brass rolling mill in southern Illinois. One of the innovative new systems installed at that time was a totally unique, very heavy capacity; multi-axle, Transporter in the form of a Mobile Roll Changer designed to carry matched mill rolls to the operations area, then automatically removed worn rolls from the rolling mill and install the new or reconditioned ones.

The "mobile roll changer" was a totally untried new concept that used fluid equalizing suspension and computerized steering to control six heavy capacity, on-center rotation, solid urethane tired, axle assemblies. Each first-of-their-kind axle assemblies were rated at 40,000 pounds carrying capacity, for a total gross load capacity of 240,000 pounds, or 120 tons.

Each of the Transporters has six on-center rotation axle assemblies. With their 3-point fluid equalizing suspension, the axles have interconnecting fluid lines that divide them into load sharing groups to assure that every wheel carries only its specific share of the load, regardless of variations, slopes, and irregularities in the floor surfaces. Floor loading is dispersed with ground pressure loads spread over a wide footprint.

compliance, and side-by-side roll set extractor shuttles powered by a low pressure on-board hydraulic system. The power package is a small GM engine converted to LP gas.



The Wheelift module provides capacity along with a degree of flexibility not obtainable through other technologies. Worldwide niche markets drive manufacturing flexibility for product customization and configurable work processes. Wheelift Transporters and AGVs facilitate this requirement.

Manufactured in Iowa, **Wheelift** Transporters and AGVs are custom developed to each application including close positioning die loading, roll transfers, assembly, and general material handling. Load deck and fixturing is built to suit with load capacities to 500+ tons and deck heights as low as 18". Power options include LP gas, diesel, battery, or on-board generator. Electric or hydraulic drives are standard. For more information on our Wheelift Transporter and inertial/wire guidance AGV systems, please visit us at www.wheelift.com



Process-driven features include a system monitor, on onboard driver station, 3% slope capability, 5" vertical travel for self-loading and surface

Headquartered in Iowa, **Doerfer** develops application specific, custom manufacturing systems and machinery - many which revolutionize the way our customers manufacture, assemble, move, package, and test their products. We thrive on your toughest process challenges for manufacturing. For more information on our capabilities, please visit us at www.doerfer.com

