

CASE STUDY



Manufacturer of off-road mining equipment discovers Doerfer's Wheelift Omni-directional Transporters for use

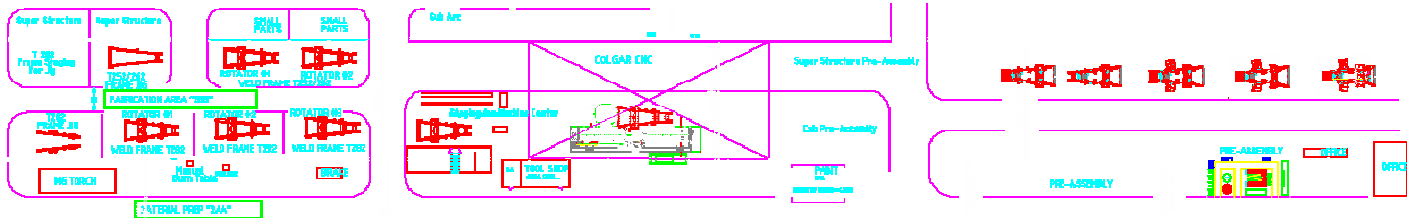
throughout their production facility complex for WIP movement between welding stalls, subassembly, and outside passage to paint facility.

Challenge: To reliably move a high CG load, provide end and side accessibility to work stalls facilitating use of existing tool setups, and keep a low profile to minimize work platforms and accessibility ladders.

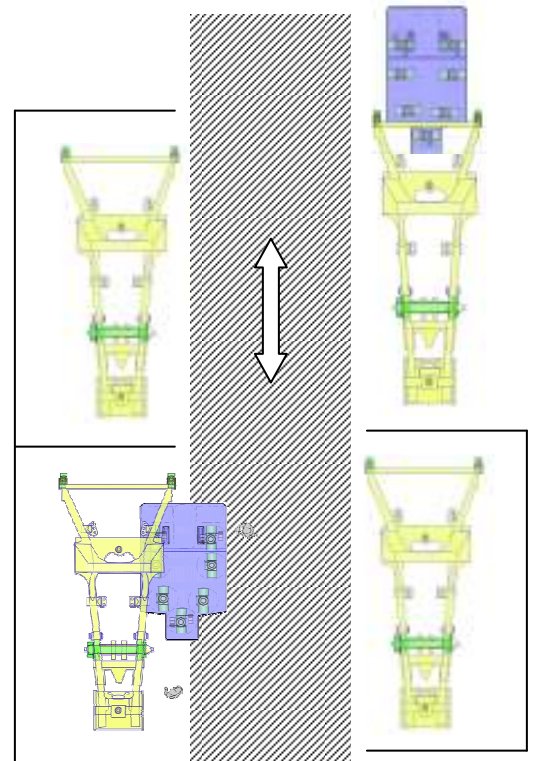
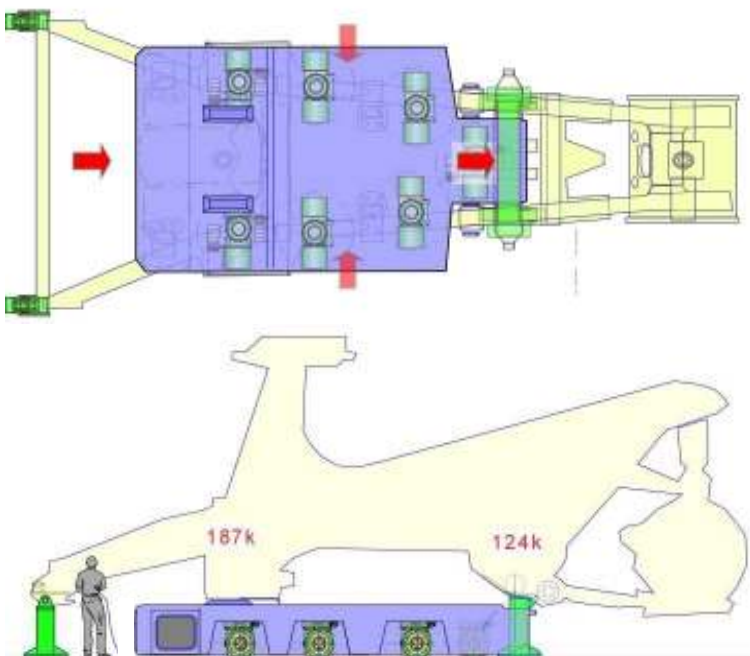
Solution: Provide one self loading 180-ton capacity low-deck wireless Transporter.

Benefit:

- Increased process equipment productivity
- Increased labor productivity
- Increased plant utilization
- Process flexibility through elimination of inflexible rail transfer carts and overhead cranes



This transporter will enter from the front or either side.



A world leading producer of mining trucks was experiencing increased product demand, and anchored in a tight skilled labor market. Productivity options were evaluated, and the non-value added time to transfer product between work stations was identified as having the greatest opportunity. The existing method of using wheeled dollies and tugs was tedious, time consuming, and had levels of risk associated with the safe operation and hookup of the equipment for the ever increasing amount moves required as production levels ramped up.



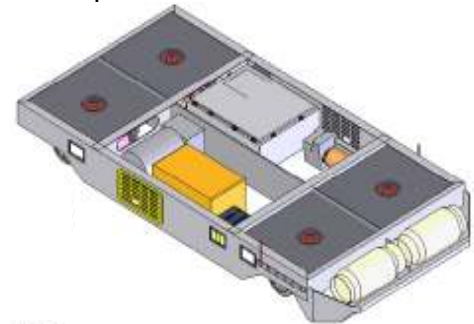
A single low profile Transporter was envisioned to support WIP accessibility and existing process equipment. Two common pickup points on the frame provide a stable position for load balance in the fore/aft and side/side orientation allowing Full Transporter movements in all directions.

Process-driven Transporter features include a flat deck at 18" for product access from any direction, 3% slope capability, 5" vertical travel for self-loading and surface compliance, weatherproofing for outdoor travel to paint, umbilical cord power backup cable, wireless control, and fire suppression plan.



A joy stick pendant control provides control of all Transporter movements in one, easy to use interface.

Each of the Transporters has four 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.



The **Wheelift modular chassis** provides 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

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