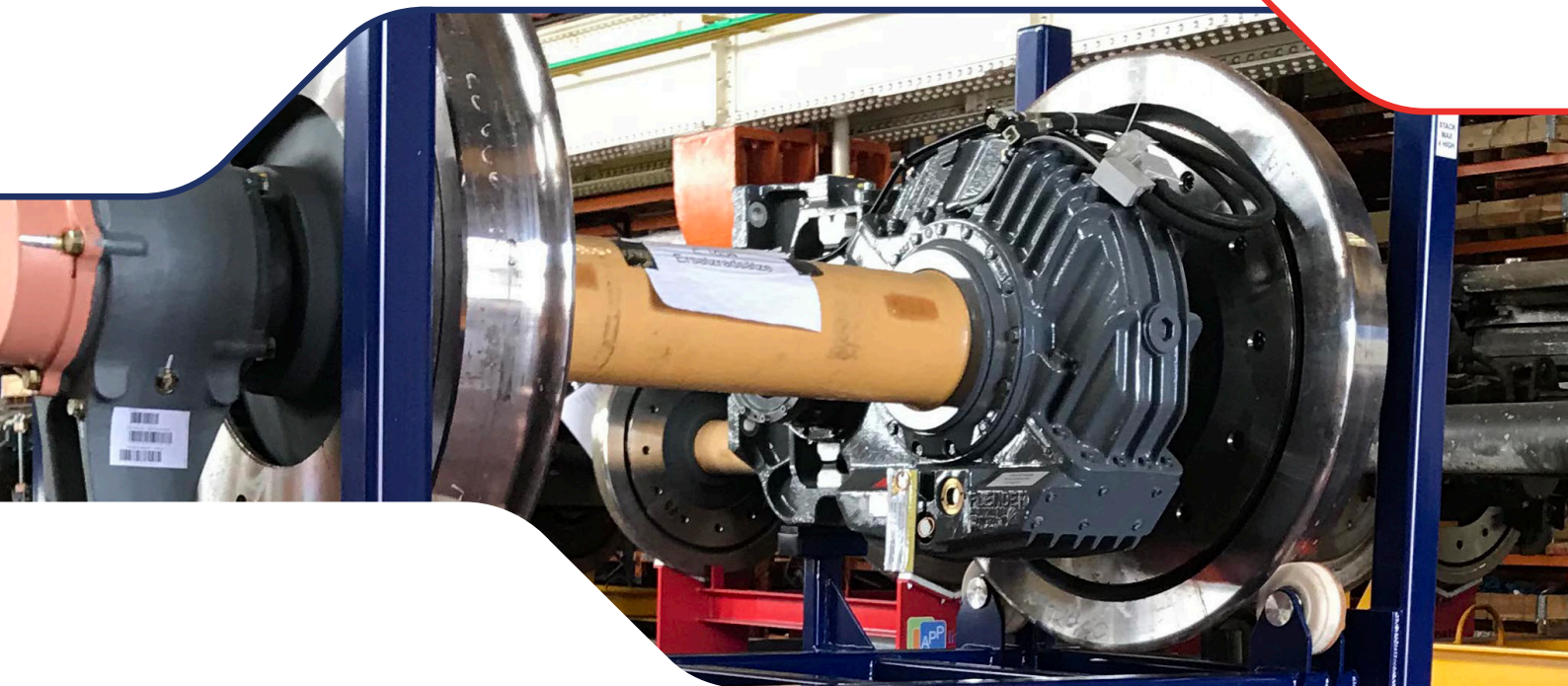




Midas 4T Dynamic Wheelset Carrier Systems to enable wheel rotation in storage

The Challenge

The storage of wheelsets has traditionally been on racking that does not allow for the easy inspection and rotation of the wheels. Increasingly train builders and maintainers need to rotate the wheels to prevent the potential risk of brinelling* of the bearings in storage. A wheelset stacking unit to enable wheel rotation whilst in storage requires a different solution to the traditional designs that had been used for many years.

The Solution

The approach that the Ferrartis design engineers took was to replace the existing static polypropylene faced chocks with industrial cast iron castors and inclined them to suit the wheelset running profile. This design proved that the concept worked but there were further engineering improvements that were also possible.

Ferrartis designed a custom made roller and after CNC prototypes were made and proved, a mould was commissioned for the mass production of the rollers. Installation of deep groove ball bearings into the CNC machined moulded rollers was a further design enhancement.

* Brinelling is a process of wear in which similar marks are pressed into the surface of a moving part, such as bearings or hydraulic pistons. The brinelling is usually undesirable, as the parts often mate with other parts in very close proximity. The very small indentations can quickly lead to improper operation, like chattering or excess vibration, which in turn can accelerate other forms of wear, such as spalling and galling.



**Space Saving
/ Utilisation**



**Safety
Improvements**



**Cost
Reductions**



**Environmental
Savings**



**Asset
Protection**

The Result

The very strong wheelset storage unit with Ferrartis custom made rollers enables one person to rotate the wheels, even on powered wheelsets. The unit is maintenance free as the bearings are sealed for life and when used in combination with Ferralon 2TX rollers, the wheels can be rotated very easily. The frame design can be made in a range of dimensions to suit the different manufacture's wheelset configurations.

There are significant labour savings due to eliminating the need to remove the wheelset from storage to periodically rotate the wheels which would involve the use of additional lifting equipment.

The construction of the frame allows for wheelsets to be stacked 4 high when loaded which enables the storage area to be used much more effectively.



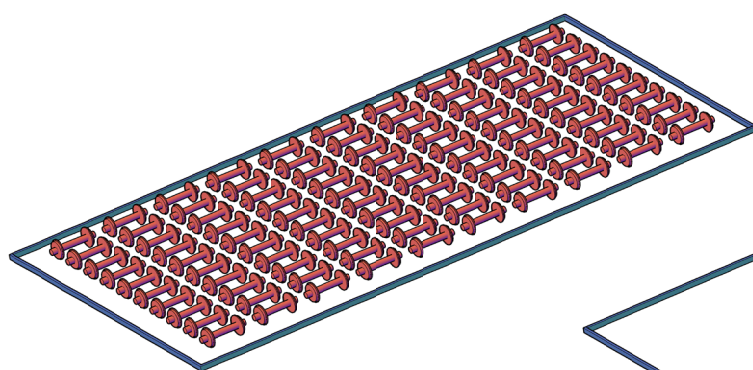
**SAVING OF
STORAGE SPACE**



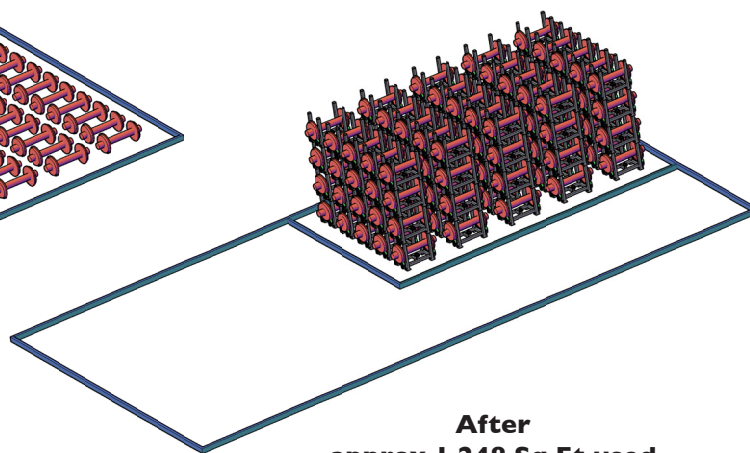
**REDUCTION IN
FRAME MAINTENANCE**



**REDUCTION IN
STORAGE COSTS**



Before
approx 4,277 Sq Ft used



After
approx 1,248 Sq Ft used

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