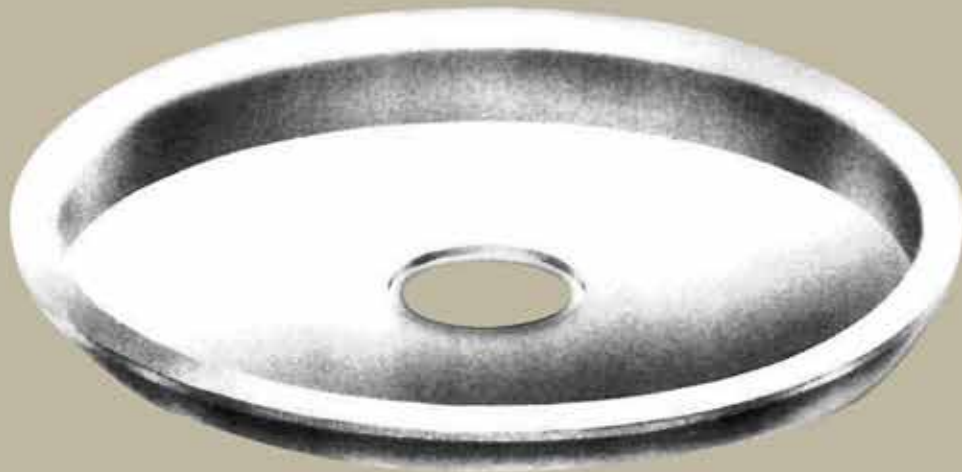


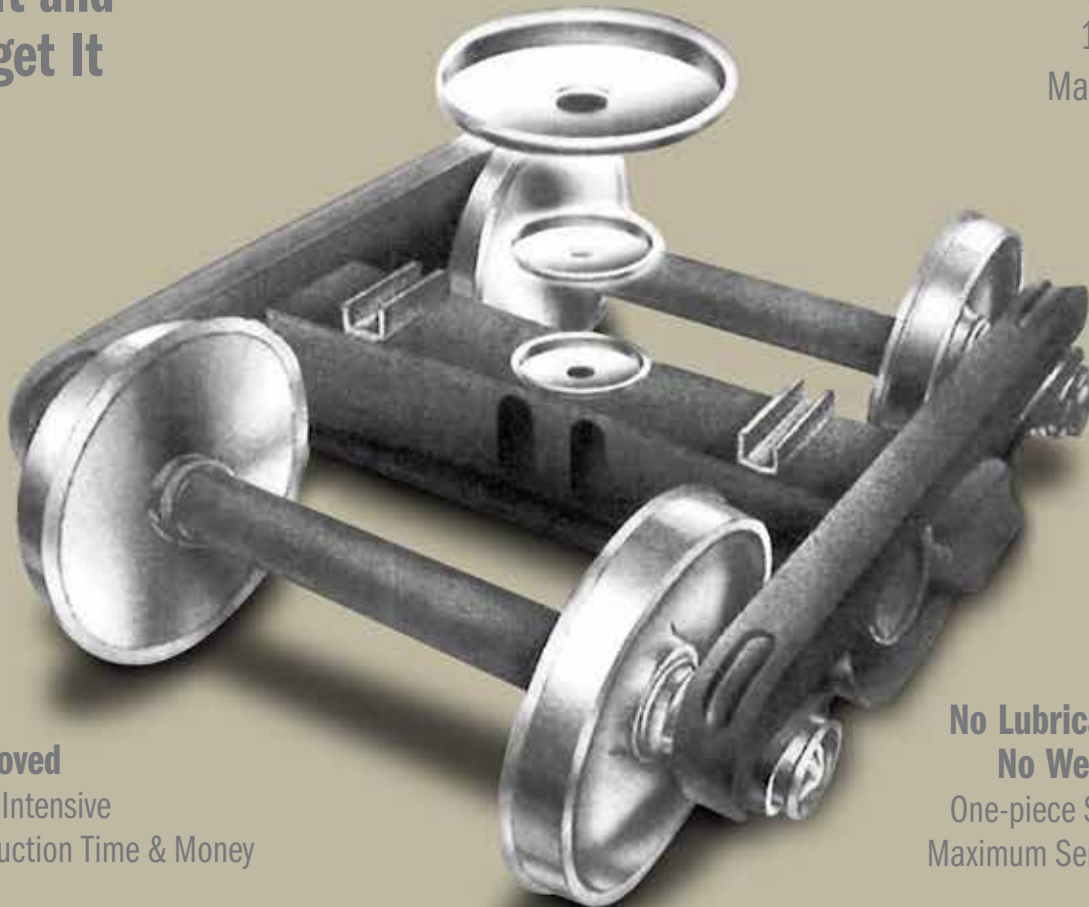
Rol-Man[®]

Revolutionized Bolster Cup Technology



**Set It and
Forget It**

Original Hadfield
11% to 14%
Manganese Steel



AAR Approved
Less Labor Intensive
Saves Production Time & Money

No Lubrication Required!
No Welding Required!
One-piece Solid Construction
Maximum Service Performance



Rol-Man®

Revolutionized Bolster Cup Technology

Astralloy's patented Rol-Man® Flanged Bolster Cup is produced from 11% -14% manganese steel, AAR approved, and unique in simple design. Its innovative-flanged rim offers greater coverage and structural integrity where you need it most.

No other combination of elements approaches the toughness, strength and wear resistance of Hadfield's original manganese steel formula.

Any steel that does not closely conform to the following chemical analysis is not true (11% - 14%) manganese steel.

Manganese	11.0% – 14.0%
Carbon	1.0% – 1.4%
Silicon	0.10% – 0.30%
Sulphur	0.01% – 0.03%
Phosphorus	0.06% Max.

Typical Rol-Man® Physical Properties

Tensile Strength	Yield Strength	Elongation in 2"	Hardness as Furnished	Work-Hardened
150 ksi	65 ksi	45 %	180 – 220 BHN (90-96 Rockwell B)	500-650 BHN (55-65 Rockwell C)

Rol-Man® rolled and forged manganese steel exactly follows this analysis.

The Rol-Man® Flanged Bolster Cup is AAR approved under the provisions of S-3004. The approval process took several years of testing, tracking, and reporting of the cups' superior in-service performance. Test cups in freight service have exceeded one million miles of satisfactory performance without replacement.

Installation, maintenance or replacement is greatly simplified and extremely cost effective. Simply SET IT AND FORGET IT. No time

consuming welding is required.

The Rol-Man® Flanged Bolster Cup is tough, hard, and thrives on severe wear. It can be expected to last the life of the rail car.

No lubrication is necessary with fully austenitic 11% to 14% manganese steel.

To ensure longer bolster cup life simply specify "Astralloy Rol-Man® Flanged Bolster Cup" - Accept no substitute.