

Western Pacific Railroad 6424

Steel Coil Gondola Freight Car

This tiny gondola is among the most historically important freight cars in the WPRM collection. Its wheels, specifically the bearings that hold the wheels, represent a sea-change in railroad technology.

From the earliest days of railroading, friction where the rotating axle attached to the framework holding wheelsets, referred to as a “truck,” had been a major issue. A type of bearing device, called an “oil waste journal” and commonly referred to as a plain or friction bearing, quickly became the standard for axle bearings. It consisted of a bearing surface which supported the end of the axle. Lubrication was supplied by wick elements, referred to as “waste,” that reached into an oil reservoir and carried oil to the bearing surface. These were prone to failure, through loss of waste, wear on the axle or bearing surface, low oil, etc. When a failure occurred, the bearing would heat up and fall apart, a condition railroads referred to as a “hot box.”

Starting in the 1920s, the Timken Company began promoting a “roller bearing” for railroad applications. This bearing required very little lubrication, created less friction and was touted as a money and fuel saving device. While some steam locomotives and, by the 1940s, many passenger cars received roller bearings, the railroads felt they were not worth the cost for freight cars.

The Sacramento Northern Railway, a WP subsidiary, served a US Steel mill in Pittsburg, California. When the WP needed to expand its fleet of steel coil cars for this mill, they decided to improve on the gondola cars usually used in such service. They purchased 100 of these short mill gons, a design that would end up being unique to the railroad. Since the coils were so heavy, they overloaded the typical 45' to 50' long cars before they were full, so the builder made the new cars very short for less wasted space.

Most significant was the application of roller bearings. These cars were the first large batch of production freight cars built with sealed roller bearing trucks. WP was at the forefront of this revolution, which was so important that the cars were delivered with a special "Roller Freight" logo, which was recreated when the car was repainted a few years ago. Today, the old “plain bearings” are illegal for regular rail service and the roller bearing reigns supreme.

builder

Greenville Steel Car

built

September, 1953

type

GBS Mill Gondola

length (inside)

29 feet 4 inches

capacity

140,000 lbs.

operating weight

46,800 lbs

acquisition

donated by
Union Pacific