My fascination with trains began at an early age. I always had dreams of working on a steam locomotive. The odor of hot valve oil and the hiss of live steam had an intoxicating effect on me. Right out of high school, I achieved my goal. In March 1940, I went on the payroll as a locomotive fireman for the McCloud River Railroad.

This was a short-line common carrier in northern California, which connected with the Southern Pacific Railroad at Mount Shasta (formerly Sisson) and with the Great Northern Railway at Lookout. Besides hauling outbound loads of forest products, the railroad hauled logs to the huge McCloud River Lumber Co. sawmill in the company town of McCloud.

When I started work, the railroad boasted a roster of eight 2-8-2 and six 2-6-2 locomotives. Many enginemen, “boomers” (itinerant railroaders) and otherwise, came and went on the railroad. Being a “home guard” myself, I stayed on and was promoted to engineer in 1948, two years after returning home from the war. (I served in the U.S. Army’s 745th Railway Operating Battalion as a locomotive engineer on the Bengal & Assam Railway, a meter-gauge line in India.)

For an inexperienced eye, it is rather difficult to distinguish a Baldwin 90-ton 2-8-2 from the same manufacturer’s 70-ton model, as they appeared pretty much alike at first glance. It could be said, however, that the 70-tonner looked like a junior edition of its 90-ton sibling, all of which I ran on the McCloud River.

Close inspection revealed a number of differences. First, the 70-tonner’s boiler was a straight-top cylindrical affair. The trailing wheels were typically the same diameter as the leading-truck wheels. Designed to carry a greater load, the trailing wheels on a 90-tonner were larger in diameter than the leading wheels (36 inches at the rear and 28 inches at the front).

A 70-tonner’s firebox was long and narrow and fit between the frame rails, extending forward to a point over the rearmost driving axle. In contrast, the firebox on a 90-tonner was wider than the gauge between the driving wheels, and thus was placed atop the main frame behind the fourth pair of drivers.

The 90-tonner’s Baldwin class descriptive listing was 12-34¼-E. To decipher this quaint code, we must know that the “12” stands for the total number of wheels beneath the locomotive. Before we learn how those 12 wheels are deployed, the class listing reports the cylinder diameter: “34” represented 20 inches – the diameter of the cylinders less three, and then double the result, i.e., 20 – 3 = 17 x 2 = 34. The “¼” signified that the locomotive had a two-wheel trailing truck, and the “E” indicated eight driving wheels.

Baldwin’s Class 12-34¼-E applied to many 2-8-2 locomotives regardless of their driver size, boiler size, and total weight – so long as their cylinders were 20-inch bore. The reason why Baldwin placed so much emphasis on noting the cylinder dimensions was because they determined how much work the machine could perform, which was of great importance to the purchaser.

What I’d call the “true” 90-ton 2-8-2 was built with 20-by-28-inch cylinders, 48-inch drivers, and 180 pounds-per-square-inch working steam pressure, resulting in good-steaming, reliable machines.