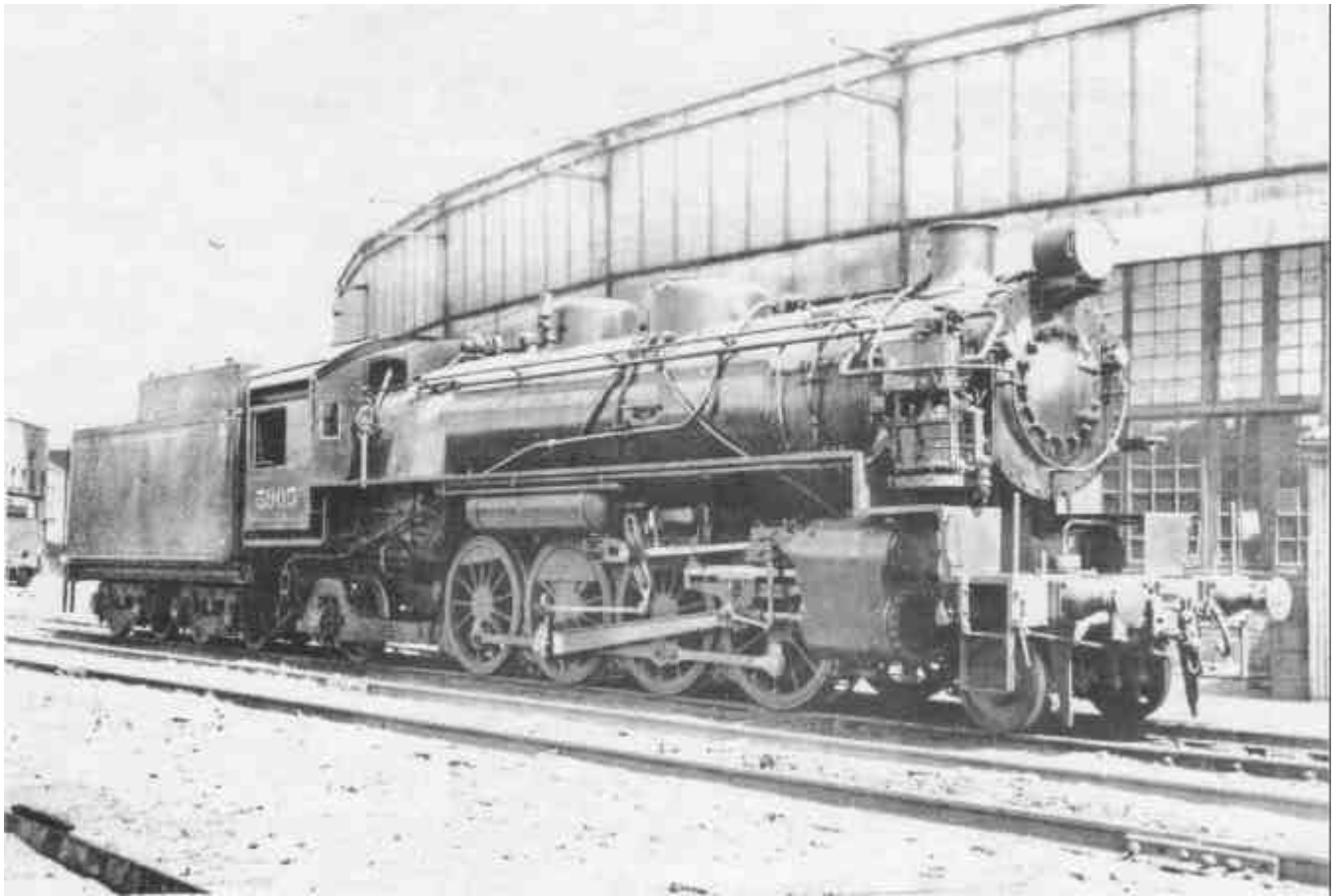


New South Wales Government Railways

(302)



BALDWIN LOCOMOTIVE

Twenty Baldwin oil burning locomotives have been obtained from the Baldwin-Lima-Hamilton Corporation in the United States of America for the Department of Railways.

The design of these locomotives is similar to those constructed during the last war for service in Europe, the main difference being that the tender has been built so that the engine and tender can be turned on a standard 60ft. turntable.

The Baldwin has the 2-8-2 or "Mikado" wheel arrangement. It is the first tender engine of this type to be operated on the New South Wales System.

Like the Department's Garratt locomotive, the Baldwin locomotive has an axle load of only 16 tons and hence it has a wide range of usefulness where the tracks are not of first class mainline standard.

The new engines are the first Baldwin built locomotives obtained by the Department since 1905 when 20 P.6 were imported. Now, however, they are the C.32 class. The new Baldwins are classified as D.59 and carry the numbers 5901 to 5920.

Features of the design are that the engine frame is cast steel with integral cylinders which are fitted with renewable steam chest and cylinder liners, inspection plug, steam operated cylinder cocks, and automatic water release valves.

Other equipment includes air sanding apparatus, Pyle National electric lighting for head and auxiliary lights, chime whistle, Nathan lubrication to steam chest and air pump, automatic couplers, and sand box on top of boiler.

The engine is provided with laminated springs compensated through the coupled wheels on each side.

The cab has large size windows and has been equipped with upholstered seats with book rests.

Particulars of the Baldwin Locomotive

Cylinders.....	2 outside 21" x 28"
Valves.....	Piston 10"
Valve gear.....	Walschaerts

Reverse gear..... Manual

Wheel diameters:

 Leading track..... 2 ft. 6 in.

 Coupled..... 5 ft.

 Trailing truck..... 3 ft. 6 in.

 Tender..... 3 ft. 1 in.

Boiler: round top..... 5 ft. 8 in.

Heating surface:

 Firebox (welded construction)... 162 sq. ft.

 Flues (30 5¼" diameter)..... 735 sq. ft.

 Tubes (139 2" diameter) 1,250 sq. ft.

 Superheater (30 sets 1½" dia.).. 623 sq. ft.

Grate area..... 47 sq. ft.

Pressure..... 200 lbs. sq. in.

Tractive power (85% B.P.)..... 35,000 lbs.

Weight:

 Engine - adhesion..... 64½ tons

 other wheels..... 25 tons

 Tender..... 62½ tons

 Total weight..... 152 tons

Wheelbase:

 Coupled..... 15 ft. 9 in.

 Engine..... 32 ft. 9 in.

 Tender..... 15 ft. 11 in.

 Total..... 58 ft.

Length overall..... 67 ft. 5½ in. over
coupled faces

Width..... 9 ft. 8 in.

Height over chimney..... 13 ft. 6 in.

Throttle - Superheaters C os "A" Multiple Valve

Safety valves..... Two 3½ in. muffled pop

Injectors..... Two Nathan type, each
capable of 3,320 gallons
per hour.

Burners (oil)..... Latest "Southern Pacific"
system standard

Brakes.(Engine and tender)..... (American) 6 ET

 (Tender)..... Hand

Compressor..... Compound.
