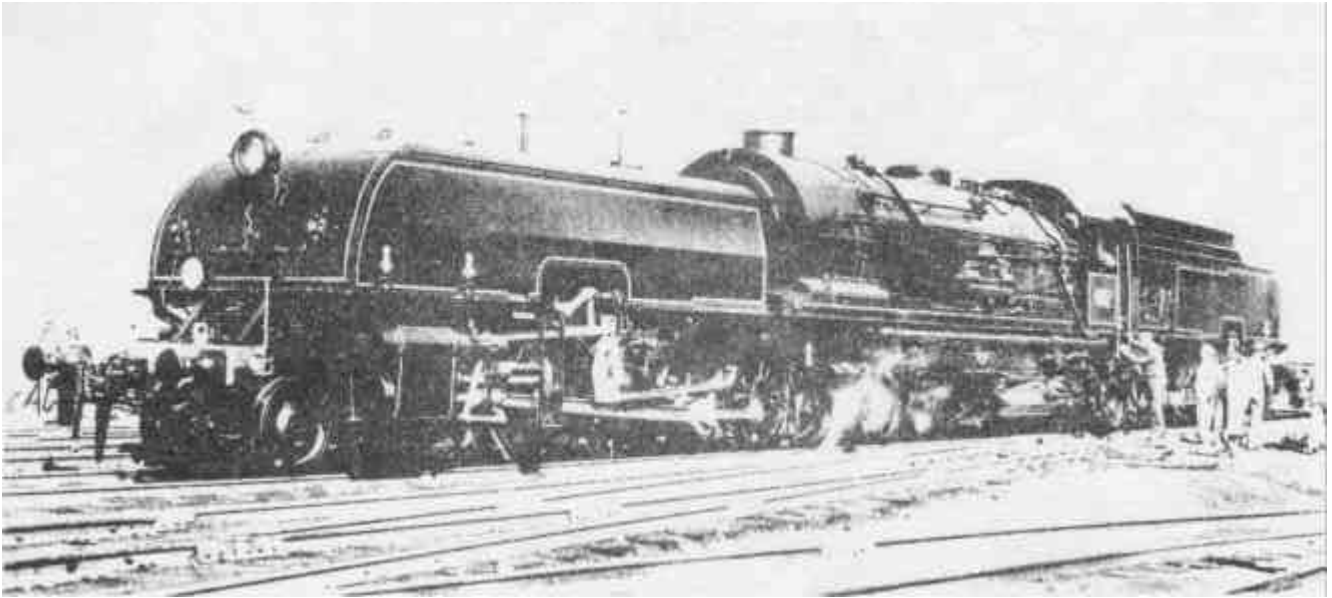


# New South Wales Government Railways

(299)



## GARRETT LOCOMOTIVE

The Garratt is a new type of locomotive to the New South Wales System but other State Systems have operated them for some years.

The appearance of the Garratt differs considerably from the standard steam locomotive in that it has two normal sets of engines with a common boiler, steam being delivered to the cylinders through flexible jointing. The wheel arrangement is 4-8-4 plus 4-8-4.

This type of locomotive was specially selected because of its high tractive capacity coupled with its remarkably low axle load. It is more powerful than the D.58 class engine and has a maximum axle load of only 16 tons. As a consequence, it will be capable of hauling heavy train loads over secondary tracks as well as on main lines.

Features of the design are that the engine frames are of cast steel with integral cylinders, which are fitted with renewable steam chest and cylinder liners, inspection plugs, air-operated drain valves and automatic release valves.

The boiler unit frame is rolled steel plate transversely stayed and the pivot centres have automatic adjustments to compensate for wear. Buffer beams are bolted on and carry automatic couplers.

The smoke-box is the self-clearing type and the ash-pan has self-cleaning hoppers.

Engine springs are the laminated type compensated on each side of the engine independent of the bogies.

Axle boxes and main crank pins are fitted with SKF self-aligning roller bearings.

The cab is equipped with upholstered seats with back-rests, and with large side windows. Other equipment includes air-sanding apparatus, Stone's electric lighting for head and auxiliary lights, chime whistle, and Nathan mechanical lubricators.

The locomotives will be numbered from 6001 to 6050 and will be classified as AD.60.

### Particulars of the Garratt Locomotive.

Cylinders.....	4 (2 per unit) 19¼" x 26"
Valves.....	Piston 10"
Valve gear.....	Walschaerts
Reverse gear.....	Hadfield's power reverse
Wheel diameters:	
Bogie.....	3'0"
Coupled.....	4'7"
Boiler: round top.....	7'3" diameter

Heating surface:

Firebox (4 3" arch tubes F ) 238 sq. ft.  
Flues (50 5½" in diameter ) ) 2,792 sq. ft.  
Tubes (238 2" in diameter ) )  
Superheater (50 sets 1½"  
in diameter) 750 sq. ft.

Grate area..... 63½ sq. ft.  
Pressure..... 200 lbs. sq. in.  
Tractive power (85% B.P.)..... 59,560 lbs.

Weight:

Coupled wheels..... 128 tons  
Other wheels..... 132 tons  
Total weight..... 260 tons

Wheelbase:

Coupled (each unit)..... 14'9"  
Engine (each unit)..... 37'6"  
Total (both units)..... 97'8"  
Length overall..... 108'8"  
Width..... 9'8"  
Height over chimney..... 14'0"

Water and coal capacity:

Water..... 9,000 gallons  
Coal..... 14 tons  
Stoker..... Standard H.T, type  
Throttle..... Melesco Multiple Unit  
Safety valves..... Three Ross Pop valvae  
Injectors..... Two Nathan type, each  
capable of 4,800 gallons  
per hour.  
Brakes..... 6 ET (standard N.S.W.)  
Compressor..... Compound

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