

power for its trains in the B.C. mountain sections, recalls the fact that the Baltimore and Ohio Rd. some time ago made an exhaustive inquiry into the feasibility of operating trains over the 17-mile grade in the Alleghenies with electric power. It was found, however, that the expenditure of several millions of dollars would be necessary to put such a system in operation at that point. The track would have to be relaid with 100 lb. rails and electrical locomotives weighing 120 tons would have to be built for the service. Nevertheless, the electrical system of operating might have been introduced on the mountain had the engineers been able to find adequate water supply to drive the dynamos which would manufacture the necessary electricity. No suitable stream could be discovered, and the idea was abandoned for the time being and no evidence of its being revived has been recently observed. To operate the dynamos by steam would be too expensive. In B.C. the C.P.R. has at its disposal abundance of water power.

The Quebec & Lake St. John Ry. has ordered from the Baldwin Locomotive Works 2 mogul freight locomotives, to be delivered by Feb. Following are the general dimensions:—

Cylinder, diameter (high pressure)	20 in.
stroke	26 in.
valve	Balanced
Boiler, diameter	64 in.
thickness of sheets	200 lbs.
working pressure	200 lbs.
fuel	Steel
Firebox, material	108 in.
length	

Firebox, width	42 in.
depth (front)	
(back)	
thickness of sheets—sides	5-16 in.
back	5-16 in.
crown	3-8 in.
tube	1/2 in.
Tubes, material	Iron
number	abt. 262
diameter	2 in.
length	12 ft. 6 in.
Driving wheels, diameter outside	57 in.
diameter of centre	50 in.
journals	8 in. x 10 in.
Engine Truck Wheels (front) diameter	30 in.
journals	5 in. x 10 in.
Wheel Base, driving	14 ft. 0 in.
rigid	14 ft. 0 in.
total engine	22 ft. 2 in.
total engine and tender	abt. 52 ft.
Weight on driving wheels	abt. 117,000 lbs.
Tender, diameter of wheels	33 in.
journals	4 1/4 in. x 8 in.
tank capacity	5,000 gals.

The C.P.R. recently received from the American Locomotive Co. eight compound consolidation freight locomotives, one of which is illustrated on page 13. E. A. Williams, Superintendent of Machinery and Rolling Stock, has furnished us with the general dimensions, as follows:—

Total weight in working order	150,500 lbs.
Weight on drivers	140,500 lbs.
on truck	10,000 lbs.
of tender, loaded	114,000 lbs.
Total weight of engine and tender	273,500 lbs.
Total wheel base of engine	23 ft. 7 in.
Rigid wheel base	15 ft. 8 in.
Total wheel base, engine and tender	51 ft. 8 in.
Simple or Compound	Compound
System	Schenectady
Cylinders	22 and 35 x 28 in.
Driving wheels, dia. on tread	57 in.
centres	Cast steel
axle boxes	Cast steel

Driving wheels, axle journals (main)	9 x 11 in.
leading, interm. and trailing	8 1/2 x 11 in.
Engine truck journal	6 x 11 in.
wheels, Allan No. 7 steel tired	30 in. dia.
Crank-pin journal (main), nickel steel	6 1/2 x 6 in.
main (side rod), nickel steel	7 1/4 x 5 in.
intermediate, nickel steel	5 1/2 x 4 1/2 in.
front and back	5 x 3 1/2 in.
Engine truck	Swing bolster
Boiler, extended wagon-top with wide fire box over frames	
Working steam pressure	200 lbs.
Diameter of boiler at waist, inside	61 in.
of tubes, outside	2 in.
Number of tubes	281
Length of tubes	14 ft. 3 in.
of firebox	9 ft. 1/2 in.
Width of firebox	5 ft. 5 1/2 in.
Depth of firebox	front, 4 ft. 6 1/2 in.; back, 5 ft. 2 1/2 in.
Radial stays (Taylor iron)	1 1/2 in. dia.
Stay-bolts (Taylor iron)	1 in. dia.
Boiler material (steel)	1/2 in., 3/4 in., 1 1/4 in. and 3/8 in.
Heating surface, firebox	134.37 sq. ft.
tubes	2,084.17 sq. ft.
total	2,218.54 sq. ft.
Grate	43.64 sq. ft.
type	Rocking, with dump.
Tender:	
Tank capacity	5,000 impl. gals.
Coal capacity	20,000 lbs.
Tank Material	Steel
Frame	10 in. steel channel
Truck	Common sense bolsters
Axles	Steel, 5 1/2 x 10 in.
Wheels	Cast iron, 33 in. dia.

Four similar compound locomotives have been received by the C.P.R. from the Canadian Locomotive Co. The C.P.R. has placed an order with the American Locomotive Co. for 12 additional similar locomotives for September delivery, and for three 10-wheel passenger locomotives. The latter will be duplicates of the 12 the Co. is building in its Montreal shops, the general dimensions of which

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