PULVERIZED FUEL

NEW YORK CENTRAL RAILROAD

So far as known the New York Central railroad was the first to equip and successfully operate, in regular train service, a locomotive having a self-contained equipment for burning pulverized coal in suspension. At the present time this railway is using fuel in small amounts on one locomotive, the policy being to develop the use of pulverized fuel as an alternative to the use of fuel-oil in territory in the forest reserve, where oil is at present required. The following is a result of tests carried out on this locomotive:

Class of locomotive.	4-6-2
Number of trips averaged	28
Miles run, average each trip	78.6
Adjusted train ton miles. 12	5,956.0
Total water used, pounds	4,850.0
Total coal used, pounds.	2,730.0
Boiler pressure, pounds per square inch	180
Average steam pressure, pounds per square inch.	$174 \cdot 8$
Apparent evaporation	7.45
Pounds of coal per 1,000-ton miles	$101 \cdot 0$
Pounds of coal per engine mile	161.9
Average speed in miles per hour	21.8
Service Fre	ight
Diameter of exhaust nozzle, in inches	61

The temperature of water at start was 120° and the time taken to obtain the maximum pressure of steam was 72 minutes.

The tests were carried on with bituminous coal obtained from five mines and having the following average analysis:

Moisture 0-85 Volatile matter 27-25 Fixed carbon 61-68 Ash ?	per cent "
100-00	"
Sulphur	per cent
Fineness of pulverized coal: Through 100-mesh screen. 96 Through 200-mesh screen. 81	per cent

The following is a brief description of this locomotive:

Type	.4-6-2
Cylinders	. 26 x 26 inch.
Driving wheels	. 69 inches in diameter.
Boiler pressure	. 180 pounds per square inch.
Total weight	. 266,000 lbs.
Weight on drivers	. 172,000 lbs.
Total heating surface	.3,769.6 sq. ft.
Grate area (nominal)	. 56.5 sq. ft.
Tractive power	 . 38,980 lbs.

CENTRAL RAILWAY OF BRAZIL

In Brazil, owing to the difficulty of obtaining high-grade coal as fuel and the necessity for using the low-grade coal which occurs there, the Central Railway of Brazil, after considerable investigation of the pulverized-fuel-burning locomotives, decided to equip its locomotives for burning