



JAMES R. KOONTZ

Vice-President in Charge of Traffic, Frisco Lines

J. R. Koontz came to us only this year, on March 1, 1923, but with many years of experience in railroad and traffic work and recognized as a real leader of his profession. So quickly did he adapt himself to conditions here and so thoroughly did he proceed to become acquainted with all about him that since his first day with the Frisco he has been acclaimed one of the real leaders of thought and action at the "family table."

Mr. Koontz' experience in railroad work covers a lifetime of energetic, hard work and perhaps no better insight into the character of the man could be found than this tribute from one who has been for years closely associated with him: "He is much more than the 'boss'—he is a friend."

DOUBLE TRACKING—The Frisco West of St. Louis

By COL. F. G. JONAH
Assistant to the President and Chief Engineer

The first line of what is now the Frisco System was built from Pacific to Sullivan in the year 1858, a distance of 34 miles. In 1859 the line was extended to Cuba, and in 1861 on to Rolla, where work was stopped on account of the Civil War. In 1866 the line was built to the Gasconade River at Arlington, and during the years 1869, 1870 and 1871 was completed to Vinita, Okla. In the early 80's the line was extended to Sapulpa, and in the latter part of the 90's was built on to Oklahoma City.

In the year 1883, the line was built from Pacific into St. Louis, and prior to that time trains were run into St. Louis over the tracks of the Missouri Pacific. In 1896 the second track was built from St. Louis to Southeastern Junction and in 1904 this second track was extended to Windsor Springs, a distance of 13.2 miles from St. Louis Union Station. This 13 miles of second track was a great help in getting trains in and out of the terminal.

In order to facilitate passing trains and avoid congestion at Pacific, seven miles of second track were built from Eureka to Pacific and placed in operation in the year 1921. There then remained a gap of 14 miles of single track between Windsor Springs and Eureka, practically all of which was heavy construction. It was decided to build in two pieces: first,

the 4.7 miles from Windsor Springs to Valley Park, and later the 9.3 miles from Valley Park to Eureka.

The original line from Windsor Springs to Valley Park was economically constructed. The grade climbing out of the river bottom at Valley Park was one per cent, uncompensated on curves, and to avoid a heavy cut at Meramec Highlands a tunnel 400 feet long was made through the hill. This Valley Park hill was the ruling grade on the Rolla Sub-Division, and the train load of Santa Fe type freight engines was limited to 2,150 tons. The tunnel had for many years been a nuisance, smoke from the engines was very objectionable to passengers, and on the slow-moving, heavy freight trains, enginemen were often nearly suffocated in passing through it. The tunnel opening was small and the limiting overhead clearance on the entire railroad. Many times shipments had to be refused on account of the load being too high to go through the tunnel.

Several surveys were made for a new line east from Valley Park to locate the railroad farther south than the old line, but on account of the exceedingly rough country through the foothills along the Meramec River bottom any new location was found to be very expensive to construct. It was then decided that the location of the original line was the most feasible route,



West End of the Old Meramec Highlands' Tunnel



New Double Track, East of Valley Park

and that the best proposition was to build a second track on a revised grade line, and locate it practically parallel to the old, except to make an open cut 200 feet south, to avoid using the tunnel. Revision of grade for eastbound traffic was made by raising the new

track seven feet above the old on the Valley Park end, and lowering the summit west of Windsor Springs, 13 feet, making a total reduction of 20 feet in the climb up the hill. It was figured that this reduction in grade

(Continued on page 32)



Near Windsor Springs

Oil-burning Locomotives Prove Their Worth

By A. H. OELKERS
Chief Mechanical Engineer, Springfield General Offices

WHEN the Frisco Lines put into service, in the months of May and June of this year, fifteen modern, "mountain type," oil-burning passenger locomotives, a forward step was taken which placed the service on a plane equal to the very best to be obtained in transportation either in the United States or any other portion of the world.

The reliability of these mammoth engines is being proven daily by the record on time performance obtained with trains on which they constitute the motive power and their safety is shown by the fact that during four months of operation no derailments or other accidents due to the locomotives have been experienced.

These engines are being used on through passenger trains between St. Louis and Oklahoma City, the entire distance of 542 miles being regularly made without change of engines. On Trains Nos. 9 and 10—"The Meteor"—the assigned locomotives of this class are running on an average of 11,000 miles a month, continually handling from 11 to 16 cars per train. Their hauling capacity, measured in terms of pounds of pull behind the tender, is 54,100 pounds, which is maintained on the steep grades, such as Dixon Hill, where a train consisting of twelve heavy steel cars is handled without a helper engine. Under maximum working conditions a horse power of 2,800 is developed.

Some of the principal dimensions of the locomotives and their tenders are as follows:

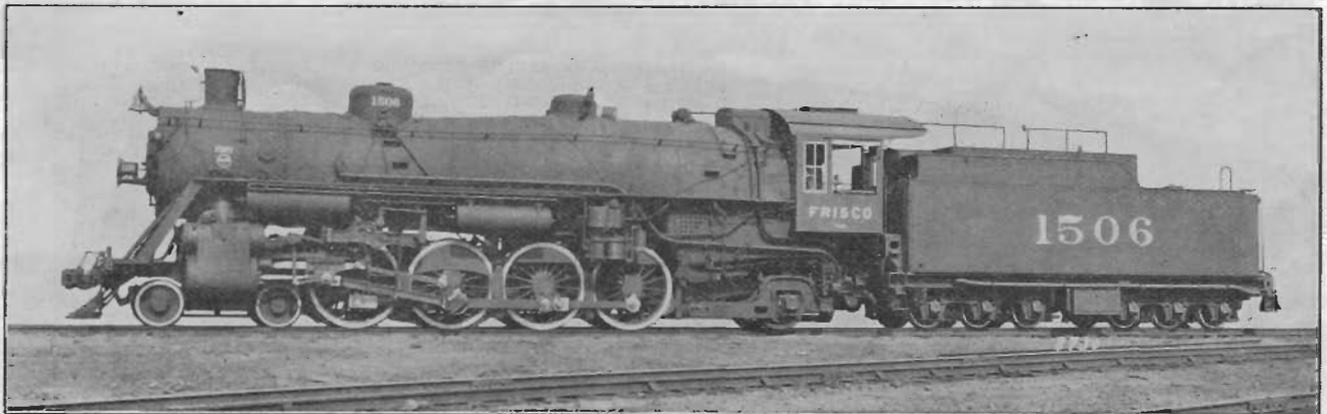
- Cylinders, diameter and stroke.....28x28 inches
- Valves, kind and size.....Piston diameter, 14 inches
- Maximum travel of valves.....8¾ inches
- Weights in working order—
 - Weight on engine truck..... 57,100 pounds
 - Weight on drivers.....233,700 pounds

- Weight on trailer trucks..... 51,400 pounds
- Total weight of engine.....342,200 pounds
- Total weight of tender, loaded.....240,500 pounds
- Wheel bases—
 - Driving wheel base.....18 feet
 - Total engine wheel base.....40 ft. 4 in.
 - Total engine and tender wheel base....76 ft. 7 in.
- Boiler—
 - Steam pressure.....200 pounds
 - Fuel, kind..... fuel oil
 - Inside diameter, largest ring...7 ft. 10 5/16 in.
 - Tubes, 219-2-1-4, 21 feet long.
 - 45 flues, 5½ inches diameter, 21 feet long.
 - 45 superheater units.
- Tender—
 - Water capacity12,000 gallons
 - Fuel oil capacity..... 4,500 gallons

The tender, due to its large water and fuel capacity, is carried on six-wheel trucks, equipped with clasp brakes of similar design to the trucks used on the most modern passenger cars. The high water capacity permits operation from St. Louis to Newburg or similar distances without stopping for water and a through run from St. Louis to Oklahoma City, 542 miles, without taking on additional fuel.

A comparison in size developed may be gained by referring to the eight-wheel American type passenger engines built for this company thirty years ago which had cylinders 17x24 inches and weighed complete, with tender, 189,100 pounds as compared with the new mountain type, 582,700 pounds. This comparison indicates over 300 per cent increase in weight and hauling capacity.

(Continued on page 11)



One of the New Oil-Burning Passenger Locomotives

Story of a Dream That Came True

By C. B. MICHELSON
Supervisor of Farm Marketing

TWENTY-FIVE YEARS AGO, with all the fortitude and courage of our forefathers who landed at Plymouth Rock, a small band of Italian emigrants disembarked at Ellis Island, fully confident they had achieved the desire that had lingered in their hearts for half a century. One can imagine the sigh of relief that escaped from the very hearts of these sturdy pioneers, when first they sighted the Statue of Liberty and viewed that wonderful new country—the Land of Liberty.

Little did they realize the many disappointments and heartaches that were to be theirs before they finally located their permanent homes. After the customary examinations and necessary delays, they naturally drifted into the crowded Ghetto district and secured temporary tenement quarters. Alone in that great metropolis, they were confronted with a miserable future; one continual struggle for a mere pittance. While their living was indeed frugal and their household desires easily satisfied, they longed for the great outdoor life, the beautiful fields and picturesque woodlands of their native country. Heretofore, they had been producers, though toiling in the fields from early morn till the day's end. With only small patches of farm land, Mother Nature had smiled down upon them and the soil had yielded bountifully. Hemmed in by the densely populated rural districts, however, they had by most meager living been able to wrest a bare living, saving enough through a long term of years to pay for the passage of their families to this wonderful land of opportunity.

Gradually it dawned upon these agricultural folks, shut in by the tenement walls of the Ghetto district, that

their prophecy had not been fulfilled, that their journey was not yet ended. Their leaders, now more accustomed to the ways of a great city, upon inquiry learned of the great agricultural country still farther west of the Allegheny Mountains.

At this most opportune time they were informed of a wonderful virgin country, where the soil was as rich as the Valley of the Nile. Meetings were held and their source of information, a land promoter, was invited to tell them of the marvelous opportunity in this great unknown world beyond the mountains.

Delegates were appointed who accompanied the land man into the alluvial land district of Northeast Arkansas, a land destined to become the garden spot of the world.

At this time the drainage projects, which have since made this section one to rival the best to be found, had not been put into effect. Northeast Arkansas now takes its proud stand among the real agricultural and horticultural empires of America.

The new colony, believing that conditions at that time might be better elsewhere for their work and customs, sought a new haven and it was fortunate, indeed, that fate at this time provided a new leader, a guide to direct their footsteps into a section where conditions proved to be ideal for them.

Once more the colony moved into a new land, sturdy pioneers, willing to hew their new homes from the timber. And it could have been nothing less than Providence which directed their steps.

Now enters into the scene one of God's noblemen, one who was undoubtedly sent to this earth with a mission to fulfill. Petro Bandini, an Italian priest, who at this time held a responsible government position in New York City, learning of the sad plight of his fellow-countrymen, gave up his position and took charge of this little band of settlers. Born and reared among the vineyards of Northern Italy, Father Bandini was thoroughly familiar with the character of the country best suited for his people and at once investigated the opportunities offered in the Ozark territory of Northwest Arkansas, a territory where climatic and soil con-



Tontitown—When Snows Had Fallen