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Eastern Star

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UKRAINE

UK Study Tour

In August of this year NERHT were pleased to welcome six young lady railway preservationists from Ukraine, four from AZIZU (Ukrainian Railway Heritage Association) and two from the Line 102 project based in Lviv, the latter including the Lviv Children's Railway, to take a study tour of UK railway preservation.

This tour was organised and run by NERHT, and had the very important and welcome support and hospitality of the Keighley and Worth Valley Railway and the East Lancashire Railway, for which the ladies and NERHT were very grateful. They also visited the Railway Museum at York, and managed to squeeze in a little sightseeing in London.

The tour embraced they history and impact of railways in the UK, as well as the challenges to be overcome in the restoration, maintenance and operation of locomotives and rolling stock.

Selected comments from the ladies, as chosen by the Editor:

We visited the London Transport museum in London, where we learned the history of the London Underground and various forms of transport. We also visited the transport museum in the city of Bury and met the mayor of the city and a woman from the Ukrainian centre. We visited the "Flying Scotsman" museum, where we saw the operation of a steam train with virtual reality glasses and saw a lot of interesting locomotives.

Compared to our railway, you keep history and want to tell people about it. Ukraine doesn't have such cool museums as you do, and this is a big problem. But the depots are similar, but unfortunately there is no train with a unit that reconstructs wagons. But this trip made it possible to understand and inspire the

creation of this to show Ukrainians and the whole world how rich our railway is in history.

At the Heaton Park Tramway (Bury) depot, we saw how the wagons are being restored. This is an important experience for us, since AZIZU plans to implement similar projects that will combine an active museum with historical equipment. We want to be the part that unites knowledge and develops interest among young people in the study of railways.

It was an unforgettable and exiting trip. I will never forget the opportunity to ride in the driver's cab of a steam locomotive and see with my own eyes how a steam locomotive works. We will try to use all the information we will receive during this studio tour for the development of railway tourism and railway preservation schemes in Ukraine,

The Ukrainian ladies with Stephen Wiggs, Chairman of the NERHT, and the interpreter for the group (far right), in London.

Keighley and Worth Valley Railway

At the Bury Transport Museum with the Mayor and a lady from the Ukrainian centre

Haivoron

From August 18 to 20 the Ukrainian state railways and the local authorities held a steam festival at Haivoron, the junction between the surviving length of the 750mm gauge network – the country's last passenger carrying line – and the narrow gauge. Locomotives in steam, as shown in the photos provided by AZIZU, the Ukrainian railway heritage association, include both broad gauge and narrow gauge locomotives.

Class 159 #4-95, Class Gr #280 and #336 750mm gauge, 0-8-0

(Photo : Svitlana Berdnikova)

Class Er #798-71 and #799-18broad gauge, 0-10-0

(Photo : Svitlana Berdnikova)

Class L #3535, broad gauge, 2-10-0

(Photo : Svitlana Berdnikova)

LATVIA

The 120th anniversary celebrations of Banitis (a narrow gauge steam railway that runs from Gulbene to – Alūksne), on 2 September, were attended by the British Ambassador Paul Brummel, David Morgan, President Emeritus of Fedecrail and Stephen Wiggs (NERHT Chairman).

Andris Biedriņš reports:

Class Gr #319, 750mm gauge, 0-8-0, at Gulbene

(Photo : Andris Biedriņš)

The Gr-319 “Ferdinands” steam locomotive was made in 1951 by order of the USSR in Germany (GDR) - Karl Marx locomotive factory in Eastern Germany (the former "Orenstein&Koppel”) locomotive factory in Potsdam. Until 1964, the locomotive was used in the Liepāja locomotive depot, from where it was transferred to Ukraine. In 1990, thanks to Estonian railway enthusiasts, Gr-319 arrived from the Vapniark depot in Ukraine to Estonia It was part of a collection in the Lavasaare Narrow Gauge Railway Museum in Estonia. In 2007, as part of the cooperation agreement, the locomotive was transferred to Gulbene and put into use by "Gulbene-Alūksnes bānītis. Since the she was restored and are in operation On the Gulbene-Alūksne railway line.

Chonburi Sugar Company, 750mm gauge, 0-6-0WT #105 “Siam”, at Gulbene

(Photo : Andris Biedriņš)

The narrow-gauge (760 mm) tank locomotive "SIAM 105" was built in 1956 in Germany, at the "Henschel und Sohn" machine factory (factory No. 29582). It is

one of the six locomotives of this series that were built for use on the railway of the Chonburi Sugar Refinery in Thailand.

In 1982, the locomotive was sold to England, and since 1989 it has been owned by the private museum railway "Bredegar and Wormshill Light Railway". There it was completely restored and named "SIAM 105". The locomotive was in the collection of this museum railway until 2020, when, following a private initiative, this steam locomotive was bought and transferred to Alūksni.

"SIAM 105" is intended to be certified in accordance with the technical operation regulations of our country's Railways and used for the transport of tourists in the territory of the city of Alūksnes on the former section of the Alūksnes-Apes railway, which is planned to be restored with the support of the municipality of Alūksnes region.

POLAND

PRZEWORSK

Andrew Goltz reports:

On Sunday 13th August a huge crowd gathered in Kańczuga, a small town in south eastern Poland to celebrate the restoration and reopening of the town's narrow gauge railway station. But there was more to the event than the restoration of one historic building, the assembled dignitaries, including representatives from the government in Warsaw, the provincial government in Rzeszów, local councils, agricultural cooperatives and local businesses, had all came to celebrate the rebirth of their very own railway which – after massive storm damage in 2020 –many believed had been lost forever.

The star attraction of the festivities on 13 August was the arrival of a steam hauled train from Przeworsk which was hauled by Px48-1920. The Px48 had been loaned by the Środa narrow gauge railway for a fortnight and had been hauling regular revenue earning passenger trains between Przeworsk and Łopuszka Mała. The proceedings received widespread coverage from press and television and were judged by everybody to have been an outstanding success.

Class Px48 #1920 arrives at Kańczuga with the VIP special train

(Photo : Powiat Przeworski)

WOLSZTYN

Poland's most prestigious Railway Heritage event took place on 19th August in Wolsztyn, Wielkopolska province. The Parada Parowozów, literally "Steam Locomotive Parade", has a 30 year history, although its continuity has recently been disrupted by Covid-19 and a shortage of serviceable steam locomotives. This year the parade was a truly international event with locomotives from Germany, Belgium, Luxembourg, the Czech Republic, as well as Poland taking part.

Currently only three standard gauge locomotives in Poland are 'in ticket''. Two - express passenger 2-8-2 Pt47-65 and Kreigslok derivative Ty42-24 were to have taken part in the parade. Unfortunately, the Ty42 failed on its way to Wolsztyn and it fell to Pt47 to be the sole Polish representative. The Pt47 had returned recently from a major boiler overhaul in the Czech Republic and had her final acceptance trials a few days before the parade. She now operates the regular scheduled steam service from Wolsztyn to Leszno.

However the precarious situation illustrates the difficulties of trying to run a regular service with just one serviceable steam locomotive. Currently overhauls are planned for four more Wolsztyn locos, but work is on hold due to lack of funds. Wolsztyn remains the last standard gauge steam shed in Europe — is not the world — which supports a regular steam hauled passenger service which is part of a national railway timetable.

Class 01 2-8-2 #0509-8, at the Locomotive Parade, at Wolsztyn

(Photo : Wojtek Lis)

ROMANIA

Star performer at the September steam gala on the 760 mm gauge Sibiu – Agnita Railway was Bill Parker's Manning Wardle 0-6-2T No. 1877, built in 1915 and formerly known as Chevallier, which arrived in Romania after an epic journey from The Flower Mill works (in Gloucestershire, England) just days before being put to work. During the highly successful gala weekend held on 9 and 10 September the loco hauled several trains carrying altogether over one thousand people over the 7 km. section based on Cornatel which has been restored by the Association of the Friends of the Mocanita (the affectionate Romanian term for a narrow gauge train). It is expected that No. 1877 will

remain for some time on the SAR, making a major contribution to the attraction of this fascinating line.

Manning-Wardle 0-6-2T #1877
One proud owner with his locomotive getting steam up at Cornatel station, shortly after delivery.

(Photo : Keith Raeburn*)*

Manning-Wardle 0-6-2T #1877,
The first full-line test run pauses in the hazy warmth of a Transylvanian afternoon.

(Photo : Keith Raeburn*)*

Manning-Wardle 0-6-2T #1877,
One of the gala services pauses in the bucolic Hartibaciu valley, to allow passengers a photo stop.

(Photo : Keith Raeburn*)*

RUSSIA

KUZHENKINO PRESERVED STATION MARKS 5th ANNIVERSARY

Sergei Dorozhkov reports:

Five years ago, on 29 October 2018, regular steam returned to Russian railways. Since then every Saturday a local train, connecting Bologoye and Ostashkov on the October Railway, is hauled by a steam locomotive. At Kuzhenkino, an intermediate station 40 minutes from Bologoye, the train makes a half-hour stop, when the engine takes water while passengers are given an excursion around the station complex.

Class "L" 2-10-0 #3051 arrives at Kuzhenkino with a mixed local / tourist train on celebration date October 29

(Photo : Arthur Berzin)

Although the train runs as a local, it gradually became more and more popular with tourists, as the route passes through a picturesque forest and the lake region of the Tver Oblast.

Kuzhenkino main station building

(Photo : Arthur Berzin)

The museum complex at Kuzhenkino began from the restoration of the main station building, dating from 1902 -1906. As the railway still runs considerable revenue freight traffic, preservationists had to seek a compromise between historical exposition and modern requirements.

Since 2018 the exposition cautiously expanded, with more items added and buildings opened. In 2023 an original guards' house of the Bologoye – Polotsk Railway was moved from another station and restored.

Restored guards' house

(Photo : Arthur Berzin)

29 October 2023, on the 5th anniversary of the project, the guards' house was opened to public. In spite of being a Friday, to mark the event the Bologoye – Ostashkov train ran with steam.

The celebration was attended by guests from various areas and organisations.

Continuing the tradition of co-operation between private and state railways and narrow and broad gauge, representatives of the Centre for Industrial and Transport History and the 'Cuckoo' Steam Museum presented to Kuzhenkino team an original MPS station bell from steam times.

Sergei Dorozhkov of the Centre for Industrial and Transport History officially presents the MPS station bell. Happy Alexey Vulfov of the All-Russia Union of Railfans is on the left

(Photo : the October Railway)

We wish colleagues from the October Railway steady development of the project, many happy visitors, green light and full steam ahead!

The bell at its place and in action – signalling departure of trains

(Photo : Arthur Berzin)

THE STORY OF A 'STRENGTHENED CUCKOO', OR THE ORIGINS OF TYPE 157 NARROW GAUGE 0-8-0

Sergei Dorozhkov reports:

THE BIRTH OF THE CUCKOO

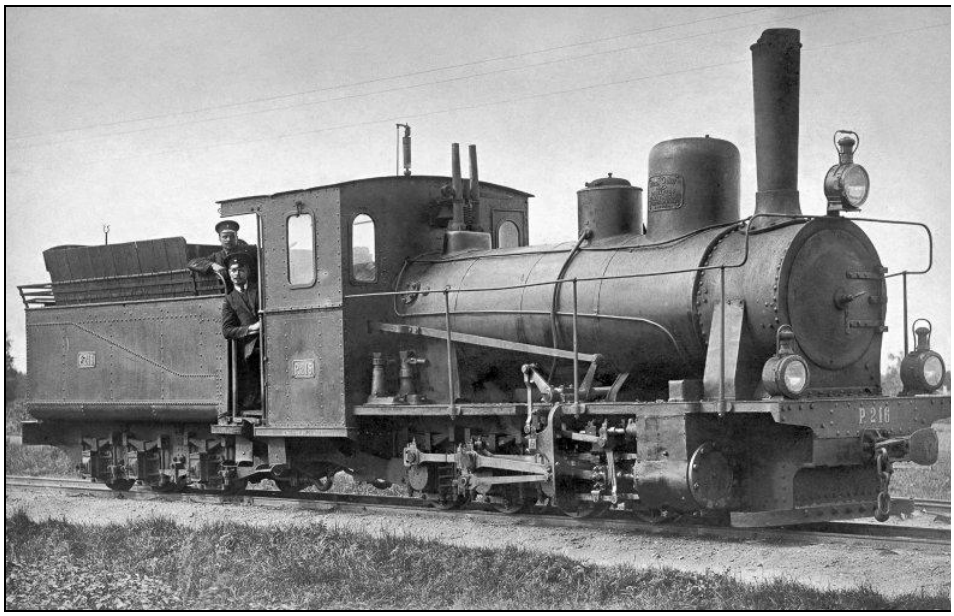
In the previous issue of 'Eastern Star' (ES 090) we have shared news of the Type "157" 750mm gauge 0-8-0 being test steamed in Ekaterinburg and promised to give the background story of this locomotive, widely considered as the most successful of Soviet narrow gauge designs.

Rapid expansion of narrow gauge in Russia started after 1892, triggered by ratification in the summer of that year of the "Regulations for the Construction and Operation of Feeder Railways with Steam Traction to Common-Carrier Railways". Recommended dimensions for public narrow gauge lines were 750mm and 1 metre, the smaller one actively advocated by the newly formed private "First Company of Feeder Railways".

Three years later the First Company began operating its Sventsyany Branch in present-day Lithuania and Belarus, soon followed by the Pernov – Reval line in Estonia and the Yuzhnaya (Southern) Branch in Ukraine. The motive power for these lines was first ordered in Belgium. In 1894 – 1899 St. Leonard supplied to the First Company 27 outside-framed wood-burners, of which 14 were 0-6-0Ts (Type A), and 13 0-8-0Ts (Type M). However, it rapidly began clear that tank locomotives with their limited fuel and water capacity and significantly changing adhesion weight were unsuitable for Russian distances. Already in 1895 the Technical Department of the First Company began planning a tender locomotive.

The key features of the new 0-8-0, the first design for this arrangement for 750mm gauge in Russia, were versatility and simplicity. The first 16 engines were outshopped the same year by Kolomna (Type "60"), receiving the designation Type "R". Proving reasonably successful in service, the design was altered in 1897 with a little larger boiler, bigger cylinders and wheels to form Type "T" and eventually Type "K", of which just under 300 examples were built until 1926 (with modifications).

A further development was the Type "O", which was the same as the Type Class "K" or Type "63" from Kolomna, but built for the military in 1918 - 1926 (in the range of locomotive designations of the Russian Army the loco was assigned the letter O. Following the Revolution and the end of hostilities many military locos were diverted to industry.

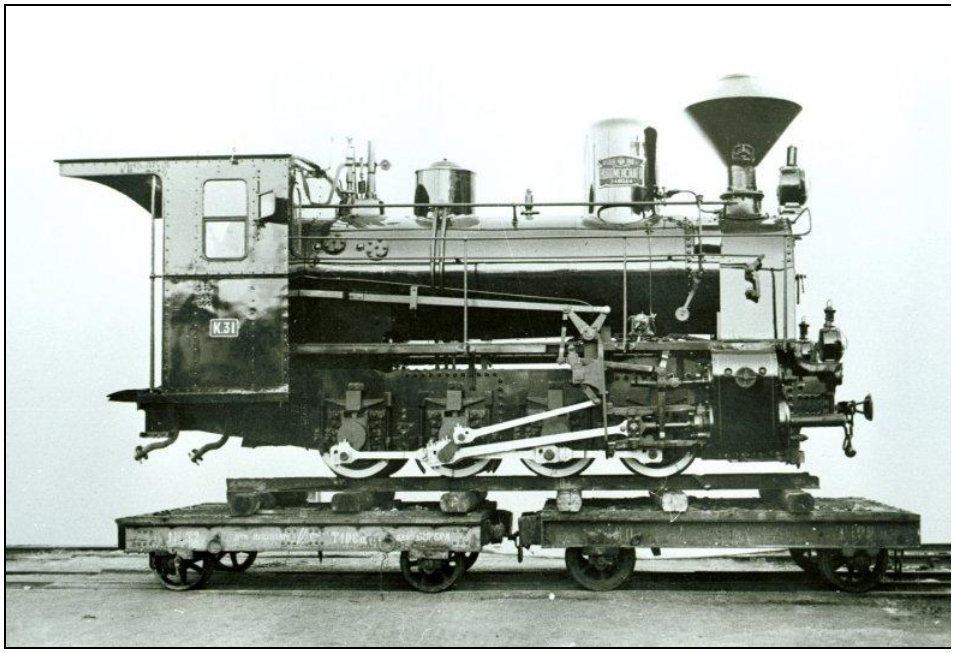


Type "R" 0-8-0 #216

One of the earliest Kolomna Type 60 0-8-0s

(Note : "P" in Russian)

(Photo : Collection of Toms Altbergs)



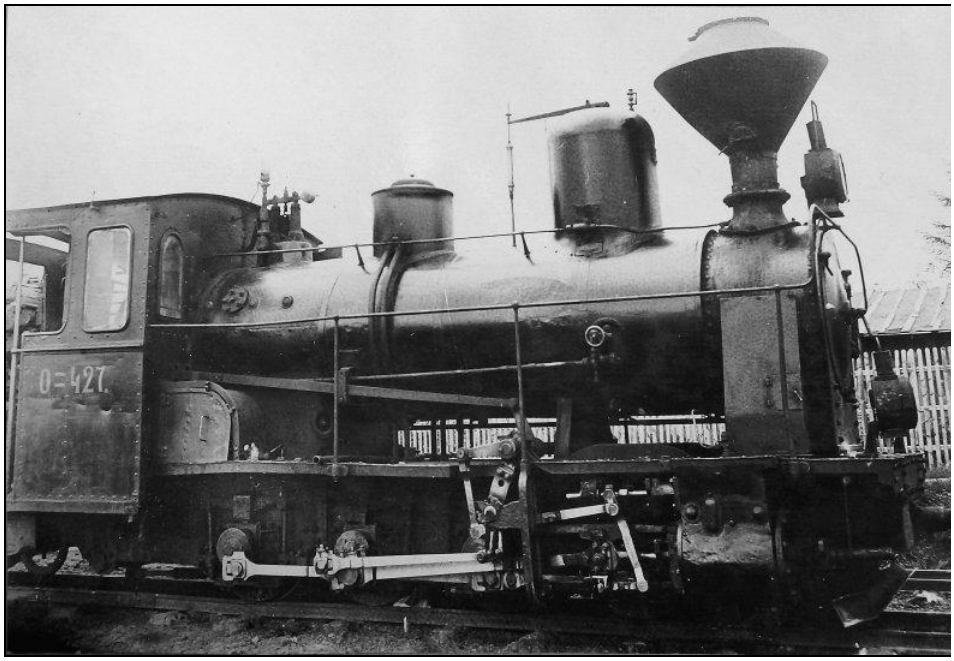
Type "K" 0-8-0 #31

Ordered by the Moscow Company of Feeder railways, the operator of 750mm gauge lines in Moscow area.

(Photo : Kolomna works archives)

The following picture shows Class O (type 63) of the last batches before the end of production, with a more spacious cab (note differing arrangement of rear side

windows), and strengthened frames with horizontal shaft for steam brakes seen under the cab.



Type "O" 0-8-0 #427

(Photo : Collection Anton Maximov)

Nicknamed 'Kukushka' (the 'Cuckoo'), Kolomna narrow gauge 0-8-0 became symbolic for Russian narrow gauge. Of course, their family deserves a separate thorough coverage.

THE BIRTH OF THE STRENGTHENED CUCKOO

While the First Company developed, projects were drawn for comprehensive narrow gauge networks in Ukraine and the Baltics. The 'Cuckoos', effective in their versatility, appeared too weak and slow for these ambitious plans, so designs of four perspective locomotive types were drawn up by the Technical Department:

- strengthened versatile 0-8-0;
- 2-6-0 for passenger service;
- 2-8-0 for heavy mixed traffic;
- 0-6-0+0-6-0 Mallet in two versions, with wood and coal firing.

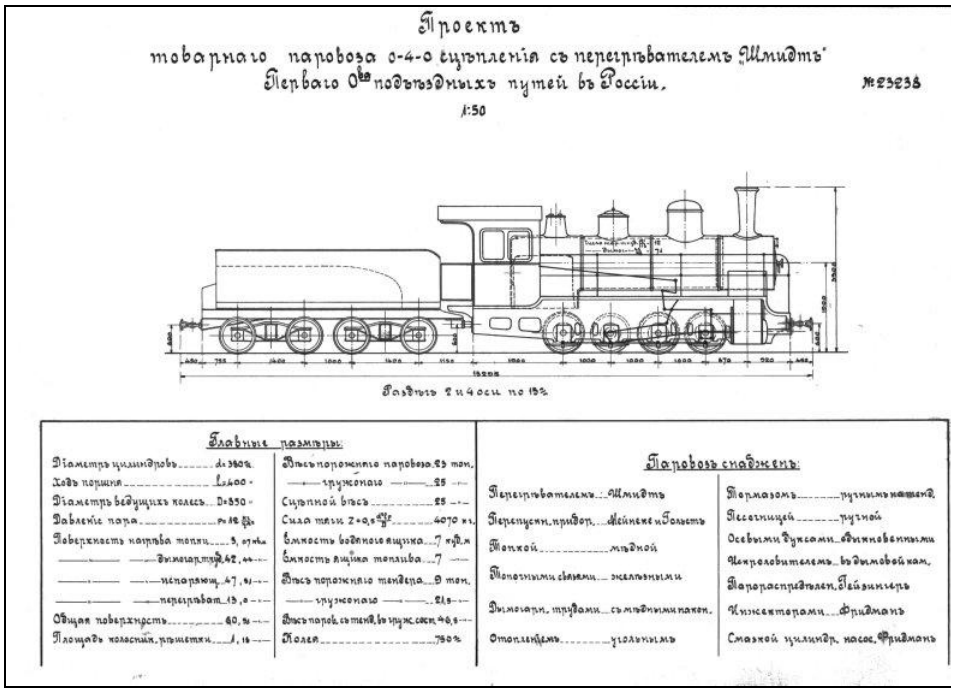
All these were planned superheated (except for the Mallets), with maximum interchangeability of parts. Alas, it was 1914, and the outbreak of the Great War halted further development. Of the four, just two were ever realised. In 1923, heavily reworked, the idea for 2-8-0 evolved into Type "Rp" of the Latvian Railways. In 1928 "strengthened Cuckoo' became type "157" of the USSR.

Initial specification for 'strengthened Type K', drawn by engineer Belyayev of the First Co., described a coal-burning outside-framed 0-8-0, weighing 25 tonnes in working order. 14 atmosphere (205 psi) pressure boiler with a Schmidt superheater, 400mm diameter and 325mm stroke cylinders, and 850mm wheels, should have allowed to take a train of 25 standard 14-tonne wagons up the 1 in 125 slope in a 100 sazhen (700ft or 213 metres) curve with a speed of 25 versts per hour (16.6 mph). Top speed was set at 40 versts per hour (26.5 mph). To facilitate negotiation of 210 ft minimum curves front and rear wheels had 30mm side play. The tender with 7 cubic metres of water and 7 tonnes of

coal capacity was mounted on American-type diamond bogies, for which a special 'privilege' (license) was planned to be obtained. Braking was of the simple hand screw type.

Kolomna Locomotive Department Chief Engineer Felix Meineke made some alterations to the project. Cylinder dimensions were changed to 380mm diameter and 400mm stroke respectively, and side play was offered to the second and fourth sets of wheels. The calculated power of a new locomotive turned a little less than projected by the First Co. – 24 standard wagons up straight accent of 1 in 125 at 13.25 mph. Westinghouse air brakes, standardised with passenger stock, could be installed without exceeding the restricted 6.5 tonnes axle load.

The resulting design can be seen at the accompanying drawing.



"Strengthened Type K" design drawing. If built, the loco would have received designation "Type K^{U}"

Note that "0-4-0" refers to the number of axles.

(Photo : Kolomna works archives)

Due to the Great War, the plans remained on paper. Felix Meineke, as a German, was interned in August 1914. Later he managed to escape back to Germany and continued his career as a noted locomotive engineer.

Following the Bolshevik Revolution of 1917 the property of the First Company was nationalised. The new, highly centralised Soviet method of administration brought changes to the very nature of the narrow gauge. New realities made public feeder railways redundant. Now they were considered to be little more than industrial conveyor belts to move raw materials to processing plants or to points where they could be transshipped to other means of transport; this was particularly true of newly built lines. The majority of such systems still operated some limited passenger and general freight services, but their status was totally different as they had now become 'works' trains. Priority was given to the main commodities (timber, peat, minerals etc.) for which the railways were built.

This inevitably entailed changes to the building and operational standards of railways and the construction requirements for locomotives. Having never reached implementation, plans for heavy freight, mixed-traffic and express engines for narrow gauge were abandoned. Reality asked for more medium-power versatile 0-8-0s.

Production of Type "K" in its initial form continued until 1926, but, as industry recovered after hostilities and political upheavals, it became clear that the design of 1897 was now outdated – and underpowered. Folders with specifications and drawings, which had collected dust since 1914, were taken from the shelf *(to be continued.*)

Kolomna type Type "K" 0-8-0 #5 of the 1920s at the peat works in Nizhniy Novgorod.

With a robust but graceful shapes – a typical "Cuckoo" at her best!

(Photo : Kolomna works archives))

THE ShU (Шᵘ) LOCOMOTIVE

The Editor reports:

Following on from the last issue of Eastern Star, we were contacted by a railway preservation group in Alaska about the ShU / S160 article who are restoring their own S160 (Alaska Railroad #557). It is pleasing to know of our outreach in this respect, and to have opened up a channel of correspondence with likeminded enthusiasts.

The "Russian" 2-10-0s

Sergei Dorozhkov and the Editor reports:

In the last copy of Eastern Star we discussed the American 2-10-0 locomotives passed over to the Soviet Union during World War 2 (The "Great Patriotic War" as it was known in the USSR). In this edition we are going to discuss a similar event that took place in Word War 1, with some of the ordered locomotives remaining in the USA, where they were subsequently classified as "Russian".

The story begins when the Chairman of the Rolling Stock and Traction Commission, Professor N. L. Shchukin, proposed ordering 400 2-10-0 locomotives, such being ordered in 1915, to supplement the locomotive fleet of Russia, as follows:

50 locomotives from the Canadian Locomotive Construction Company in Kingston, Ontario (designated as Ek)

100 locomotives from ALCO in Schenectady, New York (designated as Ec)

250 locomotives from Baldwin in Philadelphia, Pennsylvania (designated as Ef)

Designed by Russian engineers the locomotives (classed as Ел, the "л" being for the chief engineer A. I. Lipez) were successful, resulting in more of them being ordered. Despite the fact that all firms were given the same characteristics of ordered steam locomotives, each plant designed its own locomotives. The original plan for the interchangeability of parts, therefore, was compromised. Later discussions with the manufacturers resulted in a degree of uniformity being achieved, but by no means as much as had been desired.

The first delivery of 155 locomotives took place in October, 1915, through Vladivostok. A further 243 similarly arrived in 1916. Orders for another 500 locomotives were placed in 1917. However, difficulties in financing and the outbreak of the Bolshevik Revolution in 1917, resulted in only 300 locomotives being built, with 100 sent to Russia and the remaining 200 remaining the United States. No further deliveries were supplied.

The problem for the United States was that their 200 locomotives were built for the 5 foot gauge of Russian railways, as opposed to the standard gauge (4 feet 8 ½ inches) used in the USA. The decision was taken to keep these locomotives and fit them with wider tyres, new leading truck and a new tender, so that they could run on the standard gauge – hence the title of "Russian" being later applied to them.

The Erie Railroad received 75, the Seaboard Air Line Railroad (SAL) received 40, the St. Louis – San Francisco Railway (Frisco) received 21 (these were originally sent to the Southern Railway but were later transferred to the Frisco in 1920), and 22 other railways received lesser quantities. With later modernisation some of these locomotives found a new lease of life on smaller railroads.

Six of the "Russians" still exist in various museums of the USA, four in Russia and one in Belarus, as given in the following table:

Original Railway	Last Railway	Number	Location
Frisco	Eagle-Picher Mining	1615	Rocket Park (Missile Park), Altus, Oklahoma
Frisco	Eagle-Picher Mining	1621	National Museum of Transportation, St. Louis, Missouri
Frisco	Eagle-Picher Mining	1625	Museum of the History of American Railroads, Frisco, Texas
Frisco	Eagle-Picher Mining	1630	Illinois Railway Museum, Illinois
Southern Railway, then Frisco	Eagle-Picher Mining	1632	Belton, Grandview and Kansas City Railroad, Missouri
Seaboard Air Line	Gainesville Midland	544	North Carolina Transportation Museum, North Carolina
Soviet		345	Lishchitsi Railway Museum, Brest, Belarus

Railways			
Soviet Railways		534	The Russian Railway Museum, Saint Petersburg
Soviet Railways		629	Ussuriysk, Primorsky Krai, 60 miles north of Vladivostok
Soviet Railways		311	Shushary (locomotive in parts)
South Urals Railway		350	Chelyabinsk

Class "Russian" #1630, with the Frisco smokebox number plate and cab side lettering, at the Illinois Railway Museum, Illinois

This locomotive is now operational.

(Text and photo : Editor)

Class Ел #534, built by ALCO, at the Baltisky Railway Museum In St. Petersburg

(Photo : Central Museum of Railways, St. Petersburg)

Source material for the above obtained from the paper of Yuri Ilyin ("Russian Decapods", To the 100th Anniversary of the First E-series Locomotives).

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The New Europe Railway Heritage Trust ('NERHT') is a voluntary organisation established to help railway preservation in the former USSR and the ex-communist countries of Central and Eastern Europe (registered in the UK as charity No. 1099229).

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