

CLASSIFICATION **SECRET** **SECRET**  
 CENTRAL INTELLIGENCE AGENCY  
 INFORMATION FROM  
 FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT  
 CD NO.

50X1-HUM

COUNTRY USSR  
 SUBJECT Transportation - Railroad equipment  
 HOW PUBLISHED Semiweekly newspaper; bimonthly periodical  
 WHERE PUBLISHED Moscow  
 DATE PUBLISHED 12 Feb - 31 Mar 1950  
 LANGUAGE Russian

DATE OF INFORMATION 1950  
 DATE DIST. 5 Jul 1950  
 NO. OF PAGES 4  
 SUPPLEMENT TO REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACT 50 U. S. C. 31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE Newspapers and periodical as indicated.

ANNOUNCE NEW RR EQUIPMENT

LOCOMOTIVE REPAIR TIME GREAT -- Gudok, No 34, 19 Mar 50

A recent meeting of the collegium of the Ministry of Transportation reported that in spite of the remarkable 1949 success in the introduction of new techniques in plants, construction projects, and on the railroad systems, the results still cannot be considered sufficient. Mechanization of lumbering operations (felling, skidding, loading) lagged in lumbering enterprises of the Main Administration of Timber Industry of the Ministry. Introduction of mechanization in freight yards, quarries, and construction projects is proceeding slowly.

The collegium noted that in various branches there are serious shortcomings of technological processes in the organization itself. The plan for depot repair of locomotives is being fulfilled, but layover of locomotives in repair is still very great. This is a result of a lack of appreciation of the method of interchangeability of parts and a lack of coordination between supplying and assembly shops. Locomotives have to wait for long periods for wheel pairs, journals, spring riggings, side rods, and brake levers.

It was also noted that some inventions are put into serial production without serious preliminary tests under operating conditions. Such was the case with the Gekker system of automatic train stops; the sum wasted amounted to 4 million rubles.

INTRODUCE TRAIN-CONTROL EQUIPMENT -- Gudok, No 25, 26 Feb 50

More than 2,000 kilometers of track on sections of high freight density have been equipped with intermittent automatic train stops designed by Stalin Laureate A. A. Tantsyura. A new continuous automatic train stop has also been created.

About 3,000 stations have been equipped with automatic control route installations designed by Stalin Laureate Ye. Ye. Natalevich.

**SECRET**

CLASSIFICATION		SECRET		DISTRIBUTION			
STATE	<input checked="" type="checkbox"/> NAVY	<input checked="" type="checkbox"/> NSRB					
ARMY	<input checked="" type="checkbox"/> AIR	<input checked="" type="checkbox"/> FBI					

**SECRET**

SECRET

50X1-HUM

TANTSYURA TRAIN STOPS SHOW DEFECTS -- Gudok, No 35, 22 Mar 50

During the past year, operations on the Omsk Railroad System have shown that the Tantsyura system of intermittent train stops has some drawbacks. Among other things, the train stop is not hermetically sealed against moisture. Water getting into the electromagnetic box along with air causes corrosion, and the induction coil of the valve gets out of order.

The wiring is often grounded. On the Omsk System, PRG-1 and PRG-2 wiring was used when installing the train stops, and neither has proved moisture resistant. The designers recommending these brands of wiring were motivated evidently by economy. However, in practice there have been great losses caused by the necessity of repairing the wiring often.

Under winter conditions, the electromagnetic relay first manufactured sometimes turns into a petrified frozen monolith, and afterward the indicator ceases to function. Severe cold reduces the volume of the time lag chambers, and under both winter and summer conditions the thin-walled brass tubes laid from the pressure line cause trouble. Very often they break with the vibrations of the movement of a locomotive. Workers of the Omsk Depot have decided that the brass tubes should be replaced by rubber hose of the type used for oxygen in autogenous welding.

It must be mentioned that repair of the automatic train stops is retarded by a lack of spare parts.

ADMINISTRATION HEAD BLOCKS NEW APPARATUS -- Gudok, No 39, 31 Mar 50

Not long ago, it was noted in the collegium of the Ministry of Transportation that Semenov, head of the Main Administration of Signalling and Communications of the Ministry, was in all ways possible retarding the introduction of the control route interlocking apparatus designed by Grigorov which has been approved, accepted, and proven under operating conditions. In his speech to the collegium Semenov announced that this apparatus had not proven itself, and that workers of the Zaputnaya station of the Moscow-Ryazan' Railroad System, where the apparatus was installed, rated the apparatus unsatisfactory.

However, the report of workers in the Zaputnaya station states that operation of Grigorov's apparatus over a 3-month period showed the apparatus to be reliable and simple to operate. Semenov's statement at the meeting of the collegium was, to say the least, untrue.

It was decided to introduce Grigorov's apparatus in 100 stations of the USSR network. The All-Union Scientific Research Institute of Railroad Transport, the Main Traffic Administration of the Ministry, the chief inspector for safety, and the administration of the Ministry of Transportation came out for the introduction of the apparatus. However, Semenov stubbornly continues to hinder the introduction of the apparatus, agreeing to install the apparatus for lengthy testing and in only 30 stations.

The ulterior motive is clear: while the apparatus for 30 stations is being manufactured, installed, and tested, it will be possible to equip or begin equipping all sections of the network with the apparatus designed by the workers of the Main Administration of Signalling and Communications. Then it will be impossible to install the Grigorov apparatus anywhere. It means nothing to Semenov that the apparatus designed by workers of the Administration, although having its good features, is inferior to the new apparatus in that its installation will cost the state 20 million rubles more, it is more difficult to operate, and it must be made specially for each station. No time is being wasted by the Main Administration of Signalling and Communications which is giving orders to equip quickly as many sections as possible with their own apparatus.

- 2 -

SECRET

**SECRET**

**SECRET**

SECRET



50X1-HUM

The procrastination with the introduction of Grigorov's apparatus has its story. Grigorov, an engineer of the planning department of the North Caucasus Railroad System, proposed his system of control route interlocking in 1941. Even at that time the Main Administration of Signalling and Communications did not render a decision as to its testing. With great difficulty a decision was obtained in 1945 and the apparatus was installed in 11 stations, where it has been operated successfully to this day.

Continually delaying with a review of this invention, the Administration worked out and quickly accepted its own system of control route interlocking. At that time Semenov tried unsuccessfully to represent himself as the co-author of this system, although he took no part in its designing. After the appearance of an article in Gudok, 2 March 1949, there was created a commission of specialists to determine once and for all the fate of Grigorov's invention.

Representatives of the Main Administration of Signalling and Communications did everything to hinder the work of this commission. The commission, however, recognized the necessity of working out drawings of the apparatus. The author was directed to make some changes and improvements. Semenov and Ryazantsev, chief engineer of the Communications Administration, refused to sign the order for the drawings. Finally, interfering in the rights of the author, they ordered drawings of their variation of Grigorov's apparatus. This variation was an attempt to unite the new original idea of electrical dependance with the mechanical block-keys known since the last century.

After Grigorov's apparatus was finally manufactured and installed in the Zaputnaya station, there were attempts to prove that it still had many defects. However, the commission proved point by point that the criticisms were unfounded. It proved that a broken key offered as evidence of the unreliability of the apparatus could have been broken only with the aid of mechanical force.

At present, the great advantages of Grigorov's apparatus have been completely and precisely established. In comparison with the existing type, it is 50 percent lighter, 50-60 percent less expensive, and only one sixth as large. Furthermore, it does not have to be made specially for each station.

It is necessary to break the conservatism of the managers of the Main Administration of Signalling and Communications.

#### NEW INSTALLATION FOR CAR RETARDER CONTROL -- Gudok, No 19, 12 Feb 50

Up to now control of car retarders in mechanized hump yards has not been made automatic. The operator, in putting the car retarders into action, determines the speed of the car by eye, and, taking the weight of the car into consideration, choose the rate of braking.

Hand operation of car retarders requires a sharp eye and much experience of the hump yard operator. Mistakes cause uneven loading of the hump yard tracks and extra shunting work. Serious miscalculations cause damage to the cars.

Senior Engineer Subotin of the Chelyabinsk Division of the South Ural Railroad System has proposed a system for automatic control of car retarders. He has designed a simple installation which does all operations connected with braking cars without the participation of a man. The installation automatically measures the speed of the cars along the whole braking position and sets the necessary degree of braking, depending on the speed and weight of the car, and brings the car retarders into action. The operator has only to direct the cars into the suitable part of the hump yard tracks by pressing a button.

- 3 -

SECRET

**SECRET**

**SECRET**

SECRET



50X1-HUM

Subotin's installation permits trains to be rolled off the hump at the usual rate even when visibility is poor.

Not long ago, the installation was tested on the mechanized hump yard of the Chelyabinsk station. The tests gave good results.

**NEW SYSTEM FOR SWITCH CENTRALIZATION -- Gudok, No 34, 19 Mar 50**

A new step-relay (releyno-shagovyy) system of switch centralization has been tested under operating conditions by the All-Union Scientific Research Institute of Railroad Transport. The system has many remarkable advantages over the relay-type centralization.

With the aid of the apparatus of the control board the station master controls all switches and signals located in the territory of the station. It takes only 15-20 seconds to assign a train a route. In comparison with the relay type of centralization, the equipment for the new system is about 20-25 percent cheaper and saves many materials.

**REPORT ON RAIL LAYING -- Gudok, No 25, 26 Feb 50**

In 1949, more rails were allocated for track laying than at any time before the war. Heavy improved Type R-50 and R-43 rails are being laid. In 1949, three experimental types of rails were produced and laid in track for operational tests. Designers have the task of increasing the durability and resistance to wear of the rails without increasing the expenditure of metal. A new type of rail fastening is also being produced.

**Izvestiya Akademii Nauk SSSR, Otdeleniye Ekonomiki i prava, No 2, Mar 50**

During the second and third Five-Year Plans, one third of the length of the USSR railroad network was laid with heavy rails.

**RADIO AIDS OPERATIONS -- Gudok, No 25, 26 Feb 50**

Two-way radio communication has been installed in 268 marshalling, freight and junction stations. The receiving and sending sets now operating in 1,176 locomotives permit savings of more than 8 million rubles per year.

- E N D -

- 4 -

SECRET

**SECRET**