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CONNECTION WITH THE INTRODUCTION OF NEW  
WAGE SCALES

- USSR -

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[This is a translation of an article written by A. Arkhipov in Byulleten' Nauchnoy Informatsii; Trud i Zarabotnaya Plata (Bulletin of Scientific Information; Labor and Wages), No. 6, 1959, pages 3-9.]

(Based on material gathered from the following plants: "Calibre" ["/"Kalibr"/], imeni Vladimir Il'ich, and State Bearing Plant No. 1.)

As a result of insufficiently high wage rates, the application of new wage terms, carried out by way of experiment of 1956 in fourteen machine works, did not allow for the full organization of the forms and systems of workers' wages. In 1957 and 1958, higher wage scales were adopted, in the Plant imeni Vladimir Il'ich, the Calibre Plant and the State Bearing Plant No. 1. This policy has ensured the possibility of a more correct application of the forms and systems of workers' wage scales. The respective changes are reflected in Table 1.

The given data attest to the fact that, in spite of the reduction in the proportion of the piece-work system of wages, it continues to remain the basic and prevalent system. In the Calibre Plant, the proportion of piece-rate wages remained substantially higher than in the two other plants. The explanation for this phenomenon lies mainly in the smaller proportion of auxiliary workers in this plant, the overwhelming majority of whom (approximately 80 percent) are paid on an hourly basis.

The reduction in the number of production and auxiliary piece-rate workers took place basically as a result of the elimination of fictitious and indirect piece-rate wages in sections in which proven work standards were not substantiated.

The production workers transferred to hourly pay rates were primarily those who worked in departments in which the application of piece-rate wages had led to de-

terioration of the quality of the output and to violations of the technological processes in the manufacturing of the products; this group primarily consisted of workers engaged in chemical and thermal processing. For example, the workers (40 men) of the tempering section of the thermal shop of the Calibre Plant were transferred from piece-rate wages to the premium hourly pay system; the same change also took place in the thermal shop and thermal section of the tool division of State Bearing Plant No. 1 (173 men) and in the thermal section of Plant imeni Vladimir Il'ich (18 men). In addition, the following workers were transferred to hourly pay: in the State Bearing Plant No. 1 -- adjusters of mechanical manufacturing equipment (in various shops), workers engaged in polishing disks, workers attending drums in which small objects are polished with abrasives, and polishers of parts; in the Calibre Plant -- sand-blasters of the thermal shop; in the Plant imeni Vladimir Il'ich -- impregnators attending vacuum machines, etc. These sections work on a long list of manufactured products. The elimination of piece-rate pay has thus made it possible to reduce the formulation of a great number of work orders, to release record-keeping personnel, and to employ standardization workers in technological operations and in work for the formulation of standardization in other sectors. On the other hand, the transfer to the hourly pay system of workers who are basically required to adhere to technological manufacturing processes resulted in a reduction of spoilage and in an improvement of the quality of output. For example, the workers of the tempering section of the thermal shop of the Calibre Plant, were transferred to the hourly premium pay system in July 1957. As a result, as early as the second half of 1957, spoilage had declined by 27 percent, compared with the first half of the year; moreover, spoilage continued to decrease in 1958. An analogous development took place in the State Bearing Plant No. 1 and in the Plant imeni Vladimir Il'ich.

The experience of these plants also shows that the transfer of workers of the thermal sections from piece-rate to hourly premium wages caused some reductions in output; in most of these cases, the reduction was minor. While the savings attained through the reductions in spoilage have been considerable, they have by no means always covered the losses caused by the decrease in output. For this reason, the transfer of piece-rate workers to the hourly wage system, has been approached with extreme caution in most cases.

The application of the piece-rate system to auxiliary workers in manufacturing shops has been particularly widespread; accordingly, the hourly pay system has become the

Table 1  
(in percent)

Name of plant and time of wage-scale regulation	Proportion of piece-rate workers	Among these, according to the following systems				Proportion of workers paid by the hour	Among these, according to the following systems		
		Ordinary piece rate	Progressive piece rate	Premium piece rate	Indirect piece rate		Ordinary hourly pay	Premium hourly pay (as per adopted category scale)	Premium hourly scale (as per pay rates)
<u>State Bearing Plant No. 1</u>									
Prior to regulation in 1956.....	70.2	53.2	10.4	1.8	4.8	29.8	1.5	28.3	-
After regulation in 1956.....	61.3	51.8	1.51	5.0	3.0	38.7	21.6	17.1	-
After regulation in 1958.....	54.7	46.3	1.4	5.4	1.6	45.3	2.0	16.3	27.0
<u>Plant Imeni Vladimir Il'ich</u>									
Prior to regulation in 1956.....	77.0	63.3	3.4	-	10.3	23.0	0.8	28.2	-
After regulation in 1956.....	60.0	52.8	-	7.2	-	40.0	-	14.8	25.2
After regulation in 1957.....	56.3	35.9	-	20.1	-	43.7	-	18.7	27.0
<u>Calibre Plant</u>									
Prior to regulation in 1958.....	74.9	74.9	-	-	-	25.1	-	25.1	-
After regulation in 1958.....	72.3	70.0	-	2.3	-	27.7	-	8.8	18.9

basic and prevalent system for these workers. Thus, in the automatic lathe shop, in shops that manufacture articles in small series, and in the thermal shop of State Bearing Plant No. 1 not a single auxiliary worker is still paid on the basis of piece work. In other shops, only a small group of auxiliary workers remains on the piece-rate system. This is also characteristic of the Plant imeni Vladimir Il'ich. (For example, in the mechanical shop 87 percent of the auxiliary workers are paid by the hour, in the engine assembly shop -- 89.4 percent, and in the insulation-winding shop -- 89 percent.)

The experience of these plants attests to the fact that, under conditions of higher wage rates, it is proper to adopt extensive hourly premium wages for auxiliary workers of the basic shops of the machine-tool enterprises.

In contrast to State Bearing Plant No. 1 in the basic shops of the Calibre Plant and the Plant imeni Vladimir Il'ich, repair mechanics and mechanics who service mechanical manufacturing equipment are still paid according to the piece-rate system. In the Calibre Plant, this was primarily the result of the desire of the plant workers to preserve the comparatively high wage levels that had evolved there. In the Plant imeni Vladimir Il'ich, piece-rate pay for repair mechanics and mechanics servicing equipment survived for only a little over six months after the adoption of new wage scales; the piece-rate system was then replaced by the hourly premium-pay system. It should be noted that the experience of State Bearing Plant No. 1 and the Plant imeni Vladimir Il'ich has thus far not solved the problem of the suitability of hourly premium pay for repair mechanics and mechanics who service equipment; nor has it yet solved the problem of whether the premium system applied in these plants is an effective one.

This system has certain shortcomings. In particular, in order to preserve the previous level of output of repair and servicing mechanics, it would be expedient to calculate the premium not on the basis of the wage scale of each worker (the current practice), but on the basis of the wage-scale fund of the brigade as set forth in the plan. The distribution of the premium within the brigade should then be carried out according to both the categories of work and the number of work hours put in by each worker. This system of calculating and distributing the premium will provide concrete incentives for the workers to fulfill the equipment repair plan with a smaller labor force. However, this system should provide for a maximum limit for reductions in the number of workers in a brigade.

A substantial number of auxiliary workers in occupa-

tions that employ a great many people have also been transferred to the hourly pay system. This category includes transport workers engaged in intershop and intrashop transportation, loaders, power-truck operators, crane operators, loading machine operators, etc. This change has made it possible to bring their wage levels into line with planned levels.

The data contained in the table show that the previously applied progressive piece-rate and indirect piece-rate systems, which, were utilized for ensuring the planned wage level, have been partly or completely eliminated. At the present time, the progressive piece-rate wage system remains in force only in State Bearing Plant No. 1, where it is applied only in exceptional cases. In particular, it is being applied to the wages of stamp operators who work on the horizontal forging machines and hammers of the foundry; their labor is characterized by great exertion and difficult conditions.

In State Bearing Plant No. 1, only the adjusters of the mechanical working equipment of some manufacturing shops are still paid according to the indirect piece-rate system. However, the piece-rate wage system has not encouraged the adjusters to take an interest in improving the qualitative indices of their work (reductions in spoilage, reductions in the expenditure of instruments, improvement in the utilization of the equipment, etc.) As a result the Plant is currently working on the transfer of the adjusters to the hourly premium system of wages.

The data in Table 1 also show that the piece-rate premium system of wage payments began to expand after the introduction of new wage-scale conditions in the plants. The piece-rate premium system is utilized on a particularly wide scale in the Plant imeni Vladimir Il'ich. In State Bearing Plant No. 1 and in the Calibre Plant, this wage system is only being applied to a small number of workers (5.4 percent and 2.3 percent respectively). The workers of these plants believe that the piece-rate premium system of wages should be applied only in exceptional cases, since the large-scale utilization of the piece-rate premium system can lead to an unjustified increase in wages.

The introduction of piece-rate premium wage payments, with premium payments for the fulfillment of technologically justified standards, has been motivated, as a rule, by the necessity of preserving the former wage levels of workers at the same time that new standards are adopted. For this purpose, piece-rate premium wages were introduced for milling machine operators of the flat horizontal calibers gages, bores, diameters shop, for individual operations

in the spindle shop, in the mechanical shop of the Calibre Plant, and in a number of shops of the Plant imeni Vladimir Il'ich (engine assembly shop, foundry, mechanical shop and others).

The experience of these plants attests to the fact that the piece-rate premium system of wage payments has had a good effect on expanding the scope of operations conducted according to technologically justified manufacturing standards. In certain manufacturing sectors, the adoption of technologically justified standards would be impossible without the application of the piece-rate premium system.

The application of piece-rate premium wage payments differs from plant to plant. In the Plant imeni Vladimir Il'ich and in the Calibre Plant, premium awards for workers are, as a rule, given for the fulfillment of monthly tasks. In State Bearing Plant No. 1 (for example, in the shops in which small lines of articles are produced) premium awards are distributed for the fulfillment of variable tasks that are determined by taking into account the fulfillment of the monthly program; but these awards are not distributed for less than 100 percent fulfillment of the norm. In the Plant imeni Vladimir Il'ich and in the Calibre Plant, a constant volume of tasks is set for the entire period during which the conditions are in force (three to six months). In State Bearing Plant No. 1 (in the above-mentioned shops) the right of determining the tasks is left to the foreman, since the foreman is better acquainted with working conditions and with the potentiation of every worker.

The policy of granting this right to the foreman and of awarding premiums for the fulfillment of variable tasks has enhanced the stimulating effect of the piece-rate premium wage scale in the form of an increase in output and an increase in rhythmicity. This is particularly significant in the large-series and assembly-line mass production shops of State Bearing Plant No. 1. Moreover, this policy has also enhanced the importance of the foreman's role in production.

In certain cases, as shown by the experience of State Bearing Plant No. 1, the piece-rate premium pay system should be employed for the purpose of improving both the quantity and the quality of the work indices of the sectors.

For example, in the first half of 1958, there was a sharp increase in the amount of spoilage in the polishing grinding of the outer and inner rings of No. 27709 bearings in the roller-bearing shop. In July of the same year, premium awards to polishers grinders-- conditioned in the fulfillment of the month's task -- were introduced in order to effect a reduction in spoilage. The polishers grinders and adjusters in flat-surface polishing received the follow-

ing premium awards (in percentages of piece-work earnings):

with losses from spoilage of not more than 0.1 percent .....	5.0 percent	
with losses from spoilage of not more than 0.05 percent.....	10.0	"
with losses from spoilage of not more than 0.01 percent.....	20.0	"

Polishers /grinders/ and adjusters engaged in the preliminary polishing of the surface diameters of outer rings are awarded the following premiums (in percentages of piece-work earnings):

with losses from spoilage of not more than 0.3 percent.....	5.0 percent	
with losses from spoilage of not more than 0.15 percent.....	10.0	"
with losses from spoilage of not more than 0.05 percent.....	15.0	"
with losses from spoilage of not more than 0.01 percent.....	20.0	"

The technical control department keeps a record of the spoilage caused by each individual worker. Premium awards for a reduction in spoilage have made it possible to ascertain and study the reasons for spoilage; and at the same time, they have served as an incentive for the workers to enhance their technical knowledge.

When wage regulations were put into effect in 1956, a sizeable group of auxiliary workers, including controllers, warehouse men, greasers and others (Table 1) were transferred to the regular hourly wage system. The total number of workers paid according to this system reached 21.6 percent. However, experience disclosed that regular hourly wages were not effective for workers in manufacturing shops. They do not provide the incentive to effect improvements in work indices. Therefore, controllers, warehouse men, greasers, and others were transferred to an hourly premium wage system at the time of the institution of wage regulations in 1958.

At the present time, in addition to the above-mentioned workers engaged in production or manufacturing, the following auxiliary workers are being paid according to the hourly premium wage system in State Bearing Plant No. 1: welding operators engaged in electric and gas welding, grinders of instruments, mechanics engaged in the repair of equipment, lathe hands of various sections of shop mechanics.



At the Calibre Plant, the hourly premium wage system includes transport workers hauling coal to the boiler plant. At the Plant imeni Vladimir Il'ich, this system comprises equipment adjusters, instrument grinders, mechanics-assemblers, fettlers, photogravure workers, locomotive engineers and their helpers, couplers-assemblers, etc. In addition, the following workers are included in the hourly premium payment system in all the plants under review: workers engaged in planned preventive repairs on electric equipment and pipe lines, electricians, pipe layers, mechanics-tinsmiths in ventilation equipment shops, and others.

It is evident from the experience of the plants that hourly pay with premium awards for the fulfillment of qualitative and quantitative work indices has been fully justified for workers engaged in the above-mentioned occupations.

The introduction of higher wage terms has permitted an increase in the share of the wage scale of workers paid by the hour. This, in turn, has increased the significance of premium awards for improvements in quantitative and qualitative work indices.

In the plants under review, premium awards for hourly workers are distributed according to principles for the granting of premiums which were ratified by the State Committee on Problems of Labor and Wages of the Council of Ministers USSR. In a number of cases, plants derived indices and conditions for premium awards to workers directly from these principles without taking into account the specific conditions and peculiarities of the organization of production in sectors and shops. This practice has undoubtedly weakened the effectiveness of the new premium principles.

In some instances, in fixing the amount of premium awards, the plant workers began from the premise that it was necessary to preserve the former level of earnings; this created an obstacle to the establishment of correct relations between the wage levels of workers engaged in various occupations. Thus, in State Bearing Plant No. 1, different levels of premium awards for equipment repair mechanics were fixed for every shop merely because the former earnings levels of the mechanics had varied.

The data in Table 1 show that, after the introduction of the new higher wage scales, the salary system became the dominant system of payment. (More than 50 percent of the workers were placed on hourly wages.)

Prior to the experimental wage regulations of 1956, this system was not, as a rule, applied to machine building enterprises. It was introduced in the course of the regulation of wages in 14 plants, including one of the plants reviewed -- the Plant imeni Vladimir Il'ich.

The salary system found its broadest application in payments to auxiliary workers in manufacturing shops. Thus, the following workers are being paid according to the salary system in State Bearing Plant No. 1:

in shops that produce small lines of articles -- 51.1 to 57.7 percent of the auxiliary workers; in the mechanical shop No. 25 -- 57.4 percent; in the engine assembly shop -- 58.9 percent; and in the foundry -- 58.7 percent.

In the insulation-winding shop of the Plant imeni Vladimir Il'ich, 51.5 percent of the auxiliary workers have been transferred to the salary system of wage payments. This system also includes 57.4 percent of the workers of the No. 25 mechanical shop, 58.9 percent of the workers of the engine assembly shop, and 58.7 percent of the workers of the foundry.

Piece-rate workers, as well as workers paid by the hour, have been transferred to the salary payment system. Thus, the following piece-rate workers have been transferred to the salaried category: transport workers, power truck operators, hoist operators, crane operators, workers who remove shavings and chippings, loaders, and others. Since the application of piece-rate wages to these workers often resulted in unjustifiably high earnings, in some cases earnings levels dropped upon the transfer of piece-rate wage earners to the salaried class. For example, the average monthly pay of transport workers and power truck operators of the Calibre Plant changed in the following manner.

Of the workers paid on an hourly basis, those transferred to a salaried basis included warehouse workers, distributors of tools, work distributors, controllers, personnel workers, equipment greasers, harness makers, laboratory workers, and others. Upon transfer to a salary system, most of the workers who had been paid by the hour received higher wages. This is the result of the fact that, as a rule, the conditions obtaining in the application of former wage scales had lowered the level of the earnings of the hourly-payment workers. Thus, when 603 workers of the Calibre Plant, who had previously been paid by the hour, were transferred to the salaried system, the earnings of 303 of these workers (50.2 percent) increased, while the earnings of 242 workers (40.4 percent) remained unchanged.

The shortcomings of the salaried system in the plants reviewed also include the fact that, in a number of cases, the amount of the salary was fixed on the basis of the pay-structure level that had evolved in each of the plants for individual groups of workers and under specific working conditions. Thus, the power truck operators in

Table 2

Designation of occupation	At piece-rate wages prior to the wage regulation			At the salaried system after the wage regulation		
	Number of workers	Monthly wage fund (in rubles)	Average monthly wages per worker (in rubles)	Number of workers	Monthly wage fund including premiums (in rubles)	Average monthly wages per worker (in rubles)
Transportation workers	62	52875	853	62	47988	774
Power truck operators	19	21972	1156	19	17169	903

the Plant imeni Vladimir Il'ich were assigned salaries of 650 rubles, while the salaries for the truck operators in the Calibre Plant were fixed at 750 rubles.

The experiences of State Bearing Plant No. 2, the Calibre Plant, and the Plant imeni Vladimir Il'ich attest to the fact that under the given conditions of wage regulation, the application of the salary system for wage payments to auxiliary workers has helped to resolve a number of problems. In particular it has helped to establish better-substantiated wage levels, to avoid a mass reduction in the personnel of some occupational categories, and to carry out an orderly regulation of wage payments for workers within the limits of the existing wage fund. This does not, however, constitute proof of the desirability of employing the salary system in wage payments for workers in all the above-mentioned occupations in the course of the continued perfection of wage payments.

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The adoption of new wage-scale conditions and the simultaneous implementation of changes in the application

of workers' wage methods and systems have contributed to the establishment of a better ratio between earnings according to occupations, shops, and sectors qualifications, and labor conditions. It has contributed to an increase in the effectiyeness of the wage systems applied and to an improvement in the results of the productive and manufacturing activities of the enterprises.

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