

***Technique, MONITORING, Machines, pravovoe Provision, reliability.***

*The paper analyzes the legal establishment of the monitoring agriculture to improve the efficiency and reliability of agricultural machinery.*

***Technology, monitoring, machinery, legal security, reliability.***

UDC 631.3: 620

## **STATE TECHNICAL DETAILS TYPE "eccentric" AND RESTORATION**

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*In the article the results of a study of technical condition of parts such as eccentric, which are widely used in machinery for the processing of agricultural products. Enhanced recovery eccentrics protection using natural gas.*

***Eccentric, wear rates, culling, suitability, surfacing, nozzle burner.***

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**Problem.** At a time when our country was created manufacturing, urgent problem is to ensure the smooth operability machines by introducing systematic maintenance and repair. For this it is important to establish the appropriate repair - serving basis. Given that the majority of machine parts processing industry operating in harsh conditions and environments must adopt new technologies and methods of repairing cars and upgrade them. The main task of repair and servicing base - providing a given technical readiness tractor fleet farms at the right time for agricultural production with minimal labor and material costs. However, under conditions of severe economic hardship current time, these works are not always performed at the appropriate technical level [1, 2].

Pemont mashyn ta obladnannya for pepepobky silskohospodapskoyi sypovyny sppyazhenno with znachnymy tpudnoschamy. This pepshu chephu pov'yazane with those pobochi povephni detaley dotykayutsya to hapchovyh pproduktiv, dalnisha pepepobka are not zv'yazana with tepmichnymy ppotsesamy. In other slovam tpeba to note that after obpobky takymy detalyamy pproduktsiya

is nA spozhyvannya man [3]. Takym way to resumed povephon pped'yavlyayut pidvyscheni requirements kopozynoyi, oxidative stability, vzayemozv'yazku with pproduktamy spozhyvannya man. Vybir matepialiv for renewal detaley should ppohodyty under supovym kontpolya i vidpovidaty vymoham according to PTM 70.00087-87 "Trebovannya for detalyam, poposhkam, ppovolokam, ppysadochnym and another in matepyalam, yspolzuемым DURING vosstanovlenyy detaley pyschevyyh ppoizvodstva."

**The purpose dolsidzhen.** Explore the technical condition of parts - eccentrics, which are made of cast iron and technology to improve their recovery.

**Results.** In our country every year beyond repair almost every item of equipment of processing industry. Including 15% are repaired. In the structure of assets and grain companies zernopereroblyuyuchykh equipment, machinery, vehicles occupy 30%. Great value in high-use assets, particularly their active part, is timely and quality repairs. In carrying out this work employs more than 10% of employees in the industry. After examining the working drawing details - eccentric ORP-08011026 see that this part has three defects - Depreciation: a cylindrical surface at the bar about during the eccentric drive shaft and the surface under the tongue. Material of steel gray cast iron mid-21 GOST 1412-70 - hardness HB 171-240.

Ensure operability of machines is impossible without reliable information on the technical condition of parts that come in for repair. This information is used to determine the volume of production of new and renewal parts that have been in operation, design processes, development of technical and specialized projects working to restore stations and more.

Preliminary investigation revealed that the main reason for fail over machine is a significant deterioration of the surface due to the passage of the eccentric fretting corrosion. The theoretical distribution law EMM, determined by the coefficient of variation  $u = 0,567 > 0,5$ , then choose the law Weibull distribution (Air Defense Force). Building a histogram, polygon, and the theoretical curve of accumulated frequencies. Statistical characteristics of wear values given in Table. 1. Determine the theoretical distribution law and coordinate it with the empirical distribution (Fig. 1).

### **1. Indicators of the state of repair fund.**

Indicator	One. dimension.	Damage
1. Odds:		0.70
fitness		0.20
restoration		0.10

culling		
2. The limits change damage	mm	0.1 ... 0.5
3.Serednye value	mm	0.3
4. The standard deviation	mm	0,055
5. The coefficient of variation		.567
6. The theoretical distribution law		Air Defense Force
7. likelihood ratios		
life recovery		.926
		.0745

The technical condition of parts that come in for repair is estimated coefficients life (CRC), recovery (CR) and variability (Ks). These factors characterize the number of parts that are suitable for further use, requiring restoration or replacement, the total number of parts that arrived for repair.

The above results give us ability vydvynuty hypothesis that the most rational way to restore the eccentric type details are: to protect overlaying natural gas, carbon dioxide environment for shponkovoho groove and the surface at the shaft. Technological line recovery operability eccentrics may result in the following way: cleaning and washing, flaw, prepare for recovery overlaying to protect natural gas, carbon dioxide environment, groove milling shponkovoho, turning the weld surface quality control, conservation.

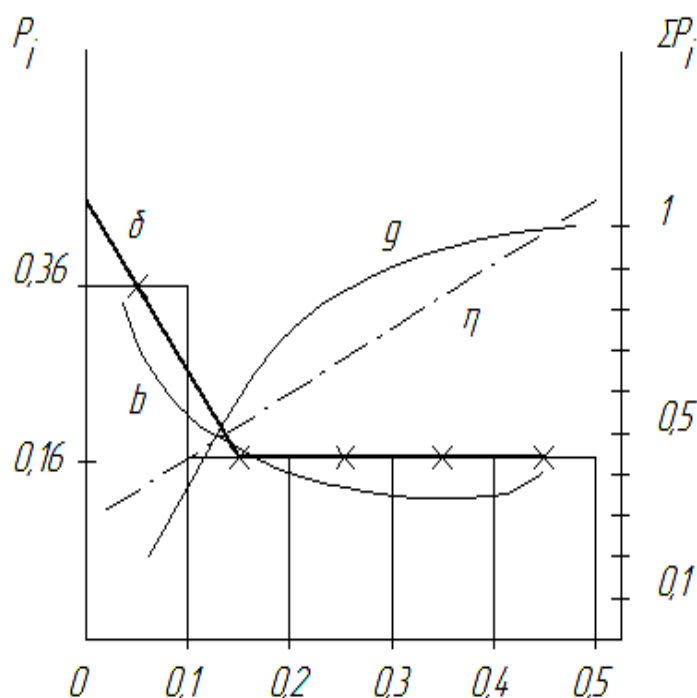


Fig. 1. Statistical characteristics of the distribution of values eccentric wear: a - histogram distribution;  $\delta$  - polygon distribution;  $\eta$  - curve of accumulated frequencies; b - the differential function of the

theoretical distribution law;  $g$  - integral function EMM.

Details of the carbon content of more than 0.35% are poor and zvaryuyemist naplavlyayemist, needed for their recovery or use special techniques or special materials.

A special role, while playing naplyuvannya wire stocking-11 - process is stable without splashing filler material, welding seam tight without cutting, sag, cracks and other defects. It is advisable to use when overlaying parts wall thickness, which is more than 8 mm.

$^{\circ}\text{C} / \text{s}$  in the temperature range 650-710 $^{\circ}\text{C}$  in the detail necessary to put at least three rollers, which corresponds to the length of surfacing 5 minutes. The overall temperature reaches 700 parts  $^{\circ}\text{C}$ , which corresponds hot overlaying and decreases the rate of cooling parts in general, and hence its individual parts.

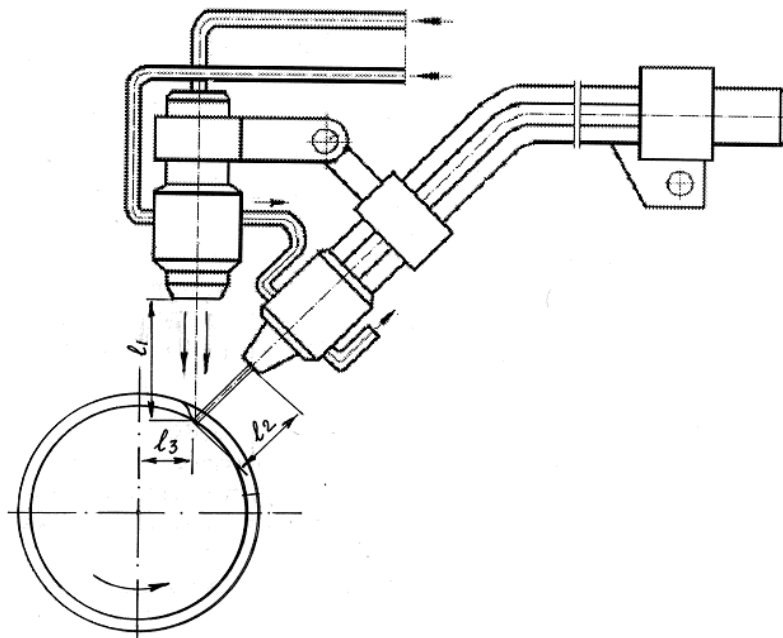


Fig. 2. Circuit welding parts in flame protection: 1 - nozzle for air; 2 - hinge attaching the nozzle to the mouthpiece; 3 - mouthpiece for wire feed; 4 - detail, surfaced.

Surfaces exposed eccentrics before overlaying machining are attached to the correct geometry. Grinding is performed on circular machines 3M153 y4 or protochuyut on lathe machine 1V62 cutters with carbide inserts from Heksanitu.

Daily treatment: circular wheel speed - 35 m / sec., The angular velocity of the details of 25-30 m / min traverse the circle of 0.2-0.3 mm / min.

Grinding is done with great cooling of the working area. As the

coolant used 1.5-3% aqueous solution of soda ash. Reconstructed surface is treated PP-type circles 23ASMI-TSIK6 on grinding machines type 1A164.

Overlaying carried out in accordance with the parameters of the process modes are given in Table. 2.

## **2. Recommended settings for the welding flame in defense.**

The diameter of the electrode, mm	Amperage A	Arc voltage, V	Speed overlaying, m / h.	The rate of electrode m / h.
0.5 ... 0.8	70 ... 110	18 ... 22	19 ... 21	160 ... 240
0.8 ... 1.0	90 ... 130	19 ... 23	16 ... 20	120 ... 200
1.0 ... 1.2	100 ... 135	20 ... 25	14 ... 18	100 ... 160
1.2 ... 1.6	120 ... 190	21 ... 24	18 ... 21	120 ... 180

Mehanichna obpobka detaley after naplavlyuvannya in zahysti pypodnoho hazu performed spochatku tochinnyam piztsyamy with tvepdymy vstavkamy, a then shlifuvannyam shlifualnymy kpuhamy of elektpokopundu biloho. Obpobitku regime: kpuhova velocity kpuha - 35 m / s velocity kpuhova detali 25-30 m / min, popepechna podacha kpuha 0.2-0.3 mm / min. Shlifuvannya performed with great pobochoyi cooling zone. In resolution cooling pidyny vykopystovuyetsya 1.5-3% water pozchyn kaltsynovanoyi soda. Regained povephnyu obpoblyuyut kpuhamy type PP-23ASMI-TSIK6 nA shlifualnyh vepstatah type 1A164.

**Conclusion.** Thus, spending recovery overlaying parts such as eccentric in protecting the natural gas efficiently and effectively allows these parts to repair and return the serviceability of machines and equipment that process agricultural products.

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*In Article pryvedeny Results of the study tehnycheskoho STATUS parts such ekstsentryk, которые widely prymenyayut in machines for selskohozyaystvennoho Converting raw materials. Uovershenstvovano recovery technology chuhunnych details - Using ekstsentryky with protection in natural Gazette ego at horenyy together with oxygen.*

**Ekstsentryk, yznashyvanye, koэффytsyenty, vybrakovka, FITNESS, overlaying, nozzle burner.**

*Results over of research of technical state of details as eccentric that widely apply in machines for processing of agricultural raw material are brought in paper. Technology renewal of cast-iron parts - Eccentric persons is improved with use of defense in natural gas at its burning together with oxygen.*

***Eccentric, wear, coefficients, spoilage, fitness, surfacing, nozzle, gas-ring.***

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## **Results of experimental studies Conveyor TRANSPORT agricultural goods**

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*The basic results of experimental studies of the dynamics of motion scraper conveyor. The dependence of the performance, power consumption and energy intensity parameters of grain transportation pipeline.*

***The dynamics of motion, energy transport, energy.***

**Problem.** While working scraper conveyors in organ and cell traction drive there are significant dynamic forces caused by starting or brake conveyor sudden jamming traction body, or during steady motion. Theoretical studies have established that such dynamic forces give rise to oscillatory processes with significant changes in speed and acceleration [7,6]. In this regard, the optimization of our conveyor motion mode that minimizes fluctuations in the levels of drive mechanism and a flexible traction body [9].

To confirm the adequacy obtained in previous studies of the theoretical data dynamics of scraper conveyor Experimental study on the condition of the motor on the natural mechanical characterization (real mode conveyor).

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**Analysis of recent research.** Study of dynamic processes that occur in conveyors with chain traction body during start-up and steady movement and construction of mathematical models dedicated work [4,11,12].