CALCULATION OF THE ROTATION SPEED OF THE CLINKER CRUSHING MILL

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Abstract
Most of the production of building materials in the article the basic technological device atagiven rotational speed of the mill one who rida sharli a method to calculate the condition. Sharli calculation methods of the rotational speed of the mill is detected on the basis of scientific studies provide detailed information in the source is illuminated.

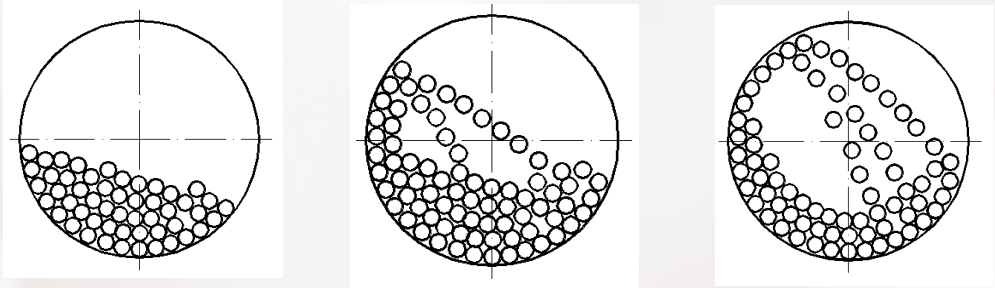
Keywords: mill, mode, tuyuvchi body, the movement of the ball tronktoriyasi, power, speed

Introduction

Sharli basically operates in two different modes depending on the rotational speed of the mill drums:

- cascade wasimi (drums becomes slower).
- the waterfall mode (very quickly becomes drums)(1-picture).

Balloons ascending the hill a breeze maydalanayotgan material together with cascade mode, the horizontal axis angle in relation to places. Waterfall mode power away from the center of the ball in turn raised high in the effects of the outer array, and the drums on the walls of the waterfall as the material tightened and from a certain height, tattoos fall, with her side, maydalaydi. When used in the same way the action of the trajectory of the ball shredded order in the layer is divided into two parts (Fig.2) [1-9].



a) *b)* *c)*

Fig. 1. The order of the actions in the way the ball waterfall.
cascade mode - drum become slow ball quality, b - mixed mode - become faster condition, v - the condition of the waterfall - very quickly become condition.

Fall ball point to *B* point to the papers from *A* raised – when framework from the way *A* from point *B* to the point when they fall while *AV* the line on expenses. the way of sharing the situation in the framework of the radius from the center of the ball milling drums the drums, which form steep the angle is determined by the concentration of the diameter. Power weight ball at any point *J* from the center qochirma power with *r* indicate the effects of:

$$p = \frac{m \cdot v^2}{2},$$

here, *v* – ball, the speed of the line of the line. The force of gravity and the structure can be divided into: the power of the developer radial *N=I a cos*.

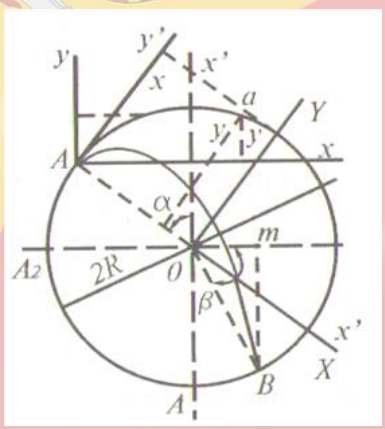


Fig. 2. The scheme of sharing the drums scan.

The speed of the cycle when the drums remain unchanged from the corner of mill and the value of the t axis power tangentsial the way to its edge will keep previous xolicha. While the size and direction of the radial force in the framework of the ball will change depends on the situation. The inner surface of the drum of the ball with touching him stood the correspondence between the friction forces framework layer, which is formed from the way the balloons will force you to move [10-21]. Friction the friction force depends on the size of the pressure with koeffisienti power.

T power drum is turning against the side of yo'naltirmoqchi balloons. Balloons for the moment of friction forces on the inner surface of the drum to the moment of the forces sirpanmasligi tangentsial tenglashmog'i should be. Radial forces *N* and *P* side effects zo kvadrantlarda who flock tolis large with a force presses the inner surface of the drum. Here are some of the biggest friction power, the advance of providing circulation of sharing sprint "beams" builds. *N* - power has the opposite effect yuqorigi kvadrantda to the side, as a result, *p is* the pressure of the power, consequently, the friction force is reduced. Sharing framework when it is moved from the path *of a* point from *N* to turn away from the power center power *P* is equal to. Tangentsial caused by a regular array in the same layer of resist ball power *T* extinguished balloons and will get rid of the effects of power [22-34]. Speed ϑ ball is the center of *R*, the radius equal to the speed of the rotary scan framework from the way; in the wake of the ball to achieve such speed, point *A* , starting from (certain slope than the horizon ϑ at a speed like irg'itilgan solids) in the effects of their weight is moved from the parabolic path (sirpanmaydi, assume that it is):

P=N

$$\frac{m\cdot\vartheta^2}{R}=I\cos\alpha$$

$$\frac{m\cdot\vartheta^2}{R}=m\cdot g\cdot\cos\alpha$$

$$\vartheta^2=R\cdot g\cdot\cos\alpha,\ V=\frac{2\pi\cdot R\cdot n}{60}=\frac{\pi Rn}{30}$$

here, *n*-the number of milling drums in a minute to become due.

$$\frac{\pi^2R^2n^2}{30}=Rg\cos\alpha$$

$$n=\frac{30\cdot\sqrt{g}}{\pi\cdot\sqrt{R}}\cdot\sqrt{\cos\alpha}$$

$$\cos\alpha=\frac{\pi^2R}{900}$$

Ball mills are commonly referred to as the basic equations of this equation the move.

The girth of the drums further increase the speed of the forces due to the weight of the ball from the center, which is the power qochirma causes. In this case, the armor of the drums qapishib strip balloons, get along with shredded displaces as a result of the material maydalanish stops. Become due to the number of drums in a minute mill, which remain despite the coating of the papers from balloons in a certain amount of armor, drums, drums due to rotation is called the rotational speed, the number of these critical've:

cos a=1, since *a=0*

The equation which expresses the movement of the ball so that circulate at the speed of drums:

$$\ell = \frac{R \cdot n^2}{900},$$

that came out also become critical due to the number of

$$n_{kp} = \frac{30\sqrt{g}}{\pi \cdot \sqrt{R}} = \frac{30}{\sqrt{R}} = \frac{42{,}3}{\sqrt{D}} \text{ ail/min}$$

here *D*-internal diameter of the mill drum, m.

Rotational speed of the drum at the time of doing the work

$$n_{uu} = 0{,}76$$

or

$$n_{uu} = \frac{32}{\sqrt{D}}$$

Drums always raised to the height of the ball when turning at the same speed, armor coating to form the appetite of the method to the material (dry or wet method seemed to) and how his maydalik will depend seemed [35-46]. His armor coating of the drum of the ball-stratification of himself (popular education)ha that is born in such cases particular to adapt to the shape of the rotational speed of the drums armor coating plays a role. The inner surface of the drum in the form of a cone, the armor is covered if the board surface is smooth, the ball of the rotational speed of the drum to provide a good shredded stratification n=0.8-0,9 up to you will need to increase this value corresponds to the following:

$$n = \frac{34}{\sqrt{D}} \div \frac{38}{\sqrt{D}}$$

The cone-shaped surface and the speed of the drums to'lqinsimon the purpose shall be considered in accordance with the following cycle:

$$n = 0{,}7 \div 0{,}8$$

or

$$n = \frac{30}{\sqrt{D}} \div \frac{33}{\sqrt{D}}$$

The cone-shaped surface and punch work strongly to create conditions to achieve a good barabandan ball speed and stratification drums should become acceptable to them below:

$$n = 0{,}6 \div 0{,}7$$

or

$$n = \frac{26}{\sqrt{D}} \div \frac{29}{\sqrt{D}}$$

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