CALCULATING THE EFFECT OF LIGHTING ON PEOPLE AND THE ENVIRONMENT

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Annotatsiya: Work in and out of the illumination of the place a big list. Birth regulatory coverage for the productivity of the production to increase to 15% will cause. The lighting in production and increasing the quality plays an important role in unum normalization to work. Labor protection and safety of life activity of the birth of lighting as an important requirement to be or not to be progressing in its norms related to human health. The coverage in this article the concept of birth, its norms and optimization issues lighting quotes

Key words: birth lighting, clarity, lyumen, lyuminessent lamps, natural lighting of the birth, the birth of suniy lighting

Jobs normative lighting products ensures that the quality norms and unum. See the ability to maintain the center made to ensure the safety in production and the status of the system like in types and lighting conditions play an important role. To correct the lighting, that is, the normative condition is determined depending on the type of work. For example, recording work, water clarification, dyeing, sewing coverage for work 200 lux of birth (lk); lk 200-250 computer engineering in the room; builder, 2-20 for educational warehouses lk; lk plant 200; 30 slot machines to place lk; l 2 kva corridor to relieve the fire in buildings and structures etc. Jobs in the artificial lighting of the work place and height of the room is taken into consideration, capacity of each square meter of the training room to put in to place at the expense of lighting time is 8-10, and their eyes are shaped to be dressed for the bulbs do not lock milk glass, allowing light from lamps or lyuminessent should be used.

Fiber incandescent electric bulbs electric erergiyasining 60% to the part is converted into heat energy. While in electric lamps Lyuminitsent energy 20% part of the rage is converted into heat energy. Therefore, the lighting of lamps using production lyuminitsent found convenient to be done. Doing any work in enough natural light is not do in cases before artificial lighting in the work place unbreakable light that falls on the condition of the works it is necessary to take into account the angle afford. For example, compared to the corner of the floor will be evaluated as follows under:

-0-14 - eyes strong very fascinating;
-15-27 - eyes stro ng is fascinating;
-28-45 - the eye of fascinating average;
-46-64 - eyes is fascinating weak;
-65 from the start the eye does not have fascinating effects.

A permanent place in the same work engaged in artificial lighting for eyes in general non-dazzling angle should be set at. Partially the work place, or weak eyes changing to term working at that angle to the proverbial fascinating short from time to time, staring into the details who work their jobs, is quickly changing the lighting angle can be at the average of that

fascinating eye. Do you always have to stand in the place of work is not the way to will put things for different lighting angle. Of the electric bulb and a person in the natural light of the sun showing the structure of the spectrum of the negative effects of infra red and ultra violet light are mainly, if it is to heat up the infra red rays, ultra violet rays lighting is far excess of the regulatory activity of working norms and their labor serves to destroy. Later on the effects of ultra violet light from a window it is recommended to use brown or permanent blackened for the working man. Infra red light mainly to the heat to be spending for cases that exceed the norms in this light, additional vacation time or break the organization.[3]

For the light of the level of lighting in the workplace birth meters – In luxmeters is measured. This is mainly to measure the size of the birth of natural lighting in the work place, and on this basis the birth of the coefficient of natural illumination, that is, outside of a few percent is put into the fact that the inside of the light is found.

Basic lighting techniques and a large measure of their units. The part of the electro magnetic spectrum 10-340000 nm (nanometr) long term from the waves if uspektrning the optical part (oblast) is called.

The spectrum of optical part is the following:

-infra red radiation 340000-770 its wavelength, nm;

-visible radiation 770-380 its wavelength, nm;

-ultra violet radiation 380-10 its wavelength nm.

(Vpredelax) radiation spectrum visible part in the field of various

long-term different light waves and color images (the spectrum) of the form: violet (400 nm) to red (750 nm) until the color of. See all the responsiveness among yellow-green (555 nm) irradiation will be more. Lighting is characterized by the amount and quality indicators: quantitative indicator to pack light (potok), light power, lighting birth,clarity (yarkost) contains. Accept the view that as the part of man potok light light, light, f is called potok and lyumen (l.) is measured at.Potok not only great physical light, but the physiological basis for that is the ability to see the bo'lchanadi. All solutions, including lighting equipment light source for light potok around its uneven density (surrounding) - I included the size of the power of light. This I-d bootkit-is determined by the formula. Thus, the bootkit - light of potok; d - the fundamental forces of physics under the corner (inside) primary light which spread flat. Kandela light power to the unit (kd) has been received, if the surface area of this full radiant 1 / 600000 m2 (etalon light state) the power of the light outgoing. This Pain under the pressure of 101325, temperature hardening of platinum (2046,we have over 65) daperpendikulyar out on in the direction taken into account.Lighting the birth of E-bootkit / dS buerda, bootkit - light potok; the ds –element surface. Lux the unit of measure for the birth of lighting (lk) were adopted.Clarity L-d2f / (d-.dS.cosQ) dI / dS.cosQ here, dI - dS, which falls at an angle q of the occurrence of radiation, kd . m-2 the coefficient of the return either - down, they potok is characterized with the back of the light. This is determined as f f kay isbati reduced.Indicators of the quality of illumination pulsation coefficient, dis comfort to see and maturity indicators drop, such as the spectral composition of light in the lobby. See conditions like the background of the background contrast with the object, as is the appearance of the object. Lux is measured in meters lighting in the workplace. The light is mainly In luxmeter element selenium photo – light of the light receiving is down and many-arrows disruption of the vine, which is formed according to the galvanometer of birth according to the power change depending on the angle of the coverage measure.YU-Lyuksmetri 16 1-galvanometr, 2-a

photo selenium element, 3-light filter. Knowing the level of coverage mainly for lighting in the concept of the coefficient of birth, birth there. How much of it outside in natural lighting inside, the main meaning the amount of light that enters the room that means. This is determined with the following formula:100 external internal

E=E/K;

Here e is the internal – internal light, Lk;
external E - melted out of the birth, Lk.

Birth coverage coefficient of the window, the window will depend on the occurrence of incoming light to the room, that is, how large is the window, the room is so bright.

Human light effects on the body:

Human is one of the important conditions of light available. It will effect the position of the human body, on the process of light are established to promote the fulfillment of the higher nervous activity of members, the work carries ensure disabled. Besamar enough light in human works, was quickly exhausted, the error is a result of injuries also go yanglish increases the possibility of trying to make. 5 percent of injuries, occupational disease – cannot work in the long term than (blizorukost) the cause of it. Depending on your wave length of light, the causative (olovrang-red) or sedative (yellow-green) shows the effects of. The clonal composition of the light spectrum shows the effect on the efficiency of labor. If it receives 100 percent of you in natural lighting, red and shafaq color in the lighting , it is 76 percent. When you are deprived of natural light from full or partial - - from the light, to open (hunger) can be.[10]

The lighting of the building, workers must meet the following conditions:

1. Fulfilled to the level of the work surface coverage, gigienik work must meet the standards for the same type.

2. In the building of the lighting equal dimensionality and stability, should not be a harsh contradiction.

3. In the viewing area of the light source should ensure the tovlanish.

4. The clonal composition of the spectrum of artificial light to natural light should be approaching.

2.4.The room is put to the main lighting requirements.

The organization of a productive employee working conditions in the room and the lighting of the store in order to improve his fatigue from the eye in relation to the main room, has been put hygienic plumbing tools installation are required.

Thus, the room and the lighting system to the following requirements:

1. Sanitary-hygiene in the workplace lighting standards adapted to the category of work to be should. Of course the lighting of the work place to improve ishsharoitini maximum leads. This work of the new facilities and the appearance will improve as a result of work unum increases. 50 j j determinations do some work to the lighting when the pm had increased by 25 percent, it is known that with increasing dan1000 unum. Work must be small to see with the eyes (more coarse) to increase from 50 to 300 j lk lighting also do work when work is known fruit increase to 5-7 percent. However, the coverage does not give good results

oritilishni to increase after reaching a certain amount. Therefore, it is necessary to choose the coverage option that gives the effect of economic rational.

2. They are working and should be a visible light that the eye falls flat to the environment. Because of the surface as you work in and the environment if there is a shiny place, then they fell back to the workplace, rather than to the eye and the eye should be accustomed to a certain time and shivering. This eye leads to fatigue.

3. The working surface of the sharp shades in be should. Because such cases are found to be, especially, it is moving in the shade of the object if it worsens carried out the appearance of the items of work to afford this seems to be wrong and will lead to a decrease in quality and productivity. So also in the room on that falls umbrellas to the sun against the sunlight and other harsh because the sun's rays must be blocked by means of the effects will emerge from the shadows.

4. Working in the place right from theright to the return of the light, which is formed on the effects of yaltirab or harmful. To glittering in the workplace because of the eye's ability by decreasing the eye could be fascinating. The surface of the instrument illumination in the surface, formed on the effects of light return which is glittering review, the coefficient of the return of the light is large in the surface which will arise. The selection of the angle of the lighting devices to reduce glittering distribution light and the return of the light to change directions, which is formed under the influence of of glitters can be achieved at the expense of blocking the light.

5. Time to the amount of coverage on should not be changed. The coverage increase-decrease you-which happens to be afford to bring harm to the eyes because the light has to get used to change. While we have own to get tired quickly this brings. Climate change and that does not change the coverage requirement can be achieved by way of the use of a voltage source.

6. We have the optimal direction of light directed with era; thus, in certain cases, details of the inner surface of the view details of the defects on the surface and in other cases a better view of the possibility arises.

7. The need of light , which is the structure of the spectrum it is necessary to choose. These requirements are necessary to determine the color of the material it is in cases where it plays an important role.

8. Additional risk of the lighting device, and should not be the source of damage. Therefore, distinguishes the source of the heat that lighting, that it is necessary to reduce maximum sound.

9. The lighting device is easy to use, easy to install and is cost-effective, it should be.

The following includes a room artificial lighting sources.

The selection of the light source and from the following description of them in comparison to each other are used:

♦ electro technical description (at nominal voltage and its capacity);

♦ light a description of the technique (lamps radiating the flow of light, the maximum luminous power);

♦ economic and run description. They are the following –give the light of the bulbs l./W measured when the bulbs from the light coming ratio consists of the flow of electrical capacity. Two of the bulbs from the period of service time, that is, the total run period (from

the time until the period of its work was burned to burn) and the bulbs of useful service period (give their light bulbs in it

the 20 percent in case of loss of position is still good to use).

♦ constructive description (of the tube shape, the structure of cabsorbent element, the tube is filled with gas, if the gas composition, pressure and others). At the present time absorbent mainly in the lighting of the room and the gas discharge lamps, the use of lamps is that lyuminis cents. Most absorbent lamps at the present time many common light source distribution. The main reason for this, they the structure of the material, when used to the convenience, the speed of the combustion period and additional device should not use them. However, much of these bulbs are only disadvantages. The main ones of them: spreading reddish and yellowish light from the bulbs in the structure of a light, the light of the sun different in comparison to the composition of the spectrum since it is the color of reason is limited and therefore the possibility to perform a number of things is distorted, i.e., some works such a light can not be done. Also, these lamps are to give light level is also very low, 7 l. 20/W and only go to less than the service period, that is, 1000 hours. For the purpose of lighting a room from a couple of different cho'g'lanuvchi lamps: light bulbs, vacuum (NV), a gas-filled spiral' lamps (NB), a stuffed krepgoksenon spiral bulbs (nb we have)use. Partial content added in the last time yodli cho'g'lanuvchi are using lamps of mind. These services mainly in the content of the term prolonged to the reductive properties of iodine 3000 hours and the ability to give the light of these lamps also l. 30/W increased. Based discharge of gas lamps – these lamps of electricity in an inert gas, metal or their compounds in the environment are formed of steam projects from discharge which comes into being as the range of optical light. At the time of application using the following bulbs have some positive features compared to cho'g'lanuvchi razryadlanish gas lamps; lamps are quite large, the level of radiation in this particular is, 50, 100 l./W will go up to (e.g., in terms of the radiation of 100 l. sulbactam sodium lamps/W, while 75-80 lyuminissent lamps l./Vg to make up). Also, while they also service term many are 8000-14000 hours will go to some one. This is filled with an inert gas in the bulbs, the amount of metal in the spectrum who want to change their steam account there is the possibility of getting light. There are some negative features of these lamps. Flow of light and even more as a result of two things is pulsation appearance circulate and changed the direction of engine rotation this is a view, can be some noise in. Low temperature low pressure gas bulbs discharge the environment when used. The grass fall and support them in production areas is limited to the risk of explosion. Support using an inert gas, steam, however the composition of the metal and bulbs in several types of bulbs according to some characteristics lyuminissent towards the conclusion is: LB – white light lamps, lt – focusing warm white light bulbs, lx –the cold white light bulbs, the ld – light bulbs from which the right color and others. Among Yoyli simobli lyuminissentlampalar undesirable high bosimlilampalar (MERCURY) separated with savings electrical energy cost and ensures a high level of coverage. They're in the air, dust, smoke, and which can be rolled, steel is widely used in the lighting of the tall buildings and other of mechanics shops transplant.

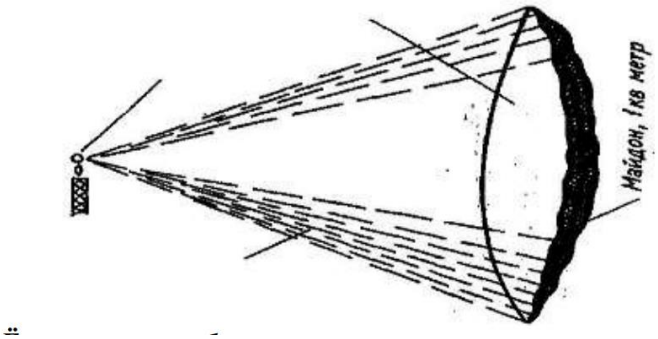
Room lighting plays a very important role during the activities of human life that light. See for men while the main source of information. Common data removable approximately 90 percent of the eyes is taken through. Therefore, to ensure the production of quality lighting products, along with production standard room conditions improve, saves tired from the staff and the productivity of labor increases. The mood-lit work areas of employees who work in

reasonable good is, as well as create safe working conditions and as a result, accidents are dramatically reduced. Also, as seen hygienic requirements only did not put in room lighting, but also the technical and economic requirements will be put. 10 n wave lengths of the electromagnetic spectrum. 340000 n mdan.the process is called optical range of the spectrum to m, also from 10 to 380 n.mga infrared rays far, from 380 to 770 n.340000 n and 770 m from visible light.m. it is said that while the ultraviolet rays out. We have our eyes with light purple color from the color dark red you will feel. The perfection of the quality of illumination of the room and is characterized by the number of indicators. The number indicator to the flow of light, the power of light, the brightness, the coefficient of the return of the light, the light enters. Light flow— is determined as the capacity of light energy and intuition, as it affects the human eye will be evaluated. Lyumen as the unit of luminous flux (l.) were adopted. Flow of light only did not become a physical indicator, but as a physiological indicator is determined. To see the intuition of the measurement unit, because its based.

Source of all light, including the light also won't don't scatter lighting devices in the same space so the density of the flow of light to be detected in space light no power unit included. Held and or the light that falls or the price can be the flow of the space with the surface. The light source of the material as the spread of corner which flow out of the light spread with dots in the same 1 l. the unit of measurement of the power of the light source is. I = bootkit/dW it: Ia —angle light under the power; bootkit, A-flat on the boundary of the spatial angle spreading the flow of light.The power of light as the measuring unit Kandela (kd) take has been. Pain under the pressure of 101325 focusing 204,65°K at a temperature of 1/600 000 m2 of platinum stiffening the power of light falling on a kandela that adopted (etoloni light state). The same white light l. 1 dissolve 1 square meter the occurrence of a fall, the birth of this lighting is.

$$E = \text{bootkit}/ dS$$

It: bootkit –falling like the flow of light;
dS – surface



1-the picture Light flow

Luminous flux luminous flux from spreading Illumination light from the surface of the flow this birth the likelihood of falling back, this is determined by the coefficient of the return of the light. The return of the light color depends on the coefficient of surface if, absolute black surface the return of the light of the coefficient is equal to 0. Absolute black background in nature because the thing is the return of the light of reason in determining the coefficient of 0,02 0,95 pm from the limits are taken into account. If it is larger than 0.4, the coefficient of the return of the light of the bright background, up from 0.2 to 0.4, and 0.2 is smaller than the average background, referred to as the black background.

Room lighting network access to the following method, In relation to the light source in the lighting of the room, the two methods are:

- natural sun light(using the light from it being spread out in the sun or sunlight directly in the balances of heaven, light of the effects of diffusion are used tarqalayotgan from light use);

-a room using solar lighting using light after sunset, room, and if possible the general electric artificial lighting is carried out by way of.

Artificial natural light with all its features from the coverage drastically different. Natural light and see the bodies of other physiological processes required for the human body it is necessary to go and other physiological processes.the rich work in a room lit with ultra violet light and this light is to the eye very useful. Lighting natural light to the region across a flat spread. Through the window lighting the room with natural light postponed from the side special, very special room on the upper side of the large window postponed – framugalar and position combination is carried out in the case of these two. The room in a sort of artificial lighting – general lighting and special lighting general lighting with the lighting of the work place in addition to kombinatsiyalashtirilgan added using a method that is performed. With the lighting of the room not only in the work place content is absolutely not allowed. The overall lighting of the room in a flat illuminated with the method to be a must. Thus, the folding or partial reduced in some areas carried a certain amount is put in the way, but in any case, for the coverage of the common room to satisfy the sanitary requirements to be must achieve. The complex work fulfilled rooms kombinatsiyalashtirilgan lighting should be provided. Gives positive coverage to such a bilateral effect, first of all, in the workplace, especially in places of work carried out and any surface eliminates shadows and darkness and light, and this allows us to calculate the exact amount of which should be for the work place. Secondly, the general lighting is achieved by spending less energy compared.The work to complete the task than under artificial lighting work: working lighted, lighted, custom lighting and disaster studies will be.[5]

All the rooms of the enterprise to the working party of the region, the place of the vehicle to scan in required areas will be. Disaster coverage in the period implies that the lighting in the room suddenly working directory can be left off. When such cases occur in the areas of production need to provide the minimum coverage will be. Mainly suddenly interrupted coverage of workers remain lighted disaster, explosion, fire, poisoning of workers and when circumstances arise that can lead to accidents, as well as the process of this technological phenomenon for a long time stopped bring you to stay, power stations, including the dispatcher points, to provide the population with water, the pump station is provided in the areas that caused the stop. The total coverage period of coverage of the

disaster to 5 percent less than the overall system, which provide light and this light is in the room in relation to less than 2 lk

the light must ensure (thus the coverage is based on the norms).Relating to the period covering the disaster, as well as the extraordinary mobilization of employees more than 50 people running enterprise (relieve) paths, transition areas, and the other is set to place the output of stairs. Thus, the threshold of the room to the lighting, and the place of the stairs at least 0,5 and open areas should be illuminated with light of at least less than 0.2 j lk. More than 100 people running out of light signals to employees enterprise areas (index signal) is provided. Working with lighting in the lighting period of the disaster not bound must be connected to an independent source. Lamps and lighting from the lighting in the disaster period and not as not as cho'g'lanuvchi lyuminissent cho'g'lanuvchi lyuminissent bulbs you can use.

Special to the type of lighting in order to guard and moves on duty, you can add the lighting. Such coverage work for general lighting or lighting, you can use a portion of the means in the period from disaster. In some cases, drinking water and food products processing and production to the air of the room in order to maintain the quality of bakteritsid lighting are used. Thus, a special ultra violet lamps light is generated using 0,254 - long wave has brought mkm 0,257 which the light rays will give good results.

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