CHOOSING THE RIGHT LIGHTING FIXTURES

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Lighting is a fundamental requirement of any facility, affecting people's daily activities. It accounts for a significant portion of the total energy consumption in residential, commercial, and industrial buildings. There have been major improvements and innovations in lighting technologies that can offer significant opportunities for energy savings in many lighting applications, including home lighting, street lighting, hospitality and retail lighting, and office and industrial lighting. The following are some of the energy-efficient lighting techniques or types that are being used as energy-saving options: Relighting with the two most popular energy-saving CFL bulbs: (compact fluorescent lamp) and LED (light-emitting diode) bulbs. LED bulbs use up to 75 percent less energy than traditional incandescent bulbs and 50 percent less energy than CFLs. Light Sensors: Lights can be controlled using a variety of sensors to ensure that lights operate when needed. These sensors detect human presence, movement, time, or occupancy, and turn lights ON and OFF based on the sensor output. These types of controls include infrared sensors, automatic timers, motion sensors (PIR and ultrasonic sensors), and dimmers.

Connected lighting systems: Centralized management systems are often used in street lights. The popular centralized management system is a system (supervisory control and data collection) system, which provides remote control of street lights from central place. Replacing existing reintures and ballasts: Some

devices can master more than half of the light light, which reduces the efficiency of light. High efficiency applies emerge more light, and therefore can save energy and money. Such devices are reflected to direct light into the required direction. All pious lamps require ballastic to achieve the required operation. Traditional magnet

The range of ballots leads to power losses, which is usually 15 percent of the lamp power. In today's market, energy consumption in relation to 20 to 30 percent of the energy consumption has 20 to 30 percent.

Light is one of the most important conditions of human existence. It affects the state of the human body, increases workability by stimulating the implementation of the higher nervous processes. In insufficient light, a human being works, quickly tires, and the consequences will also increase errors, the possibility of misinterpretation. Five percent of injuries is due to professional illness - not to see the long time (Blorukop). Depending on the length of the wavelength, the light is influenced by radiator (fiery-red) or soothing (yellow-green). The spectral composition of light is affected by labor efficiency. If 100 percent receives 100 percent in a natural lighting, it is 76 percent in the color light. Full or partially deprived of the natural light - can be disclosed from light (hunger).

Lighting of working buildings must meet the following conditions:

1. The level of illumination of the work done must meet hygiological standards for this type of work.

2. The stability of the perforations and conditions of light in the building should not be a sharp contradictory.

3. On the science area, light sources should not be filled.

4. The spectual light spectral should approach natural light.

In production conditions, 3 types of light are used: natural, ie solar, artificial (electrical or fluorescent lamps) and combined.

The natural lighting is divided into the following:

• upper (ceilings, roofs, as well as high perepads through the mixed building);

• Backling (through windows);

• combined.

Natural lighting depends on the season, time of day, geographical latitude of the place, the internal structure of the building and windows, the reflective properties of the surfaces in front of the windows, the width of the streets and other conditions. Natural lighting can change significantly during the day. Under certain climatic conditions, the illumination can increase or decrease by several times in a matter of minutes. Changes in lighting do not guarantee sufficient and uniform illumination of individual workplaces in industrial buildings during the day. When designing and calculating natural lighting, the diffuse light of the sky is taken as the source of light, while direct sunlight is not taken into account.

References

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