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# MEASURES TO COMPLY WITH HYGIENIC STANDARDS IN THE FORMATION OF A HEALTHY WORKING ENVIRONMENT FOR HUMANS.

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**ABSTRACT**

The leading factors in spinning mills are dust and noise. These factors are affected at all stages of the technological process in these workshops. In the workshop, water is sprayed under pressure from sprinklers installed on water pipes to achieve this. The water outlet is located at a height of 2.2-2.5 m above ground level and directed in this direction. The water used must meet the requirements for drinking water only. Reuse is prohibited.

**Keywords.** Vibration, noise, textile industry, cotton, fur, silk, linen, synthetic fibers.

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# “INSONNING SOG’LOM MEHNAT MUHITINI SHAKLLANISHIDAGI GIGIYENIK ME’YORLARGA RIOYA QILISH CHORA-TADBIRLARI”

**ANNOTATSIYA**

Ip yigiruv fabrikalari yetakchi omil chang va shovqin hisoblanadi. Bu sexlardagi texnologik jarayonning hamma bosqichlarida bu omillarni ta’siri mavjud. Sexga o’rnatilgan ishda suv tomchilarini purkash yo’li bilan buni amalga oshirish uchun suv quvurchalariga o’rnatilgan purkagichlarga bosim ostida suv chiqariladi. Suv chiqarish joyi yer sathidan 2,2-2,5m balandlikda shunga tomon yo’naltirilgan holda amalga oshiriladi. Foydalanilgan suv faqat ichimlik suvi talablariga javob berishlari kerak. Qayta qo’llash man etiladi.

**Kalit so‘zlar.** Tebranish, shovqin, to’qimachilik korxonasi, paxta, mo’yna, ipak, zig’ir, sintetik tolalar.

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# «ОЦЕНКА РОЛИ СТОМАТОЛОГИЧЕСКИХ И ФИЗИОТЕРАПЕВТИЧЕСКИХ МЕРОПРИЯТИЙ В КОМПЛЕКСНОМ ЛЕЧЕНИИ ЗАБОЛЕВАНИЙ, РАЗВИВАЮЩИХСЯ ВСЛЕДСТВИЕ ВОЗДЕЙСТВИЯ БЫСТРОРАЗЛАГАЮЩИХСЯ УГЛЕВОДОВ»

## АННОТАЦИЯ

Основными факторами, влияющими на работу прядильных фабрик, являются пыль и шум. Эти факторы влияют на все этапы технологического процесса в таких цехах. Для этого в цехе вода распыляется под давлением из установленных на водопроводных трубах разбрызгивателей. Водоотвод расположен на высоте 2,2-2,5 м над уровнем земли и направлен в этом направлении. Используемая вода должна соответствовать требованиям только для питьевой воды. Повторное использование запрещено.

**Ключевые слова:** Вибрация, шум, текстильная промышленность, хлопок, мех, шелк, лен, синтетические волокна.

Working conditions and health issues of workers in knitting enterprises:

-The knitting industry includes enterprises producing fabrics from cotton, fur, silk, linen and artificial, synthetic fibers.

-In Uzbekistan, there are enterprises producing the most common yarn and silk fabrics. Because the Republic has enough raw materials for the production of these fabrics [2,4].

**The purpose of the study.** The technological process at these enterprises is the basis of the technological processes of enterprises weaving fabrics from flax, hemp and other fibers. Enterprises (combinations) producing yarn consist of three independent enterprises (factories). These are spinning, weaving and finishing workshops or factories. If all three components are located on the territory of one enterprise, these are called textile combines. Each of them can also be in the form of factories in a separate independent state. Especially now, in connection with the opening of various small private, joint-stock, joint-stock enterprises in the territory of the Republic, the number of such independent workshops and factories is increasing [3,6].

The raw material for spinning mills is cotton fiber. It is brought from cotton fiber factories. The brought fiber is used in the sorting and screening shop. Here, 10-11 screening machines operating under special automatic conditions are installed. After the fiber is fed into the machine, the pressed fiber is screened there. During the screening process, the dusty plant residues present in the fiber are also cleaned and removed. The screened fiber is transferred to carding machines. These machines comb it in two stages, first coarsely and then finely, and the carded fiber is released in the form of rovings[4].

It is passed through a wide and small ribbon preparation machine and divided into certain necessary parts. The ribbon is transferred to a yarn spinning machine in narrow rovings, located in cylindrical containers. In yarn spinning machines, the narrow rovings are turned into yarn by twisting and spinning[6].

**Material and method of research.** The prepared yarn is transferred to sewing factories. In sewing factories, the supplied yarn is prepared for weaving. For this, the yarn is rewound on special spools, and then sent to a “sizing”-finishing machine. In this machine, the yarns, mainly those that run lengthwise along the fabric, are passed through a special mixture (starch, distrin, antistatic, technical oil, etc.). The yarn soaked in the mixture is rotated between hot drums. passed and dried. The drums are heated with hot water vapor. The dried, finished yarn is wound onto spools of weaving boards. As mentioned above, the transverse yarn (shuttle, thread) is also processed and wound onto a

small bobbin. Before placing the long yarns on the sewing machine, one thread is passed through large holes installed on a separate loom. The bobbin is installed on the sewing machines with a cassette with thread. If there is an unfinished thread on the loom, each new thread is attached to the previous bobbin threads separately. After the long thread is installed, it is also installed on the bobbins in a special device on the loom. The loom is started up when it is ready and works automatically. If the thread breaks during the weaving process, the loom stops automatically and a signal light comes on [6,7].

The weaver, seeing this, starts the loom to eliminate the defect. The spilled fabric is wound onto a special loom reel. When the reel is full, it is removed from the loom on carts and sent to the inspection section. At the inspection section, each reel is placed on a special loom and the fabric in it is inspected from beginning to end. If there are stains or broken threads, this part is cut out and removed[3].

The measured and inspected fabric is sent to the warehouse. The woven fabric is transferred to finishing and dyeing and flower printing factories. In these workshops, the raw fabric is first cleaned of fibers and lint present on the surface. The cleaned fabric is sent to bleaching. Bleaching is carried out to remove the remaining size on the surface of the fabric and to remove oil stains.

This process is carried out in the following stages:

1. Treating the fabric in a solution of hydrogen peroxide with chlorine lime or calcium and sodium hypochlorite in water;
2. Keeping it in special containers for 3-4 hours to achieve the full effect of the above chemicals;
3. Washing in machines;
4. Treating it in a solution of sulfuric acid;
5. Washing the fabric;
6. Drying;

All of the above processes are carried out by mechanisms. After the bleached fabric is washed in detergents, a white or dyed floral-printed fabric is prepared from it, washed, then dried and bleached. Currently, there are also fully automated dyeing units. These units automatically perform all processes sequentially. When performing work in this way, the number of workers is also sharply reduced. The dyed, dyed fabric is sent to the consumer bleached[3].

Results and discussion. Items intended for flower printing are sent to flower printing workshops without being dyed. Flower printing on fabric is carried out in two ways:

- the oldest ancient method, hand flower printing.
- machine flower printing.

The dyed fabric is washed several times in clean water, then dried and dyed. Nowadays, there are also fully automated dyeing units. These units automatically perform all processes sequentially. When performing work in this way, the number of workers is also sharply reduced. The dyed fabric is sent to the consumer dyed. The manual flower printing method is currently used only in small private enterprises for printing flowers on small quantities of fabric. For this, flowers are printed using a previously prepared “Strafaret” tool[3].

The method of printing flowers on machines is used in all enterprises. For this, the future flower or future flower pattern is engraved on metal shafts. It consists of several shafts. Since each shaft consists of several parts and colors, dye solutions of the desired color are placed in special containers under the shafts installed in the flower printing machine. The shaft rotates, touches this dye and applies it to the surface. It is pressed onto the fabric.

The printed fabric is dried and transferred to bleaching (upperliting). The bleaching process is also carried out in large capacities. The fabric is placed in a solution of starch and glue-like substances in water in the container. After a certain time, it is dried and ironed. These works are also carried out in special units.

Technological processes in textile enterprises and the raw materials used, machines and devices, chemicals create specific working conditions at each stage[3].

The leading factors in spinning mills are dust and noise. These factors are affected at all stages of the technological process in these workshops. In the workshop, water is sprayed under pressure into sprinklers installed on water pipes to do this. The water outlet is located at a height of 2.2-2.5 m above the ground level, directed towards it. The water used must meet the requirements for drinking water only. Reuse is prohibited[3,5].

Air humidity is constantly monitored. Failure to monitor in a timely manner will lead to an increase in air humidity. The microclimate conditions in dyeing and printing workshops also have special characteristics. Because the technological process in these workshops uses hot water and dye solutions with a temperature of 75-850 C. This, in turn, causes high humidity in the workshop air[4].

Water vapor also escapes into the air from the surfaces of washing, painting, and drying equipment, as well as from leaks in pipes and fittings that carry heat and water vapor to the machines. In some cases, the air temperature in these workshops is also high. Increased air temperature (up to 32-330 ° C) and increased relative humidity (75-80%) have a negative impact on the thermal state of workers [3].

Among the leading factors in the textile industry is noise, which is mainly of a wide spectrum (300-4500 Hz). Its level in spinning workshops is 85-90 dB, and in textile workshops there is also the effect of general vibration. Although its intensity in most cases is within hygienic standards, its combined effect with other factors can lead to negative consequences.

In textile workshops, there is a noise of general vibration of 105 dB. The noise intensity depends on the number of looms placed in the rooms and the effectiveness of countermeasures. Among the physical factors, it is possible to indicate the physical strain that spinners and weavers have to endure for 85-90% of their working day, standing, walking, and crossing. Studies have shown that spinners cover a distance of 6-7 km during the day, and tailors - 9-10 km. This is because each worker manages several tasks at the same time[5,8].

In the dyeing and printing factories of textile enterprises, the chemical factor should be listed among the leading factors. The main sources of the chemical factor are bleaching agents (hypochlorites, hydrogen peroxide), aniline and diazo dyes, acids used in this technological process. Chemical substances released into the air of dyeing or printing shops are chlorine, aniline gas vapor, nitrogen oxides, etc. [5].

It should be noted that in dyeing shops, exposure is observed not only through the air, but also directly through the skin.

Preparation of bleaching solutions and their use.

Analysis of the incidence of diseases of textile industry workers shows that colds occupy the leading places. This is due to the uneven microclimate in the shop (heating and high humidity), the strain of thermoregulation processes, the high level of dust in the air, the presence of conditions for the spread of airborne infections;

- The second place is occupied by diseases of the gastrointestinal tract (10-16%). The third place is occupied by inflammatory skin diseases (10-11%). The fourth place is occupied by injuries. In dyeing and flower-printing workshops, the first place (26-29%) corresponds to colds, and the second place is occupied by the cardiovascular system[3,4].

The main task of the occupational hygiene doctor is to create harmless working conditions for workers in production enterprises, to control humidity and to develop these conditions.

Since textile industry enterprises consist of a set of various technological processes, the health measures carried out at these enterprises are also unique. Control over health work is fully implemented at the stage of state sanitary supervision, which is a warning, and includes the following:

- Correct location of flower-printing factories in relation to residential areas and other enterprises that emit harmful air factors;

- correct placement of enterprises on the land area, correct placement of workshops in the building.

When introducing new technological processes and technological equipment:

- introduction of means of protecting workers and the external environment during design and construction;

At the current stage of State Sanitary Supervision:

-Existence of dust control measures (local exhaust ventilation, ventilation, respirators for respiratory protection, inhalers);

-Existence of noise control measures (replacement of local existing workbenches with suitable ones. This will reduce the noise level in workplaces by 15-20 dB, covering the ceiling and walls of the room with a noise-absorbing layer, use of earplugs);

- Effective placement of anti-vibration measures includes the installation of special vibration-damping devices (shock absorbers) under the workbench;

-Combating the chemical factor should be carried out primarily in specially equipped rooms (type of local exhaust ventilation with exhaust hood) during the paint preparation process;

-If there is a hood in the painting equipment, it is advisable to use exhaust devices if there is no side exhaust. Of course, -general ventilation is also installed in the room.

- It is necessary to prevent the formation of positive air in such workshops. Because this situation causes the spread of chemical substances to other rooms:

- - in order to reduce meteorological conditions to optimal or acceptable conditions, general air exchange ventilation in spinning and textile enterprises (special preparation of compressed air gives a good effect.)

- In dyeing and flower-printing workshops, in order to combat relatively high air temperatures and high humidity, the following should be used:

- - first, to ensure the tightness of hot water and water vapor pipes and fittings, local air supply ventilation is installed in two parts, dry air with a temperature of 27-300 C is supplied under the ceiling, which quickly absorbs the rising vapor. The second is installed lower (2.5-3 m above the floor), from which air with a hygienic indicator is supplied. The general air supply is installed on the ceilings of the building.

- organization of lighting suitable for hygienic areas at work surfaces;

- in addition to the above technical, technological and sanitary measures, medical preventive measures are also carried out. These include the provision of personal protective equipment (respirators, overalls, rubber gloves, aprons, etc.), timely medical examinations of workers in accordance with the order of the UzRSSV dated 06. 06.2000 No. 300, the organization of special rooms in the composition of utility rooms, the organization of inhalation, the equipment of photo galleries if the workshops are located in windowless rooms, etc.

The most common among light industry enterprises are sewing enterprises. Currently, such enterprises are mainly in the form of various joint-stock companies, joint ventures and private enterprises.

-Regardless of the type of enterprise, the technological processes are the same. The first stage of the technological process is the use and measurement.

This work is called the preparatory stage, the fabric is placed on a special machine and inspected in its entirety. For this, the fabric is moved from the bottom along the illuminated surface (inclined or horizontal). In this case, the part with existing defects on the surface of the fabric is cut off.

In the methods applied to the fabric layer, after the pattern is applied, cutting is performed. Two types of scissors are used for this. The first is powered electric scissors, the second is inductive tape electric scissors. The combined scissors are cut into large pieces, and the tape scissors cut small parts.

Each bundle of the cut clothing is numbered on machines or manually. The purpose of this is to ensure that all the details of the clothing are from the same level. The cut and prepared parts are transferred to the sewing workshops. Nowadays, in large sewing workshops, the process of sewing clothes in large quantities is carried out using a conveyor belt. At the beginning of the conveyor, a set of future clothes is collected and placed on a conveyor belt. Along the conveyor, seamstresses are arranged one after another, each of whom performs the technological operation he needs to perform and passes it on to the next seamstress. The finished garment is inspected and sent for ironing, which is done manually on an iron heated by hot water vapor or electricity, or in special ironing units called “cones” [5,8].

Ready-made clothes are sent to the warehouse. Each stage of the above-mentioned technological process is carried out in its own raw conditions. In the preparation shop, the leading factor is dust, forced body position and tension. The main source of dust is the fabric moving along the construction site. The amount and chemical composition of dust directly depend on the fabric being processed.

When using yarn, fabrics, linings, the amount of dust in the air reaches 4-5 mg/m3, and when using synthetic fabrics, it reaches 2-3 mg/m3. When the fabric stops moving, the release of dust also stops. The main part of the dust is organic substances and disintegration aerosols. Since the main work of the worker is related to monitoring the fabric, he performs this work while sitting. As a result, back and lumbar muscle tension occurs. The eye analyzer plays the main role in performing work.

Working conditions in sewing workshops are generally considered to be at a level that can burn the road according to all indicators. These are dust, physical exertion, all of which are carried out by means of vertical movement. Numbering of clothing details is performed while sitting, this work is characterized by motility. Since the work operations performed do not exceed 2-3, the time between their repetitions is 2-3 seconds. The leading factors in sewing workshops are: noise, forced working position of the body. monotony, local vibration. Dust, microclimate, chemical factors. The main sources of noise are machines used in the workshop to perform various sewing operations (straight seam sewing, overlock, buttonhole opener, buttonhole, flower sewing, etc.). Studies have shown that the noise intensity in the workplaces of seamstresses is 90-95% dB A. The maximum energy of sound corresponds to high frequencies. The noise level and noise composition directly depend on the power of the machines used, their technical condition, and number [3,5].

**Conclusion.** Working on sewing machines requires the body to be in a certain forced position, so the seamstress spends 70-75% of the day sitting and bending forward. This situation often causes a static state in the muscles of the hind legs, which differs from physiological conditions. The conveyor method is mainly used in the organization of work for seamstresses. Therefore, only the same operation is performed every day. This leads to monotony of the work performed. There is also monotony of working conditions in sewing workshops. Therefore, it creates a state of monotony in the body of workers. The source of local vibration in the workplaces of seamstresses is the fabrics that drive the machines. The vibrations generated by them do not exceed the norms. The use of fabrics causes dust formation. The amount of dust in the air was determined in the range of 1.2-1.5 mg/m3. In sewing workshops, the microclimate indicators show that the air temperature is higher than optimal during the hot season, due to the large number of people in the workshop at any given time and the continuous use of various ironing operations. The ironing process is carried out by evaporating water vapor. In this process, a certain amount of water vapor is released into the air. Another source of water vapor release into the air is water vapor, which leads to an excess of the norm of humidity in the workshop. Modern sewing technology requires the use of synthetic fabrics in certain parts. The process of gluing these fabrics to the main fabric is carried out. This causes the release of phenol and formaldehyde into the air.

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