American Journal Of Applied Science And Technology
(ISSN – 2771-2745)
VOLUME 02 ISSUE 06 Pages: 87-93
SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705)
OCLC – 1121105677 METADATA IF – 5.582
Crossref doi Google Scholar METADATA INDEXING WorldCat MENDELEY
Publisher: Oscar Publishing Services

OSCAR PUBLISHING SERVICES

Journal Website: https://theusajournals.com/index.php/ajast

Research Article

COTTON CLEANING PLANT (CCP)`S EFFECTS OF ENVIRONMENTAL FACTORS ON TECHNOLOGICAL PROCESSES

Submission Date: June 09, 2022, **Accepted Date:** June 19, 2022,
Published Date: June 30, 2022
Crossref doi: https://doi.org/10.37547/ajast/Volume02Issue06-14

Ro`zimurod Qalandarov
Professor of Termiz Institute of Engineering and Technology, candidate of technical sciences, Uzbekistan

Odinayev Akmal
Senior teacher of Termiz Institute of Engineering and Technology, Uzbekistan

Xo`shboqov Baxtiyor
Associate Professor of Termiz Institute of Engineering and Technology, candidate of technical sciences, Uzbekistan

ABSTRACT

The article provides full information about Cotton cleaning plant (CCP)`s effects of environmental factors on technological processes.

KEYWORDS

Cotton, cotton mills, mainly intended, obtain high-quality valuable, processing high grades, significant.

INTRODUCTION

There are economic problems in every industrial enterprise of the national economy. Such problems not only cause great material and economic damage to the technological processes of various enterprises, but also have a negative effect on the organization of operators who monitor (manage) the processes. Therefore, in the following periods, special attention is being paid to the issues of determining the necessary measures to prevent or reduce the negative effects of such environmental factors in the enterprises producing products in various fields. Such environmental factors also apply to cotton ginning

American Journal Of Applied Science And Technology
(ISSN – 2771-2745)
VOLUME 02 ISSUE 06 Pages: 87-93
SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705)
OCLC – 1121105677 METADATA IF – 5.582
Crossref doi Google Scholar METADATA INDEXING WorldCat MENDELEY
Publisher: Oscar Publishing Services

enterprises in Commonwealth of Independent States`s.

Because, in addition to the negative effects of existing or emerging environmental factors on the quality indicators of manufactured products, there is a negative impact on the health of the operators who control the technological machines in the main departments of the factories, other workers in the departments, the factory and the families living in the surrounding area. along with revealing secrets, it also reduces the profitability of the respective enterprise. At the same time, it should be noted that the main currency funds of the CIS countries were significantly damaged. Practical researches in any scientific directions carried out in the field of cotton gins, of course, improve the quality of the products produced, or at least the quality of the products, taking into account the factors that cause unconscious negative conditions for the health (organism) of the workers working in them. Non-reduction tasks should be considered one of the main challenges today and in the future.

It is known that cotton ginning plants with saws and rollers are mainly used in CIS.

But in cotton mills, it is mainly intended to obtain high-quality valuable fibers by processing high grades of thin-fiber cotton varieties. Because it is one of the main sources of significant foreign exchange for its sale. However, there are environmental factors that have a direct and indirect negative impact on the production of such currencies, and they are closely related. Therefore, we recommend grouping the effects of such factors on factory processes as follows:

1. Direct effects of air temperature, wind speed, and relative humidity on the operator's health;
2. The direct and indirect effects of noise and sound vibration levels on the operator's health and on the quality of the products being produced;
3. Direct effects of atmospheric air pollution on the health of operators and some quality indicators of manufactured products;
4. It is appropriate to consider that the health of the operators may have a direct impact on the quality indicators and the size of the manufactured products.

In some groups, the main purpose of considering the noise level (SHD) and audible vibration level (AVL) as environmental factors is that they also directly affect the operator during the technological processes in cotton ginning plants (during the shift) by directly affecting cotton ginning. practical tests show that they have a significant negative impact on the material and economic aspects of factories. Interpretation of harm is the main essence of our work. We are trying to make our comments based on the results of scientific and theoretical research conducted in the conditions of various cotton ginning factories in order to reveal how much material and economic damage such connections bring to the respective enterprises. For this purpose, extensive experimental research was conducted in several roller and saw cotton ginning factories in Surkhandarya region. Among the inspected factories are Kyziriq, Angor, Sherabad, Jarkurgan, Devon and Uzun. Therefore, in order to clarify our different opinions mentioned above, let's refer to the results of the general research carried out in the system of cotton ginning factories with saws and rollers. For this purpose, as mentioned above, air temperature (AT), relative humidity (RH), wind speed (WS), air pollution (AP), as well as the noise level (NL) and sonic vibration of the technological machines during operation affect the efficiency of cotton ginning factories. It is appropriate to analyze the results of the negative consequences of levels (SVL) on the management operators and workers one by one.

Air temperature, relative humidity, and wind speed were determined in the areas where all the saw and roller cotton ginning factories were located. This unpleasant situation is a natural condition that interferes with the normal implementation of technological processes performed in the main sections of cotton ginning plants, and has a negative effect on the health of operators, and if necessary, the consequences are definitely significant for CCP. causes

American Journal Of Applied Science And Technology
(ISSN – 2771-2745)
VOLUME 02 ISSUE 06 Pages: 87-93
SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705)
OCLC – 1121105677 METADATA IF – 5.582
Publisher: Oscar Publishing Services

material and economic damage. It is inevitable that such environmental factors will have a negative impact on the quality of manufactured products (especially fiber) and the efficiency of technological machines (Table 1). In this table, it is not difficult to see and compare the differences between the actual values of some environmental factors analyzed in the regions where each plant is located and the permitted limit values.

Table 1 describes the annual maximum and minimum values of environmental factors in the areas where the investigated CCPs are located.

Areas located in CCPs	Environmental factors		
	Air temperature (X_{12})	Relative humidity (X_{13})	Wind speed (X_{14})
	Grad.	%	M/S
Kiziriq	-5,7-43,5 (18-27)	10-75 (40-60)	12-20 (0,2-0,5)
Angor	-8,3-45 (18-27)	13-82 (40-60)	15-28 (0,2-0,5)
Denau	-6,8-42,3 (18-27)	11-70 (40-60)	6-16 (0,2-0,5)
Uzun	-7,4-40,2 (18-27)	13-73 (40-60)	7-16 (0,2-0,5)

Reminder: The limit numbers in parentheses in the table are summaries of the values of the optimal permissible limits of each relevant environmental factor.

It is clear that the above-mentioned environmental factors have a certain influence on the normal course of technological processes in the main departments of cotton ginning factories, on the health of operators and on the quality of recycled products. For this reason, some experimentally tested roller and saw-type cotton ginning factories will be examined and the results will be studied and analyzed for a year.

The conducted studies show that none of the above-mentioned environmental factors are found to be nearly non-compliant with the limits of the inspected cotton ginning plants (see Table 1). These unpleasant situations can cause the following. The main departments of the factories are located in the main workplace of the operator, for example, when the air temperature increases, negative situations occur for the body, such as lethargy (lethargy), decreased attention, rapid and accurate reaction, and impaired coordination of movement. And the decrease in temperature in the main workshops interferes with their compact or normal temperatures due to the thick clothing of the operators, in the process of working

American Journal Of Applied Science And Technology
(ISSN – 2771-2745)
VOLUME 02 ISSUE 06 Pages: 87-93
SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705)
OCLC – 1121105677 METADATA IF – 5.582
Publisher: Oscar Publishing Services

with gloves on the hands, it becomes somewhat difficult to control the machinery in the workshop during the shift, and these conditions can also cause various accidents. If the air velocity inside the main workshops of the factory is higher than the limits, the dust (impurities) in this shop change their conditions as quickly as possible, and various impurities are added to the produced fiber more and faster. As a result, it reduces its quality indicators, and at the same time, it is clear that it has various negative effects for the operators who manage the workshop. The inspections carried out at the bases of the above-mentioned cotton ginning factories show that the humidity of the air in their main shops is usually inextricably linked with the humidity of the outside air, or the correct proportionality shows the existence of a law of change. Such an environmental factor also makes it possible to work in cotton ginning factories in four seasons and to manage technological processes in them at the same rate. It causes various unpleasant effects on the health of the relevant operators in the workshops. Now it is enough to mention some research results about the consequences of environmental factors on the health of operators in the main workshop. Such studies examined the number of heart contractions per minute and the dynamics of changes in arterial blood pressure during work shifts according to the work experience of the operators. Such measurement works are carried out during one day (according to work shifts) with the operators of each shift three times at the beginning, in the middle and at the end of the shift) and relevant data are obtained.

For example: operators on the shift working from 8:00 to 16:00 will be returned to the inspection results before starting work (at 8), in the middle of work (at 12:00) and at the end of the shift (at 16:00). operators are also measured before starting work, after half-shift work and at the end of work, as described above, and the corresponding results are obtained. Thus, in the results of 144 measurements, it was found that heart rate changes up to 64: 108 times. It has been confirmed in practice that the minimum arterial blood pressure in the same number of operators is above 90 mm of blood pressure in almost 18% of operators and in more than 17% of operators blood pressure is higher than 140 mm of blood pressure.

Thus, it was found that due to the effects of various negative factors that arise during the technological processes in cotton ginning factories, cases of sudden changes in heart activity and blood pressure occur in the operators.

The dynamics of the obtained results show that in the operators working in all the main workshops of the inspected cotton ginning factories, the contraction of the heart and the increase in blood pressure above the norm were returned (established) in almost one minute.

In addition to the environmental factors mentioned above, it is confirmed in various literatures that the pollution of the atmospheric air inside the workshops of many cotton ginning factories is much higher than the permissible limits of the AXI limits through the scientific research conducted by the scientists of the relevant scientific center and institute in this field. z is reflected. Therefore, it is appropriate to recall the following from the results of the practical examination.

Content. Technological machines of cotton ginning factories separate a lot of dust and harmful particles during their operation. But the separated polluted air is pushed from each machine through special types and transferred to the appropriate group of cyclones. Sometimes, in spite of this, various bodies inside the workshop are open, aerodynamic regimes are violated, Due to the effects of factors that deviate from a number of technical conditions, such as pipes and casings not being well glued or punctured, various dust, gas (silicon 2 oxide -SiO_2) and other impurities come out and pollute the atmosphere (air) inside the cotton ginning plant more. In addition to these, the grains received at the factory or seeded contain various organic and mineral compounds (as impurities) that are mixed into the atmosphere inside and outside the workshops (in the factory area and in the surroundings). Thus, the atmospheric air in the main

American Journal Of Applied Science And Technology
(ISSN – 2771-2745)
VOLUME 02 ISSUE 06 Pages: 87-93
SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705)
OCLC – 1121105677 METADATA IF – 5.582
Publisher: Oscar Publishing Services

workshops of cotton ginning factories is very dangerous for the health of the relevant operators. Therefore, the sanitary standards of air cleaners in the factory are theoretically limited to the limits, and the maximum allowed concentration amounts are set for them.

Unfortunately, in practice, completely different situations can be encountered. For this purpose, the results of our interviews with people living in the atmosphere of some of the cotton ginning factories whose names were returned and checked are presented in Table 2. Conducting such surveys in cotton ginning factories was conducted based on the methodology recommended by the candidate of medical sciences A.K. Kadirov.

In table 2, the effects of communication (as transfer) on environmental pollution and sanitary and household conditions of people living as factories are examined and the results are summarized.

In addition, it can be easily analyzed that the verified results (in %) are slightly higher at the Sherabot plant compared to the Uzun plant. It should not be forgotten that this score depends on objective and subjective factors.

Table 2. Some of the cotton gins examined are information obtained from communication with people who live in the atmosphere.

Distance to sources of pollution	Sherabod CCP					Uzun CCP				
	The number of people asked	People complain:				The number of people asked.	People complain			
		Sanitary according to household conditions		Feeling unwell (headache, lethargy, Boredom).			Sanitary according to household conditions		Feeling unwell (headache, laziness, Boredom).	
	number	number	%	Number	%	Number	Number	%	number	%
100-300	53	43	80	27	50	38	23	59,8	10	26,3
301-500	74	60	80	25	33	40	15	37,5	7	17,5
501-700	60	35	60	13	21	25	10	40,0	5	20,0
701-1000	25	8	32	7	28	10	4	40,0	1	10,0
Total:	213	150	75	72	33	113	47	41,0	23	20,0

When we analyzed the information obtained from the polyclinics in the respective districts about the length of service, age, gender, and profession of the operators working in the main departments of some of the cotton ginning factories (Kiziriq and Angor) mentioned above, the following occupational and non-

American Journal Of Applied Science And Technology
(ISSN – 2771-2745)
VOLUME 02 ISSUE 06 Pages: 87-93
SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705)
OCLC – 1121105677 METADATA IF – 5.582
Crossref doi Google Scholar METADATA INDEXING WorldCat MENDELEY
Publisher: Oscar Publishing Services

occupational diseases were mainly found. presence was found, namely: chronic radicum, chronic bronchitis, chronic pharyngitis, 2-stage hypertension disease, chronic conjunctivitis, bilateral inflammation of the middle ear, recurrent hygroma, swelling of veins in the testicular varicocele, chronic liver disease (hepatitis) occupational diseases such as diseases of the cardiovascular system, ischemic heart disease, chronic diseases of the kidney and urinary tract, nephritis, hephrosis, nephrosclerosis, urethritis, inflammation of the submental gland, chronic gastritis, acute intestinal infection, etc. The existence of non-existent diseases has also been confirmed.

The main reasons for the occurrence of various diseases among cotton gin workers are as follows. Lifting of heavy loads, increase in physical load during the shift, various environmental factors in the process of operating technological machines are directly responsible. and indirectly affected, breathing of workers during the shift in a dirty atmosphere, rest, sleep, work modes not being at the required level, a number of additional unpleasant (contradictory) factors such as the consumed product (low calorie food) including

In addition to these, 226,836 soums were paid to workers who were unfit for work due to various diseases at the Zharg'rgon cotton ginning plant in Surkhandarya region for 11 months of one year. In Sherabod cotton ginning factory, 407,250 soums (in rubles) were paid to workers who were unfit for work for 12 months due to illness. paid based on the sheet, etc.

Applying such a simple statistical report only for our country (if there are more than 120 cotton gins in our Republic), if we calculate the payment of funds according to the number of cases and numbers, it will certainly be millions of sols. It is clear that it will form m.

In addition to the above, the quality indicators of fibers produced in the conditions of cotton ginning factories (from the sum of impurities and defects in the fiber - X9; staple length in the fiber - X10; and the output of the fiber - = X11) with noise and sound vibration levels (ShD and AVL), atmosphere General results characterizing the direct and indirect effects of air pollution (AHI) on operator health are shown in Table 3 for different types of roller and saw mills..

The results obtained by experimental testing of cotton ginning plants were created using electronic calculator, and corresponding mathematical relationships (equations) were created.

These studies show that the various environmental factors listed in Table 3 have significant adverse effects on the main quality indicators of the fibers produced, and are different for each cotton ginning plant (because each plant has different conditions due to) installation is reflected and hokozo.

American Journal Of Applied Science And Technology
(ISSN – 2771-2745)
VOLUME 02 ISSUE 06 Pages: 87-93
SJIF IMPACT FACTOR (2021: 5. 705) (2022: 5. 705)
OCLC – 1121105677 METADATA IF – 5.582
Publisher: Oscar Publishing Services

Table 3. The table characterizing the influence of various factors on the main quality indicators (X9, X10, X11) of the fibers produced in the tested mills and sawmills (operators' workplaces).

CCP`s	Fiber quality indicator	Noise level	Loud vibration level	Air pollution	Operator health
	IN PERCENTAGES				
Qiziriq	X_9	2,15-12.32	1,54-8,33	41,05	1,15-4,96
	X_{10}	4,25-24,79	2,05-8,68	3,02	1,39-4,77
	X_{11}	6,77-14,70	1,33-8,09	30,05	0,76-2,13
Angor	X_9	0,26-8,38	7,95-1195	0,15	1.57-20,63
	X_{10}	1,04-3,83	8,82-13,04	13,18	2,19-18,68
	X_{11}	1,67-15,84	3,77-13,04	1,76	2,29-15,62
Denau	X_9	8,49-11,37	3,15-6,58	20.15	3,16-7,92
	X_{10}	0,80-15,09	2,08-5,32	31,54	1,67-8,53
	X_{11}	3,09-8,0	2,26-6,15	52,0	0,88-4,44
Uzun	X_9	4,34-16,78	2,276-13,83	24,58	0,80-7,98
	X_{10}	4,96-17,45	1,18-8,45	35,45	0,06-5,80
	X_{11}	6,36-21,18	1,82-12,52	18,22	0,56-6,61

REFERENCES

1. .Djabbarov G.D. and others. " Technology of initial processing of seed cotton", book, T. "Teacher" 1987y. 146-150 paper .
2. E. Zikriyoev « Primary processing of cotton » Tashkent. 2002 year
3. Methodology of Teaching Technology in Secondary Schools – OA Kucharovich, KS Akmalovich, ZA Qorajonovich - Middle European Scientific Bulletin, 2022.
4. SECTION: TECHNICAL SCIENCE. TRANSPORT OA Kucharovich, KS Akmalovich - MODERN SCIENTIFIC CHALLENGES AND TRENDS, 2022