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SANITARY NORMS OF THE DESIGN OF INDUSTRIAL ENTERPRISES. SN 245---ETC(U)
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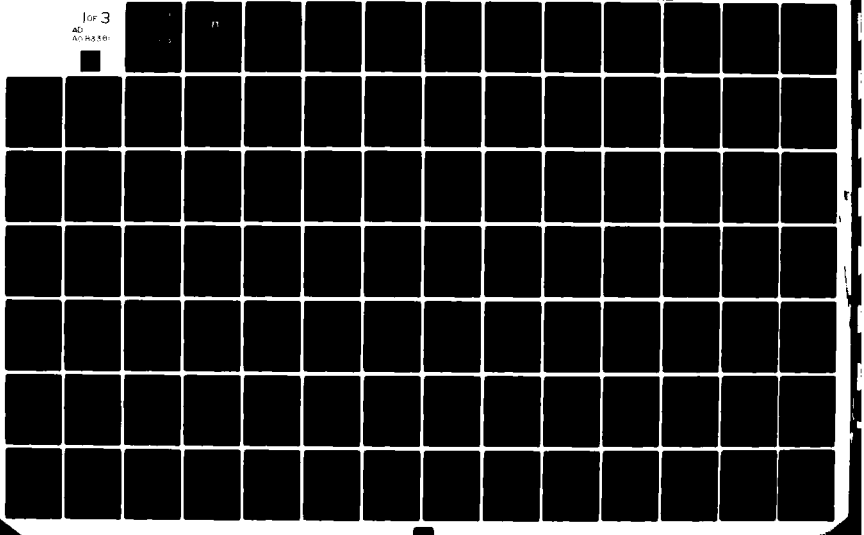

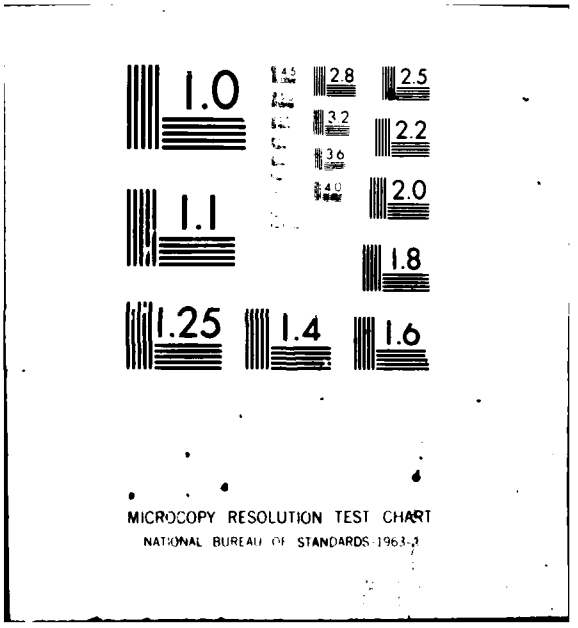
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SANITARY NORMS OF THE DESIGN OF INDUSTRIAL ENTERPRISES. SN 245-71

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SANITARY NORMS OF THE DESIGN OF INDUSTRIAL ENTERPRISES. SN 245-71

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U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

Block	Italic	Transliteration	Block	Italic	Transliteration
А а	*А а*	A, a	Р р	*Р р*	R, r
Б б	*Б б*	B, b	С с	*С с*	S, s
В в	*В в*	V, v	Т т	*Т т*	T, t
Г г	*Г г*	G, g	У у	*У у*	U, u
Д д	*Д д*	D, d	Ф ф	*Ф ф*	F, f
Е е	*Е е*	Ye, ye; E, e*	Х х	*Х х*	Kh, kh
Ж ж	*Ж ж*	Zh, zh	Ц ц	*Ц ц*	Ts, ts
З з	*З з*	Z, z	Ч ч	*Ч ч*	Ch, ch
И и	*И и*	I, i	Ш ш	*Ш ш*	Sh, sh
Й й	*Й й*	Y, y	Щ щ	*Щ щ*	Shch, shch
К к	*К к*	K, k	Ъ ъ	*Ъ ъ*	"
Л л	*Л л*	L, l	Ы ы	*Ы ы*	Y, y
М м	*М м*	M, m	Ь ь	*Ь ь*	'
Н н	*Н н*	N, n	Э э	*Э э*	E, e
О о	*О о*	O, o	Ю ю	*Ю ю*	Yu, yu
П п	*П п*	P, p	Я я	*Я я*	Ya, ya

*ye initially, after vowels, and after ъ, ь; e elsewhere.
When written as ё in Russian, transliterate as yё or ё.

RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

Russian	English	Russian	English	Russian	English
sin	sin	sh	sinh	arc sh	$\sinh^{-1}$
cos	cos	ch	cosh	arc ch	$\cosh^{-1}$
tg	tan	th	tanh	arc th	$\tanh^{-1}$
ctg	cot	cth	coth	arc cth	$\coth^{-1}$
sec	sec	sch	sech	arc sch	sech^{-1}
cosec	csc	csch	csch	arc csch	csch^{-1}

Russian	English
rot	curl
lg	log

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SANITARY NORMS OF THE DESIGN OF INDUSTRIAL ENTERPRISES. SN 245-71.

The "Sanitary norms of the design of industrial enterprises" (SN 245-71) are developed by NII of hygiene of work and of occupational diseases by AMN of the USSR with the sections of NII of the common/general/total and municipal hygiene im. A. N. Sysin of AMN of the USSR, NII of biological physics, VNII of hygiene and toxicology of pesticides, polymers and of plastics, VNII of social hygiene and organization of public health, central institute for the development of doctors, VNII of the hygiene of water transport, 1st Moscow medical institute im. I. M. Secnenov of the Ministry of Pub. Health of the USSR, Sverdlovsk medical institute of Gorkiy, Leningrad, Sverdlovsk and Ufa NII of the hygiene of work and of occupational diseases, NII of hygiene im. F. F. Erisman of the Ministry of Pub. Health of the RSFSR, Kiev medical institute Donets, Kiev, Krivoy Rog, Kharkov NII of the hygiene of work and occupational diseases of the Ministry of Pub. Health of Ukrainian SSR, NII of the hygiene of work and occupational diseases of the Ministry of Pub. Health of Azerbaidzhan SSR, Ministry of Pub. Health of Armenian SSR, Ministry of Pub. Health of Georgian SSR, VNII of railroad hygiene of MPS, the sanitary-epidemiological stations of Moscow and Leningrad, VTsNII of the industrial safety measures (Moscow), VNII of the industrial safety measures (Leningrad), VNII of the industrial safety measures

(Tbilisi) of VTsSPS [All-Union CentralTrade-Union Council], institutes of the TsNIIPromzdaniy [Central Scientific Research, Planning and Experimental Institute of Industrial Buildings and Structures], NII of structural physics and Promstroyproekt [- State Planning Institute for General-Construction and Sanitary-Engineering Planning of Industrial Establishments] the GOSSTROY of the USSR, GPI-1 of Minlegprom [Ministry of Light Industry] of the USSR, institute Tyazhpromelektroproyekt of Minmontazhspetsstroy of the USSR.

With introduction to action/effect from 1 April, 1972, of the "Sanitary norms of the design of industrial enterprises" (SN 245-71) lose force the "Sanitary norms of the design of industrial enterprises" (SN 245-63), "sanitary norms of the design of the enterprises of meat industry" (SN 106-60) and "the indications for the application/use of "sanitary norms of the design of industrial enterprises" (N 101-54) during the design of ground-based buildings and constructions of carbon shaft/mines, opencasts and concentrating plants" (SN 172-61).

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State Committee of the Council of Ministers of the USSR on matters of construction (GOSSTROY of the USSR).

Structural norms.

SN 245-71.

Sanitary norms of the design of industrial enterprises.

Instead of SN 245-63, SN 106-60 and SN 172-61.

They are introduced by the Ministry of Pub. Health of the USSR and VTsSPS.

Are affirmed by the state Committee of the Council of Ministers of the USSR on matters of the construction on 5 November, 1971.

Period of the introduction on 1 April, 1971.

1. General Instructions

1.1. Present sanitary norms apply to design of newly projected and reconstructed enterprises, buildings and constructions of industry, transport, communication/connection, agriculture and electric stations, research-experimental productions and installations.

1.2. Present norms do not apply to design of underground structures and mine workings, or time/temporary industrial buildings and constructions, erected for period of construction with period of service of up to 5 years.

1.3. During design should be also fulfilled sanitary requirements, which relate to concrete means of industrial production, production processes of enterprises of transport, communication, agriculture, etc., given in appropriate standard documents, matched and affirmed in routine.

1.4. In projects of enterprises and separate productions, should be provided for technological processes and production equipment, during which should be provided:

a) absence or minimum liberation/isolations into air of rooms, in the atmosphere and into effluents of harmful or unpleasantly reeking substances, and also absence or minimum heat liberations and

moisture into working rooms;

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b) absence or minimum formations of noise, vibration, ultrasound, electromagnetic waves of radio-frequencies, static electricity and ionizing emission/radiations.

1.5. During development of technological aspect of projects of enterprises, one should provide for:

replacement of harmful substances in production by harmless ones or less harmful ones, dry methods of processing/treatment of dusty materials - wet;

replacement of processes and technological process/operations, connected with emergence of noise, vibration and other harmful factors, processes or process/operations, with which will be provided absence or smaller intensity of these factors;

replacement of flame heating with electric ones, solid and liquid propellant gaseous;

sealing/pressurization and maximum intermediate lining and

compounds in technological equipment and conduit/manifolds, for preventing liberation/isolation of harms in production;

the heat insulation of the heated surfaces of equipment, air ducts and conduit/manifolds;

overall mechanization, automation and remote control, and also automatic signaling about the course of separate processes and process/operations, connected with the possibility of the liberation/isolation of harms;

the continuity production;

the shelter of mechanical transport, and also the application/use of a hydro- and airslide during the transportation of dusty materials;

the recuperation of harmful substances and the decontamination from them of technological ejections, for the safeguard of fulfilling requirements paragraphs 2.4; 2.15 and 5.6 present norms;

the preferred application/use of equipment with the passport, which confirms favorable health and hygiene characteristic;

the automatic block system of technological equipment and sanitary-technical devices, the application/use of equipment with the built-in local suction and illuminating lamps;

noise suppression and damping/amortization/shock absorption of the vibration

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the rational organization of work sites and their defense from the effect of the electromagnetic waves of radio-frequencies and ionizing emission/radiations;

the utilization of the processes, during which maximally is reduced a quantity of effluents.

Notes: 1. The need for the utilization of technological processes and equipment, being the sources of liberation/isolation and formation of considerable industrial harms and which require in connection with this supplementary measures for reduction these harms to the levels, provided for in norms (among other things special safety devices, sanitary-engineering installations, increase in the degree of the decontamination of technological and ventilation ejections, increase of the width of sanitary-protection zones), must

be technical and economically substantiated.

2. Calculation of possible contamination of atmosphere and basins by harmful substances, which are contained in technological ejections, and acoustic calculations must enter into composition of technological aspect of project of enterprise.

In this case, in project, should be provided for the complex of measures during execution of which in the period of exploitation are provided the accepted in calculations conditions of the ejections of harmful substances. The need of applying the devices for measurement and permanent recording of a quantity of those entering in the atmosphere and basins of harmful substances and control units of magnitude due to the intensification of decontamination, change in the technological conditions/mode of the production or other measures is determined by the special indications of GOSSTROY of the USSR, matched with the Ministry of Pub. Health of the USSR.

1.6. Satisfaction of the requirements of this norm should be ensured at the enterprise with a change in the technological process or equipment an increase in production capacity intensification of production processes and other changes.

2. Requirements for the selection of area/site for a construction I to the design of general plans.

2.1. Area/sites for construction of enterprises it is selected and location on them of buildings and constructions should be provided for in accordance with demands of chapter of SNiP

[Construction norms and regulations] for design of general plans of industrial enterprises and requirements of present norms.

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2.2. Enterprises, their separate ones of building and construction with technological processes, which are sources of liberation/isolation into environment of harmful and unpleasantly reeking substances, and also sources of increased noise levels, vibration, ultrasound, electromagnetic waves of radio-frequencies, static electricity and ionizing emission/radiations, should be disengaged habitable building-up sanitary-protection zones.

2.3. Size/dimension of sanitary-protection zone to boundary of habitable building-up should be establish/installed:

a) for enterprises with technological processes, which are sources of contamination of atmospheric air by harmful and unpleasantly reeking substances, it is direct from sources of contamination of atmosphere by concentrated ejections (through ducts, shaft/mines) either by distributed ejections (through lamp/canopies of buildings, etc.), and also from places of discharging raw material or discovered warehouses;

b) for enterprises with the technological processes, which are the sources of noise, vibration, electromagnetic waves of the radio-frequencies and other harmful factors, which enter the environment, from buildings, constructions and area/sites where established/installed production equipment (aggregates, mechanisms), which creates these harmful factors;

c) for thermal electric stations, industrial and heating boiler houses - from chimney stacks.

2.4. Enterprises, their separate ones of building and construction with technological processes, which are sources of liberation/isolations in the atmosphere of harmful and unpleasantly reeking substances, and also being sources of ambient noise higher than establish/installed by norms levels for habitable building-up, should not be located from windward face for winds of predominant direction with respect to habitable building-up.

The location of enterprises with the technological processes, which do not release in the atmosphere of industrial harms, with the processes, which do not create the levels of ambient noise and other harmful factors, which exceed those establish/installed by norms for habitable building-up and not requiring railroad siding tracks, is allow/assumed inside residential areas.

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Area/sites for the construction of enterprises must be selected taking into account aeroclimatic characteristic and area relief, direct/straight solar irradiation and natural ventilation, and also taking into account the conditions of scattering in the atmosphere of industrial ejections and conditions of formation of mist.

2.5. For enterprises, their separate buildings and constructions with technological processes, which are sources of industrial harms, depending on power, conditions of realization of technological process, character and quantity of isolatable into environment harmful and unpleasantly reeking substances, created noise, vibrations, electromagnetic waves of radio-frequencies, ultrasound and other harmful factors, and also taking into account provided for measures for decrease of their unfavorable effect on environment and ensuring observance requirements of sections of 9-14 present norms in accordance with sanitary classification of enterprises, productions and objects, are establish/installed following size/dimensions of sanitary-protection zones for enterprises:

(1) класса I — 1000 м; (1) класса IV — 100 м;
» II — 500 м; » V — 50 м.
» III — 300 м;

Key: (1) Class.

The sanitary classification of enterprises, productions and objects, with the technological processes, which are sources of liberation/isolation into the environment of industrial harms indicated above, and dimensions of the sanitary-protection zones for them are establish/installed in accordance with the section of 8 present norms.

Note. During the reconstruction of the enterprises, located in the line of populated points, the size/dimensions of the sanitary-protection zones for them should be set to the joint solution of Ministry of Pub. Health and GOSSTROY of union republic.

2.6. Sanitary-protection zone for enterprises and objects can be increased if necessary and being proper technical and economic and hygienic foundation, but it is not more than 3 times according to joint resolution of main sanitary-epidemiological administration of Ministry of Pub. Health of USSR and GOSSTROY of the USSR, for example:

a) depending on effectiveness of provided or possible for

realization purification methods of ejections in the atmosphere;

b) with absence of methods of decontamination of ejections;

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c) if necessary for the location of habitable development from the lee side with respect to enterprise in the zone of the possible contamination of the atmosphere:

d) depending on wind rose and other unfavorable local conditions (for example, frequent calms and mist/fogs);

e) with the impossibility to lower coming the environment noise, vibration, electromagnetic waves of radio-frequencies and other harmful factors to the limits, establish/installed by norms;

f) with the constructions of new ones is still insufficient the studied harmful in sanitary sense productions.

2.7. Size/dimensions of sanitary-protection zones for separate groups or complexes of large/coarse enterprises I and II classes chemical, oil refining, metallurgical, machine-building and other branches of industry and thermal electric stations with ejections,

which are powerful of creating high concentrations of different harmful substances in atmospheric air, of creating noise, vibration, electromagnetic waves of radio-frequencies or other harmful factors and of exerting especially unfavorable effect on health and sanitary-hygienic conditions of life of population, are establish/installed in each specific case according to joint resolution of main sanitary-epidemiological administration of Ministry of Pub. Health of USSR and GOSSTROY of the USSR.

2.8. Size/dimension of sanitary-protection zone for enterprises, buildings and constructions in which are conducted works with application/use of radioactive substances, is establish/installed in accordance with sanitary rules of work with radioactive substances and sources of ionizing emission/radiations, affirmed in routine.

2.9. Size/dimensions of sanitary-protection zone can be decreased:

a) if as a result of calculation of scattering in the atmosphere of harmful substances, which remain after decontamination of ejections, perfection of technological processes of production and other measures will be establish/installed, that content of harmful substances in atmospheric air of populated areas will not exceed of indicated in section 9 present norms;

b) if as a result of acoustic calculation will be determined, that the noise levels within the limits of habitable building-up will not exceed of the established/installed in the section 13 present norms;

c) if in the limits of habitable building-up the levels of vibration, ultrasound, electromagnetic waves of radio-frequencies, static electricity and ionizing emission/radiations will not exceed those establish/installed by norms.

Notes: 1. The calculations of scattering in the atmosphere of the harmful substances, which are contained in technological ejections, and also acoustic calculations should be performed in accordance with the standard documents, affirmed or matched in routine.

2. Determining dimension of sanitary-protection zone from calculation of scattering in the atmosphere of harmful substances is to produce taking into account total contamination of surrounding air by both the technological and ventilation ejections and by existing

(background) contaminations.

3. Existing (background) contaminations of atmospheric air in region of predicted construction or reconstruction of enterprise are establish/installed by local organs of sanitary-epidemiological service and hydrometeorological service and are presented to planning organizations for account with determination of sanitary-protection zones for enterprises.

2.10. Sanitary-protection zone or its any part cannot be considered as reserve territory of enterprise and be utilized for expanding industrial area/site.

2.11. Possibility of utilization of earth/ground, diverted under sanitary-protection zones for agricultural production (growing of agricultural crops, pastures for cattle and hay mowing), should be determined taking into account character and quantity of harmful substances, which are contained in industrial ejections and falling into sanitary-protection zones, according to agreement with local organs of Minsel'khoz [Ministry of Agriculture] of USSR and if necessary with organs of sanitary-epidemiological service.

2.12. Territory of sanitary-protection zone must be well-organized and planted greenery according to project of order,

developed simultaneously with project of construction or reconstruction of enterprise. The project of order and the selection of the rock/species of green cultivations should be composed in accordance with requirements of chapter of SNiP for the design of the general plans of industrial enterprises.

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During the design of the order of the sanitary-protection zone, one should provide for the preservation/retention/maintaining of the existing green cultivations. From the side of residential territory, it is to provide for the band of tree-shrub cultivations in wide not less than 50 m, and with the width of zone to 100 m - it is not less than 20 m.

2.13. In sanitary-protection zone is allow/assumed to place:

a) enterprise, their separate of building and construction with productions of smaller class of harm, than production for which is establish/installed sanitary-protection zone under condition of analogous character of harm;

b) fire station, bath, laundries, garages, warehouses (besides public and specialized provision ones), buildings of administrations,

design offices, training exercises, stores, enterprises of public nutrition, polyclinic, research laboratories, connected with maintenance of the given and adjacent enterprises;

c) room for attendant emergency personnel and protection of enterprises for the established/installed workers on the payroll, stand for a public and individual transport, local and transit communications, LEP, the power station, petroleum and gas lines, artesian holes for a technical water supply, water-cooling constructions, constructions for the preparation for industrial water, water-conducting and sewage pumping plants, constructions of reverse water supply, the buried tanks, the nurseries of plants for re-planting of enterprises and sanitary-protection zone.

Notes: 1. The location of the objects, indicated in p. 2.13, should be provided for with the observance of the requirements which are establish/installed for these objects in standard documents.

2. In territory of sanitary-protection zone, it is not allow/assumed to locate enterprise, industrial buildings and constructions when industrial harms, isolated by one of enterprises, can exert harmful effect on healthy workers or lead to damage of materials, equipment and finished production of another enterprise, and also when this leads to increase of concentration of harm in zone

of habitable building-up higher than permissible, establish/installed in present norms.

3. Location of sport constructions, park/fleets, children's institutions, schools, medicinal-prophylactic and sanitation institutions of common/general/total use in territory of sanitary-protection zone is not allow/assumed.

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2.14. Location on open areas of technological installations, devices, aggregates and equipment, which release industrial harms, should be provided for in accordance with requirements of norms of technological design, matched in routine.

2.15. Separate buildings and constructions should be placed in area/site of enterprise that so that in places of organized and disorganized air intake by ventilation systems and air conditioning content of harmful substances in surrounding air on would exceed 30o/o of maximum permissible concentrations for working zone of industrial rooms.

In this case, must be considered the need for the safeguard of requirements of paragraphs 1.4; 1.5 and 5.6 present norms.

2.16. Sanitary discontinuity/interruptions between buildings and constructions, lit through window openings, must be less greatest height to top of cornice of opposing buildings and constructions.

Notes: 1. If one of the opposing buildings or the constructions from the side, turned to another, in the zone of possible blanket, does not have light openings, then the distance between them is determined only by the height of building or construction without light openings.

2. High-altitude constructions, which do not have light openings (duct, tower, bookcase, column, etc.), it is possible to arrange/locate from wall of building with light openings at a distance not less than width of high-altitude construction. If in the zone of possible blanket from high-altitude construction within wall of building not no light openings there are, then distance between them by present norms is not standardized.

3. For buildings with longitudinal lamp/canopies, arrange/located less than on 3 m from facade of building, for height of building it is to accept height to top of cornice of lamp/canopy.

4. Indicated in p. 2.16 of present norms sanitary discontinuity/interruptions can be decreased when according to calculation, taking into account blanket of windows by opposing buildings, can be provided required according to norms natural illumination in both opposing buildings.

2.17. If necessary according to technological requirements of device of discovered or under shed available warehouses of dusty materials sanitary discontinuity/interruptions should be accepted not less than 50 m to nearest detectable openings of industrial and auxiliary buildings and rooms and 25 m to detectable openings of domestic buildings and rooms.

2.18. On pad, diverted for construction or reconstruction of enterprise, should be provided for sections for sport games and gymnastic exercises for workers in enterprise.

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For these purposes it is, as a rule, to provide for sections with smallest air pollution and less subjected to the effect of other harmful factors, distant from main tracks of the movement of transport.

3. Requirements for industrial buildings I to constructions.

3.1. Volumetrically-planning and structural solutions of industrial buildings and constructions of newly projected and reconstructed enterprises must be accepted taking into account requirements of corresponding chapters SNiP, norms of technological design and present norms.

3.2. Volume of industrial rooms to one worker must comprise not less than 15 m^3, and area of rooms - is not less than 4.5 m^2.

Note. Volumes and areas of rooms to one worker in buildings for the processing/treatment of agricultural production should be accepted according to the appropriate chapter of SNiP.

3.3. Annexes to external walls of industrial buildings and constructions with natural exchange of air (airing) it is allow/assumed to provide for, if within these walls between annexes and above them is possibility of device of openings, which ensure natural exchange of air, and also required according to norms natural illumination.

3.4. Room and sections for productions with surpluses of explicit heat (pain 20 kkal/m^3•h), and also for productions with

considerable liberation/isolations of harmful gases, vapors and dust should be, as a rule, placed in external walls of buildings and constructions.

The greatest side of these rooms must adjoin the external wall of building or construction.

Note. If according to the conditions of technology the rooms indicated and the sections cannot be placed in the external walls of buildings and constructions, then it is allow/assumed to accept another location, but with the necessary safeguard for them of an influx of surrounding air with the ventilation systems or with other measures.

3.5. For location of productions with surpluses of explicit heat, it is more than 20 kkal/m^3•h and by considerable liberation/isolations of harmful gases, vapors and dust one should provide for, as a rule, single-story buildings, in this case airfoil/profile of roof and width of such buildings either their separate parts must be assigned taking into account need for ensuring most effective and economical removal/distance of harmful liberation/isolations and heat with natural method (airing) or suction and exhaust ventilation.

3.6. With need for locating productions, indicated in p. 3.5 of present norms, in multistory buildings should be provided for location of such productions in upper levels, if this it is admissible on conditions of technological process.

In the case of the location of these productions in other floors of the multistory buildings, should be provided for the effective measures for the prevention/warning of the penetration of harmful substances from one floor on another.

3.7. During design of productions of harmful substances I and of II classes of danger in closed rooms, should be, as a rule, provided for location of technological equipment in isolated/insulated cabs, rooms or zones with control of this equipment from panels or operator zones.

In these cases in cabs, rooms and zones of the location of equipment, and also in the sections of possible emergencies one should allow for of utilization by personnel of the hose means of individual defense in repair and emergency operations.

Note. The requirements of present point do not apply to the

productions, placed on open areas.

3.8. During association in one building or construction of productions and production sections with various sanitary-hygienic conditions, should be provided for measures for prevention/warning of effect of harmful factors on workers, and also on those, who do not work with these harms (insulation/isolation, blower, air curtains, etc.).

3.9. Arrangement of industrial rooms in basement and base floors in sections, which have insufficient according to biological effect natural illumination (daylight factor less than 0.1o/o) with permanent work sites, is allow/assumed to provide only in presence of special substantiation only when this is necessary according to technological conditions.

3.10. Transit conduit/manifolds, intended for transporting of harmful liquids and gases, and also transit steam pipes to lay in pedestrian tunnels and rooms of control panels is not allow/assumed.

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3.11. Industrial buildings, rooms and their separate zones (sections) without natural illumination or with insufficient

according to biological effect natural illumination (daylight factor less than 0.1o/o) is allow/assumed to provide:

a) for productions, separate shops and processes where this is required by conditions for of technology and selecting of rational volumetrically-planning solutions, confirmed by special technical and economic substantiation taking into account medical and sanitary requirements in comparison with versions of buildings and rooms with natural illumination;

b) for productions, separate shops and processes, which do not require stay of workers in such buildings and rooms of more than 50o/o time during workday;

c) in accordance with the standard documents according to the structural design of buildings and constructions of the separate branches of industry, affirmed in routine.

Note. For the reference of building, room or their separate zones (sections) to category with insufficient in biological effect natural illumination, the daylight factor should be calculated from the level of working plane (0.8 m of sex/floor), without taking into account blanket by equipment and by communications.

3.12. During design of industrial buildings, rooms and their separate zones (sections) without natural illumination and with insufficient according to biological effect natural illumination should be provided for following supplementary health and hygiene requirements:

a) increase in norm of artificial illumination in accordance with chapter SNIP according to design of artificial illumination;

b) device of erythemal irradiation in accordance with section of 7 present norms;

c) industrial rooms without natural illumination or with insufficient according to biological effect natural illumination must be design/projected, as a rule, with area not less than 200 m^2.

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If necessary for smaller in the area of rooms, should be separate/liberated them by glass partitions, if this is permissible on the basis of the conditions of technology;

d) for periodic rest of workers (without removal/taking of working clothing) at a distance not more than 200 m from work sites

must be provided for places with the natural light, with daylight factor at these places not less than 0.5o/o.

Places for periodic rest must be equipped analogous with rooms for rest in accordance with the demands of chapter SNiP [redacted] for the design of auxiliary buildings and rooms of industrial enterprises.

For periodic rest of workers, can be used the corridors, halls, vestibules, and other rooms with natural illumination, if they satisfy requirements p. 3.12-g of present norms and their direct/straight designation/purpose and other conditions (fire-fighting, safety engineering, meteorological, etc.) allow/assume the utilization of rooms for rest of workers.

3.13. External enclosure/protections of heated industrial buildings and constructions should be provided for (besides buildings and rooms with wet conditions/mode) so that would be excluded possibility of sweating on internal surface of walls and ceilings.

Note. In industrial buildings and constructions with wet conditions/mode, is allow/assumed sweating on the internal surfaces of walls and ceiling.

3.14. Character and area of glazing light openings of industrial

buildings and constructions should be provided for from condition of safeguard of norms of natural illumination, establish/installed at head SNIP according to design of natural illumination, observance of meteorological conditions, establish/installed in present norms, taking into account negative radiation and prevention/warning of excess insolation on the basis of demands of chapter SNIP structural heat engineering.

3.15. In industrial buildings and constructions independent of presence of harmful liberation/isolations and ventilation units must provide for open/disclosed folds of interlacings and other open/disclosed devices in windows in area not less than 20o/o total area of light openings, for ventilation with possibility if necessary for direction of air intake upward - in cold period of year and downward - in warm period of year.

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In buildings and constructions with natural ventilation (aerated) the area of the detectable openings one should determine according to calculation, but their location must be provided for in such a way that the distance from floor level to the bottom of the double interlacings, intended for an air influx in the warm period of year, would be not more than 1.8 m, but to the bottom of the

open/disclosed openings, intended for an air influx in the cold period of year, is not less than 4 m.

Note. Requirements of the present point not extend to rooms with 24-hour and year-round air conditioning, to the industrial rooms of cabin planning, or to the rooms, indicated in p. 5.10 of present norms.

3.16. For open/disclosed window and lantern interlacings or other open/disclosed devices in rooms, must be provided for easily controlled from sex/floor or working areas attachments for opening, installation in position and closure of folds.

3.17. For repairing glazing windows and lamp/canopies and decontamination of glass from both sides, and also for servicing of aeration openings and fittings should be utilized passages (area/sites, staircases for output/yield to roof, etc.), special mechanisms, devices and attachments, which ensure convenient and safe execution of works indicated.

Note. Is allow/assumed utilization for these purposes of the bridge cranes with the observance of the requirements of safety engineering.

3.18. For walls, ceilings and surfaces of constructions of rooms, in which are placed productions with liberation/isolation of harmful or agressive substances (for example, mercury, lead, compounds of manganese, arsenic, benzene, hetero-organic compounds, acids, sulfur dioxide), should be provided for finishing, preventing sorption and allow/assuming light retraction or washing.

3.19. In productions with considerable liberation/isolation of dust, one should provide for retraction of rooms with the aid of vacuuming installations or via hydro-washing.

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3.20. Color finishing of interiors of rooms must be provided for in accordance with indications for design of color finishing of interiors of industrial buildings of industrial enterprises.

3.21. Materials, intended for device of sex/floors, must satisfy hygienic and operating requirements for this production.

Floors must not allow penetration into the rooms of ground water and harmful gases.

The selection of construct/designing the sex/floors is to

produce depending on the character of production in accordance with the demands of chapter SNIP according to the design of sex/floors.

3.22. Material of coating of sex/floors in heated industrial rooms at permanent work sites, connected with work standing, must be provided for with coefficient of heat-mastering not more than 6 kcal/m²•hr•deg.

Note. Departure from this requirement if necessary is allow/assumed under arrangement condition to sex/floor at the work sites of wooden panels or heat-insulating rugs.

3.23. During application/use in production of agressive and harmful substances (acids, alkalies, salts, mercury, petroleum products, etc.) should be provided for hems in places of possible effect of these substances stable in relation to chemical effect, not allowing sorption of substances indicated.

For the removal/diversion of the spilled to sex/floor agressive and harmful liquids, must be provided for the flows into sewerage, in compliance by the demands of chapter SNIP according to the design of internal sewerage and drains of buildings.

3.24. In entrances into industrial buildings, should be provided

for metallic lattices and other devices for decontamination of foot-wear.

4. Requirements for auxiliary buildings I to rooms.

4.1. Auxiliary buildings and rooms of newly projected and reconstructed enterprises should be design/projected in accordance with demands of chapter SNIP for design of auxiliary buildings and rooms of industrial enterprises.

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5. Requirements on heating, ventilation and air conditioning.

5.1. Design of heating, ventilation and air conditioning of industrial buildings and constructions of enterprises, and also ejections of ventilation air in the atmosphere and its decontaminations before ejection should be produced in accordance with demands of present norms and chapters SNIP according to design of heating, ventilation and air conditioning.

5.2. Ventilation, heating and air conditioning of industrial buildings and constructions (including cabs of crane drivers, room of control panels and the like isolated/insulated rooms) should be

design/projected with safeguard at permanent work sites also in working zone during conducting of basic and repair-auxiliary works of meteorological conditions (temperature, relative humidity and speed of air motion), and also of content of harmful substances in air in accordance with requirements of sections 10 and 11 present norms.

5.3. In rooms with heat releases, it is allow/assumed to provide for utilization of surpluses of heat for heating and ventilation taking into account requirements paragraphs of 5.14-5.17 present norms.

5.4. Quantity of air, necessary for safeguard of required parameters of air medium in working zone, one should determine by calculation, taking into account nonuniformity of distribution of harmful substances, heat and moisture according to height of room and in working zone:

a) for rooms with heat releases - on surpluses of explicit heat;

b) for rooms with heat- and moisture removal - on surpluses of explicit heat, moisture and concealed/latent heat, but by check to prevention/warning of condensation of moisture on surfaces of structures and equipment taking into account requirements of p. 3.13 of present norms;

c) for rooms with generation of gas - in a quantity of releasing harms, from the condition of the safeguard of the maximum permissible concentrations.

Notes: 1. A quantity of releasing into rooms industrial harmful substances, heat and moisture should be accepted according to the data of the technological part of project or norms of technological design.

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2. In the absence in technological aspect of project or norms of technological design of data on quantity of industrial harms, which separate into rooms, them it is allow/assumed to determine according to data of full-scale examination/inspections of analogous enterprises or sanitary-hygiene characteristics, indicated in passports of accepted in project enterprise of technological equipment, and also by calculations.

3. During codeposition into rooms of harmful substances, heat and moisture quantity of additional air during design of ventilation should be accepted greater, obtained from calculations for each form

of industrial liberation/isolations.

5.5. To determine quantity of air for ventilation on multiplicity of exchange of air is not allow/assumed, with exception of cases, stipulated in standard documents, matched and affirmed in routine.

5.6. Ejections in the atmosphere of air, driven out by general/total exchange ventilation, which contains harmful and unpleasantly reeking substances through concentrated devices (duct, shaft/mine, deflectors) or through distributed devices (open/disclosed openings of lamp/canopies, transom of windows and other openings) and calculation of scattering these substances, must be provided for so that their concentration they would not exceed:

a) in atmospheric air of populated areas - maximum one-time, indicated in section 9 present norms.

Note. In the absence in table 3 of values of the maximum one-time concentrations of harmful substances should be taken during the calculation of scattering the average/mean diurnal values of concentrations, indicated in this table, for maximum one-time ones.

b) in the air, which enters inside buildings and constructions

through intakes of the ventilation systems and air conditioning and through openings for natural plenum ventilation, -30o/o of maximum permissible concentrations of harmful substances in the working zone of the industrial rooms, indicated in the section of 10 present norms.

5.7. Air, driven out by local suction and dust-laden or harmful and unpleasantly reeking substances, before ejection in the atmosphere is subject to decontamination, which ensures requirements p. 2.15, taking into account requirements paragraphs of 5.6 and 5.8 present norms, chapters SNIP on design of heating, ventilation and air conditioning, and also branch standard documents, affirmed in routine.

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For the residual content of harmful substances in ventilation ejections during incomplete decontamination, just as in the absence of technical means of decontamination, should be provided for scattering harms in atmospheric air with the observance of the same requirements.

With insignificant gross quantity of ventilation ejections with by the content of harmful substances or by their small concentration

in the ejected air it is allow/assumed not to provide for its decontamination, if by scattering harmful substances in atmospheric air under most unfavorable conditions for this locality (direction and wind force, atmospheric residue/settlings, pressure, etc.) will be provided requirements indicated above.

In the absence of technical means of the decontamination of the ejected air, one should allow for of constructing the purification devices in enterprise in the future.

5.8. In calculations of contamination of atmospheric air, created by ventilation ejections in populated areas and in territory of enterprises, it is to consider maximum total ejections of harmful substances in ventilation air, concentration of these substances in atmospheric air from technological ejections according to data of technological aspect of projects and background (existing) concentrations of harms in region of constructions information about which should be obtained from organs of sanitary-epidemiological service of Ministry of Pub. Health of USSR and Glavgidrometsluzhba.

Note. The calculation of scattering in the atmosphere of the harmful substances, which are contained in ventilation ejections, is conducted in the composition of the project of the ventilation of enterprise.

5.9. In industrial rooms with volume to one worker less than 20 m^3 should be design/projected feed of surrounding air in quantity not less than 30 m^3/h to each worker, while in rooms with volume to each worker it is more than 20 m^3 - not less than 30 m^3/h to each worker.

In rooms with the volume to each worker more than 40 m^3 in the presence of windows or windows and lamp/canopies and in the absence of the liberation/isolation of the harmful and unpleasantly reeking substances it is allow/assumed to provide for the periodically acting natural ventilation (opening of the folds of the interlacings of windows and lamp/canopies).

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During the design of buildings, industrial rooms and their separate zones (sections) without natural ventilation (ventilation) with feed in them by the means of the mechanical ventilation only of surrounding air, the volume of surrounding air must comprise not less than 60 m^3/h by one working, but less single exchange of air (by entire volume of room) in 1 h.

During application/use for these buildings, industrial rooms and

their separate zones of the systems of mechanical ventilation and air conditioning with recirculation, the delivery volume of surrounding air must be not less than 60 m^3/h by one working, but less single exchange of air in hour with the calculated multiplicity of exchange of air 10 even more.

With the smaller calculated multiplicity of exchange of air (and the application/use of recirculation) the delivery volume of surrounding air must be not less than 60 m^3/h by one worker, but is not less than 20o/o common/general/total exchange of air.

Notes: 1. With the multiplicity of calculated exchange of air, it is less than 10 and the application/use of recirculation it is allow/assumed to decrease the delivery volume of surrounding air to 10o/o, if to one worker it is provided for to supply more than 120 m^3/h of surrounding air.

2. To buildings and rooms without natural ventilation should be related buildings and rooms in which is design/projected feed of additional air only with means of mechanical ventilation, without device of special openings for airing. To the zones (sections) of rooms without natural ventilation should be also related the zones (sections) of the aerated rooms, which are located at a distance more than 30 m from external walls with aeration openings.

3. By "absence of liberation/isolation of harmful substances" should be understood this quantity in technological equipment, during codeposition of which into air of room of concentration in it of harmful substances will not be exceeded maximum permissible, establish/installed for working zone.

5.10. General/total exchange suction and exhaust ventilation of rooms without natural ventilation should be design/projected, providing not less than two supply and two exhaust ventilation installations productivity each not less than 50o/o required exchange of air. It is allow/assumed to design/project according to one supply and one exhaust installation, equipped with the reserve fan, included automatically with the cessation of worker. Is allow/assumed also blocking of the ventilation systems of this room with the systems, which serve adjacent rooms for safeguard not less than 50o/o required exchange of air with the cessation fan of basic system.

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5.11. If according to conditions of technology isolated/insulated rooms without natural ventilation for dwelling period of supply or exhaust general/total exchange ventilation can be connected with adjacent rooms by open/disclosed openings, which ensure sufficient aspiration or displacement of air, then for such rooms it is allow/assumed not to provide for indicated in p. 5.10 of present norms reserve fans, but to have their necessary supply for replacing malfunctioned fans in the course of twenty-four hours.

5.12. Disorganized influx of surrounding air for reimbursement of drawing in cold period of year during design of ventilation is allow/assumed to accept in volume more single exchange of air in 1 h. In this case, must be avoided a reduction in the temperature of air in rooms lower than permissible temperature, the formation of mist in rooms and the condensation of water vapors on the internal surfaces of external walls, coatings and glazings of the openings the angle of slope of which to the horizon is less than 55°.

5.13. It is allow/assumed to provide for air intake from adjacent rooms, if in them are not separate/liberated harmful and unpleasantly reeking substances or if harmful substances are related to 4 classes of danger and their content in air intake does not exceed 30o/o of maximum permissible concentrations in air of working zone.

In this case, should be provided for the balance of air on the organized influx and drawing in those interlocked by ventilation adjacent rooms and the observance of the requirements of present norms on the cleanliness of air.

Note. The device of the exhaust ventilation with mechanical stimulation, not compensated by the organized air influx, in buildings and constructions with furnace heating is not allow/assumed.

5.14. During design of ventilation and hot-air heating, it is allow/assumed to provide for recirculation of air in cold and transition periods of year.

For the airconditioning systems, it is allow/assumed to provide for the recirculation of air in all seasons.

During the application/use of recirculation of air, a quantity of surrounding air, supplied to each worker, must correspond to the requirements p. 5.9 of present norms.

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5.15. Application/use of recirculation with hot-air heating, not combined with ventilation, is allow/assumed to provide for in limits one room, if in it there are no liberation/isolations of harmful substances, which are sublimated with contact with heated surfaces of technological equipment and heaters of system of hot-air heating.

5.16. For recirculation it is allow/assumed to utilize air of rooms, in which there are no liberation/isolations of harmful substances or if releasing substances are related to 4 classes of danger and concentration of these substances in supplied to room air does not exceed 30o/o of maximum permissible concentrations. In this case, must be considered the requirements p. 5.17 of present norms.

It is allow/assumed to provide for the work of supply systems for recirculation in idle time, if in rooms is excluded the possibility of the residual liberation/isolations of harmful substances 1 and 2 classes of danger.

5.17. Application/use of recirculation of air for ventilation, hot-air heating and air conditioning is not allow/assumed to provide for in rooms:

a) in air of which to be contained pathogenic bacteria, viruses and caps;

b) in which are clearly expressed unpleasant odors;

c) into air of which they are separate/liberated harmful substances 1, 2 and 3 classes of danger.

Note. The recirculation of air it is allow/assumed to provide for when a quantity of harmful substances, which are found in technological equipment, is such, that during their one-time liberation/isolation into air of the room of concentration in it will not be exceeded maximum permissible, establish/installed for a working zone.

5.18. For rooms in which local increase in temperature and speed of movement of additional air can lead to increase of concentrations of harmful substances in air of working zone than higher provided for by norms, in devices of systems of plenum ventilation, hot-air heating and air conditioning it is to provide for measures, which

eliminate possibility of increasing concentrations of harmful substances in air of rooms.

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5.19. Feed of additional air into ventilation rooms during natural ventilation should be, as a rule, provided for in warm period of year at the level not more than 1.8 m and in cold period of year - not below 4 m from sex/floor to bottom of ventilation openings.

The feed of unheated air in the cold period of year on lower marks allow/assumes under realization condition for the measures, preventing the direct effect of cold air on workers.

5.20. Temperature and delivery speed of air from air distributors of ventilation systems, air conditioning and hot-air heating should be calculated so that in working zone would be provided meteorological conditions in accordance with section of 11 present norms.

5.21. Air or air-heat curtains (air curtains with preheating of air) are to provide for in gates, which are open/disclosed more frequent than five times or not less than on 40 min in exchange, or in technological openings of heated buildings and constructions,

which are constructed in regions with calculated temperature of external air for designing heating - 15°C it is below, in the absence of trap-sluices, or when justified both at higher calculated temperatures of surrounding air and with any duration of opening of gates and other openings.

5.22. Air and air-heat curtains should be designed, so that for period of opening winch, doors and technological openings temperature of air in rooms at permanent work sites would be not below:

a) 14°C in light physical work;

b) 12°C in work of average/mean heaviness;

c) 8°C in punishment.

In the absence of permanent work sites near gates, doors and technological openings, is allow/assumed a decrease in temperature of air in this zone with their opening to 5°C.

The temperature of the mixture of the air, passing through gate, technological openings and doors, should be provided for not lower than temperatures of air, indicated in present point.

5.23. Association into common/general/total exhaust installation of suction of dust and easily condensing vapors, and also substances, which are powerful with mixing or creating harmful mixtures or chemical compounds, of providing for is not allow/assumed.

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5.24. Local suction, which drive out harmful substances 1 and 2 classes of danger from technological equipment, should be blocked with this equipment in such a way that it could not work with inaction of local exhaust ventilation.

If the cessation of production process with the disconnection of local exhaust ventilation is impossible or with the cessation of equipment (process) is continued the liberation/isolation of harmful substances into air of rooms, in the quantities, which exceed those indicated by note by 3 to p. 5.9 of present norms, then should be provided for the installation of reserve fans for local suction with their automatic changeover.

5.25. Emergency ventilation should be provided for in accordance with norms of technological design and requirements of departmental standard documents, affirmed in routine in industrial rooms in which most sudden possible admission into air of working zone of large

quantities of harmful substances (besides dust). Design/projected emergency ventilation should be, being guided by the demands of chapter SNIP according to the design of heating, ventilation and air conditioning, and also by other standard documents, affirmed in routine.

If in departmental standard documents are absent indications about the exchange of air of emergency ventilation, then one should provide for so that it together with the permanent ventilation would provide exchange of air in room if necessary not less than 8 exchanges in 1 h by the internal volume of room.

5.26. Emergency ventilation must, as a rule, be provided for by exhaust.

Deaeration by emergency ventilation (by exhaust and supply) it must be provided for outside.

The reimbursement of the air, driven out by exhaust emergency ventilation, must be provided for predominantly due to air intake outside.

5.27. Discharge openings of emergency ventilation should not be arrange/located in places of permanent stay of people and location of

air-inlet devices of ventilation systems and air conditioning.

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5.28. In projects probably as a rule, is provided for blocking of emergency ventilation with gas analyzers, adjusted to permissible concentrations of harmful substances.

Furthermore, the starting/launching of fans and the opening of openings for deaeration by emergency ventilation should be as a rule, design/projected remote from available places both from within and outside rooms.

5.29. Installations of heating, ventilation and air conditioning must not create at permanent work sites in industrial buildings in service area of auxiliary buildings of noise, which exceeds permissible sound pressure levels, and vibration, exceeding establish/installed by present norms.

5.30. In tunnels, intended for cycling or movement of people, and also in rooms of technical floors should be provided for natural or mechanical ventilation with calculated exchange of air.

5.31. For heating of buildings and constructions of enterprises,

must be provided for systems, instruments and heat-transfer agents, which do not create supplementary industrial harms.

5.32. Application/use of radiant heating with infrared gas emitters is allow/assumed to provide for with full/total/complete removal/distance of products of combustion in the atmosphere (outside).

5.33. Heating systems must be provided for with adjusters for rooms, in which is necessary heat emission change.

5.34. During arrangement of permanent work sites about windows, should be provided for defense of workers from descending cold airflow.

5.35. In systems of panel heating, mean temperature of heating surface must be provided for not higher:

a) on heating surface of sex/floor of 26°C, with exception of sex/floors in vestibules and other rooms with sojourn of people where temperature on heating surface of sex/floor is allow/assumed to provide for to 30°C;

b) on heating surface of ceiling at height of room:

2,5—2,8 м — 28° С;
2,9—3,0 м — 30° С;
3,1—3,4 м — 33° С;

c) on heating surface of partitions and walls at height to 1 m from the level of floor of 95°C, but are above 1 to 3.5 m - 45°C.

5.36. Heaters in industrial rooms with considerable liberation/isolations of dust it is to provide for with smooth surfaces, which allow/assume light decontamination.

5.37. Location of supply heating-ventilation equipment, conditioners, which serve rooms, in which is not allow/assumed recirculation of air, should be provided for in isolated/insulated rooms.

During the design of exhaust ventilation installations, should be provided for the measures, which prevent/warn the penetration of the exhausted air into supply ventilation installations, conditioners, into the rooms, intended for venting equipment, and into industrial rooms.

6. Requirements for water supply I of sewerage.

6.1. Design of water supply and sewerage of buildings and constructions of enterprises should be carried out in accordance with demands of chapters SNIP according to design of water supply and sewerage and requirements of present norms.

6.2. Device of internal water supply line and sewerage, and also systems of external water supply and sewerage should be provided for in industrial and auxiliary buildings and on industrial pads for water supply to industrial and household drinking needs and for diversion/tap of effluents.

Note. The device of the household drinking water supply line and sewerage in industrial and auxiliary buildings is not necessary in such a case, when in enterprise are absent these centralized water supply line and sewerage and number of workers comprises not more than 25 people into exchange.

6.3. Rules of selection of source of water supply and norm of quality of water for household drinking needs and shower devices are regulated by appropriate GOSTS.

6.4. Selection of source of household drinking water supply should be matched with local councils of deputies of workers and local organs of sanitary-epidemiological service when selecting of area/site under construction.

The maximum permissible concentrations of harmful substances in water of the basins of the public and domestic sanitation water-use must not exceed sublimity, of the given in the section 12 present norms.

6.5. Connection of grid/networks of household drinking water supply with grid/networks of water supply lines, which feed water of nonpotable quality, is not allow/assumed.

Note. In the individual exceptional cases according to agreement in routine, it is allow/assumed to provide for the utilization of the household drinking water supply as reserve for the water supply line, which feeds water of nonpotable quality. The device of cross connection in these cases must provide the air burst between grid/networks.

6.6. Household drinking water supply lines, supplied from urban

water supply line, must not have direct connection with other household drinking water supply lines, supplied from local sources of water supply.

6.7. Subterranean and underground water, which satisfy health and hygiene requirements for household drinking water, should be provided for to utilization predominantly for household drinking water supply.

6.8. Project of household drinking water supply must provide for organization of zones of sanitary protection of sources of water supply and water-conducting constructions in accordance with acting regulations and demands of chapter SNIP according to design of water supply.

6.9. Norms of expenditure of water for household drinking needs in industrial and auxiliary buildings of enterprises and variation factors of water consumption it is to provide for in accordance with chapter SNIP according to design of internal water supply line of buildings.

Notes: 1. The norms of the expenditure/consumption of water should be accepted lowered/reduced to 15 l upon one worker into exchange in the enterprises where is absent the domestic-human waste

sewerage.

2. Quality of water for all forms of showers, manual and foot baths, wash-stands, and also for supply ventilation systems, cooling of air of rooms by atomization/pulverization of water and dust-depression must satisfy requirements of GOST for drinking water.

3. With deficiency/lack in water of drinking quality, is allow/assumed: supply of water to washing small reservoirs of toilet bowls and to urinals from industrial water supply lines; to utilize geothermal water (in their presence) on on target/purpose of hot water supply of showers and wash-stands. The estimation of the suitability of water must by performed by the organs of the sanitary-epidemiological service.

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6.10. Diversion/tap of effluents and their decontamination should be provided for in accordance with acting standard documents, which are determining conditions of descent and degree of purity of effluents.

6.11. It is forbidden to provide for descent of domestic-human waste and industrial effluents into absorbing wells.

The descent of tail waters from reverse water-supply systems is allow/assumed only into industrial sewerage of industrial enterprise.

The descent of the uncontaminated industrial effluents is allow/assumed to provide for into shower sewerage.

The diversion/tap of effluents from showers and wash-stands should be provided for into the grid/network of the domestic-human waste or industrial sewerage of enterprise.

6.12. In the case of diversion/tap and descent of industrial flows, which release gases, should be provided for measures against penetration of gases into rooms.

6.13. Association of flows, during which are obtained chemical reactions with liberation/isolation of harmful gases (for example, hydrogen sulfide, hydrogen cyanide, hydrogen arsenide), is not allow/assumed.

6.14. Descent into urban sewer system of effluents, which contain harmful substances, is permitted to provide for, if after mixing with basic mass of effluents of concentration in them of

harmful substances they do not exceed establish/installed by norms and do not influence course of biological decontamination of flows.

6.15. Location of installations according to purification of waste water in industrial buildings is allow/assumed to provide for when from composition of effluents, and also during their mixing and decontamination they are not formed and are not separate/liberated harmful or badly reeking vapors and gases (for example, mercaptans, hydrogen sulfide, hydrogen cyanide, hydrogen arsenide) or under condition of sealing/pressurization of all processes of purification of waste water.

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6.16. Location of external grid/networks and constructions of water supply and sewerage should be provided for in accordance with instructions of corresponding chapters SNIP.

The sizes of the sanitary-protection zones for the constructions of sewerage should be accepted in accordance with section 8 present norms.

6.17. Devices for supply of workers by drinking water should be design/projected taking into account demands of chapter. SNIP for the

design of auxiliary buildings and rooms of industrial enterprises.

7. Requirements for illumination I to ultraviolet lighting.

7.1. During design of natural and artificial illumination in industrial and auxiliary buildings and rooms, and also artificial illumination in territories of enterprises it is to be guided by demands of chapters SNIP according to design of natural and artificial illumination and other chapters SNIP, and also by requirements of branch norms of design of illumination, developed and affirmed in routine, and by requirements of present norms.

7.2. Industrial rooms (with permanent stay of workers) without natural illumination or with insufficient according to biological effect natural illumination (daylight factor less than 0.1o/o) must be equipped by installations of artificial ultraviolet radiation (with erythemal lamps).

For this purpose is most effective the application/use of installations of the general erythemal irradiation of workers, which must be provided for first of all in the enterprises, arrange/located behind the Artic circle.

Until the safeguard of a technical capability of the creation of

such installations, it is necessary to provide for the device photariums (with erythemal lamps), the available in territory enterprises.

The design of the installations of artificial ultraviolet radiation should be produced on the special standard document, affirmed in routine.

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8. Sanitary classification of enterprises and Industries productions, thermal electric stations, storage buildings, and facilities constructions and the size/dimensions of the sanitary-protection zones for them.

8.1. For enterprises, buildings and constructions with technological processes, which are sources of liberation/isolation of industrial harms into environment, should be provided for sanitary-protection zones in accordance with section of 2 present norms, depending on sanitary classification.

Note. During the organization of new productions and technological processes, not connected in this classification, the size/dimension of the sanitary-protection zone must be establish/installed in each specific case according to agreement with

the main sanitary-epidemiological administration of the Ministry of Pub. Health of the USSR and GOSSTROY of the USSR.

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8.2. For industrial enterprises depending on character of production and power, should be provided for sanitary-protection zones indicated below.

Chemical enterprises and productions.

Class I. Sanitary-protection zone by the size/dimension of 1000 m.

1. Production of connected nitrogen (ammonia, nitric acid, nitric manure and other fertilizers).

2. Production of intermediate products of aniline dye industry of benzene and ether/ester series/number (aniline, nitrobenzene, phenol, etc.) at total power of production is more than 1000 t/yr.

3. Production of intermediate products of naphthalene and anthracene series/number (betanaphthol, H-acid, phenyl-peri acid, Schoellkopf's acid, anthraquinone, phthalic anhydride, etc.) more

than 2000 t/yr.

4. Production of bromine iron.

5. Manufacture of chemical pulp and hemicellulose using acid sulfite, bisulfite or monosulphite methods with preparation of cooking solution/openings by combusting of sulfur or other sulfur-containing materials, and also manufacture of chemical pulp using sulfate method (sulfatecellulose).

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6. Production of illuminating, water and generator gases with productivity is more than 50000 m^3/h.

7. Stations of subterranean gasification of carbon/coal.

8. Production of sodium hydroxide and chlorine electrolytically.

9. Production of rare earth metal by chlorination (titanium-magnetite, etc.).

10. Production of artificial viscose fiber and cellophane.

11. Production of concentrated mineral fertilizers.

12. Production of organic solvents and oils (benzene, toluene, xylene, naphthol, phenol, creosol, anthracene, phenanthrene, acridine, carbazole).

13. Production in arsenic and its inorganic compounds.

14. Production of oil gas in quantity of more than 5000 m^3/h.

15. Enterprises for refining of petroleum [1].

FOOTNOTE [1]. During petroleum refining with the content of sulfur of less than 0.5o/o (weight) the sanitary-protection zone should be accepted the size/dimension of 500 m. ENDFOOTNOTE.

16. Production of picric acid.

17. Production of hydrofluoric acid, cryolite, hydrogen fluoride and fluoride salts.

18. Enterprises with to processing/treatment of coal.

19. Enterprises for chemical processing/treatment of peat.

20. Enterprises for processing/treatment of bituminous shale.

21. Production of mercury.

22. Production of carbon black.

23. Production of sulfuric acid, oleum and sulfur dioxide.

24. Production of carbon disulfide.

25. Production of hydrochloric acid.

26. Production of superphosphate.

27. Production in phosphorus (yellow, red) and phosphorous-organic compounds (Thiophos [[redacted] - parathion], carbophos, etc.).

28. Production of chlorinated and hydrochorinated hydrocarbons.

29. Production of carbide of calcium, acetylene from carbide of calcium and derivatives on basis of acetylene.

30. Production of dimethylterephthalate.

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31. Production of caprolactam.

32. Production of filament "nitron".

33. Production of synthetic ethyl alcohol using sulfuric acid method or method of direct/straight hydration when concentration of sulfuric acid or sulfur removal is present,.

34. Production of synthetic rubber.

35. Production of foaming agents.

36. Production of amines (monomethylamine, dimethylamine, diethylamines, triethylamines, etc.).

37. Production of cyanide salts (potassium, sodium, copper, etc.), black cyanide, dicyanamide, cyanamide of calcium.

38. Production of acids: aminoenanthic, undecane amide, aminopelargonic, thiodivaleric and isophthalic.

39. Production nitri-sodium, hydrazine of sulfate, hydrazine of hydrate, sulfate of ammonium, thionyl chloride, ammonium carbonate and ammonium of carbonate.

40. Acetylene generation from hydrocarbon gases.

41. Production of diametnylformamide.

42. Production of ethyl fluid.

43. Production of catalysts.

44. Production of products and intermediate products for synthetic polymeric materials.

45. Production of sulfurous organic dye/pigments (sulfurous-black, etc.).

46. Production of hydrocyanic acid and its derivatives (acrylates, diisocyanates, etc.).

47. Production of beryllium.

48. Production of chemical synthetic medicinal preparations.

49. Production of synthetic fatty acids and production of highest greasy/fatty alcohols by direct/straight oxidation by oxygen.

50. Production of mercaptans and interlocking plants imparting odor to of gas by mercaptans with stocks of odorant.

51. Potassic combines.

Class II. Sanitary-protection zone by the size/dimension of 500 m.

1. Production of urea and thiourea.

2. Enterprises for processing/treatment of natural oil gas.

3. Production of niobium.

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4. Production of tantalum.

5. Production of generator gas on angle and peat in quantity of 25000-50000 m^3/h.

6. Production and processing/treatment of natural resins and their residue/remainders (coal-tar pitch, etc.).

7. production calcined soda using ammonium soda process in quantity of more than 400000 t/yr.

8. Productions of syntnetic ethyl alcohol using sulfate method or using method of direct/straight hydration in the absence of shop of boiling down of sulfuric acid, and also in the absence of sulfur removal at plant with second production method.

9. Production of ammonium, potassium, soda and calcium nitrate.

10. Production of chemical organic reagents.

11. Production of plastics from ether/esters of cellulose.

12. Production of corundum.

13. Production of barium chloride with utilization of hydrogen sulfide.

14. Production of technical hydrogenated fat (with obtaining of hydrogen by nonelectric method).

15. Production of artificial- (copper-ammonium and acetate), and also synthetic chemical draw plates (caprone, Lavsan, Khlorin, Vinol, Anid, enanthic fiber).

16. Production of ultramarine.

17. Production of chromic annydride and salts of chromic acid.

18. Production of artificial leather with application/use of volatile organic solvents.

19. Production of esters.

20. Production of products of organic synthesis (alcohol, ethyl ether, etc.) and oil gases during processing/treatment is more than 5000 m^3/h.

21. Production of intermediate products of aniline dye industry

of benzene and ether/ester series/number (aniline, nitrobenzene, nitroaniline, alkylamincle, chlorobenzene, nitrochlorobenzene, phenol, etc.) at total power of less than 1000 t/yr.

22. Production of intermediate products of naphthalene and anthracene series/number (betanapthol, H-acid, phenyl of Schoellkopf's acid, Schoellkopf's acid, anthraquinone, phthalic anhydride, etc.) at total power to 2000 t/yr.

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23. Production of vat dyes of all classes of azotol and azoic dyes.

24. Pilot plants of aniline dye industry at total power to 2000 t/yr and turned out productions of less than 1000 t/yr.

25. Enterprises for production of asbestos articles.

26. Production of acetic acid.

27. Production of polyethylene and polypropylene on basis of petroleum casing-head gas.

28. Production of nutrient yeast and furfural from wood and agricultural departure/withdrawals by method of hydrolysis.

29. Production 3.3 [redacted] di (methyl chloride) oxocyclobutane, polycarbonate, copolymers of ethylene with propylene on basis of natural casing-head gases; polymers of highest polyolefins on basis of natural casing-head gases.

30. Production of pitch, liquid and volatile fractions from wood, methyl alcohol, acetic acid, turpentine, turpentine oils, acetone, creosote.

31. Production of nicotine.

32. Production of phenol aldehyde, polyether/polyester, epoxy and other synthetic resins in quantity of more than 300 t/yr.

33. Production of synthetic camphor by isomerization method.

34. Production of melamine and cyanuric acid.

35. Production of polycarbonates.

Class III. Sanitary-protection zone by the size/dimension of 300

m.

1. Production of bitumen and other products from residue/remainders of distillate of coal pitch, oil, evergreen (tar, flux oil, etc.).

2. Production of soda ash using ammonium soda process in quantity of less than 400000 t/yr.

3. Production of caustic sodium hydroxide using Lowig's process and calciferous.

4. Production of mineral salts, with exception of salts of arsenic, phosphorus and chromium, lead and mercury.

5. Production of petroleum gas in quantity from 1000 to 5000 m^3/h, and also generator gases from 5000 to 25000 m^3/h.

6. Production of plastics (carbolite, vinyl chloride, etc.).

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7. Production of phenol aldehyde molding materials, and also pressed and winding articles made of paper and fabrics, impregnated

with phenol aldehyde resins, in quantity more than 100 t/yr.

8. Production of artificial mineral pigments.

9. Enterprises for reclaiming of rubber and rubber.

10. Production according to production of busbar/tires, rubber technical articles, ebonite and sized foot-wear, and also rubber compound for them.

11. Chemical ore processing of rare earth metal for obtaining salts of antimony, bismuth, lithium, etc.

12. Production of fertilizer mixtures.

13. Production of carbon articles for electrical industry (brush, electrocarbons, etc.).

14. Productions according to vulcanization of articles made of rubber with application/use of carbon disulfide.

15. Production of acetaldehyde in a vapor-phase manner without application/use of metallic mercury.

16. Production and base line warehouses of ammonia water.

17. Production of polystyrene and styrene copolymers.

18. Production of organosilicon varnishes, liquids and resins.

19. Gas-distributing stations of main-line gas lines with odor-imparting installations with mercaptans.

20. Production of sebacic acid.

21. Production of vinyl acetate, polyvinyl acetate, polyvinyl alcohol, polyvinyl acetate emulsion, acetals and Viniflex.

22. Production according to processing/treatment of fluoroplasts.

23. Production of plasticizers.

24. Production of nutrient yeast from departure/withdrawals of wood and agriculture (subsolar hull, maize cabbage hearts, straw, etc.) by method of hydrolysis.

25. Production of isoactyl alcohol, oil anhydride, butyric acid,

foam plastic, vinyltoluene, polyvinyl toluene, polyurethanes for founding, polyformaldehyde, regeneration of organic acids (acetic, oil, etc.), formalin, urotropin, pentaerythryte, methylpyrrolidone, polyvinylpyrollidone, products of organic synthesis (alcohol, ethyl alcohol, etc.) of oil gas during processing/treatment is less than 5000 m^3/h.

26. Production of varnishes (oil, alcoholic, typographical for rubber industry, that insulates, etc.).

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27. Production of drying oil.

28. Production of phenol aldehyde, polyether/polyester, poliamide, epoxy and other synthetic resins in quantity to 300 t/yr.

29. Productions of carbonyls of metals.

30. Production of methionine.

31. Production of antibiotics biologically.

Class IV. Sanitary-protection zone by the size/dimension of 100

■.

1. Production of paper from finished cellulose and rags.

2. production of galalith and other protein plastics (aminoplasts, etc.).

3. Production of glycerin.

4. Production of enamels on condensation resin.

5. Production it washed.

6. Production of organic preparations (see meat-packings plant).

7. Production of generator gas on angle and peat in quantity to 5000 m^3/h.

8. Chemical ore processing of rare earth metal for obtaining salts of molybdenum, tungsten and cobalt.

9. Production of phenol aldehyde molding materials, and also pressed and winding articles made of paper and fabrics, impregnated with phenol aldehyde resins, in quantity not more than 100 t/yr.

10. Production of technical hydrogenated fat (with obtaining of hydrogen by electrolytic method).

11. Productions, salt-making and salt-grinding.

12. Production of pharmaceutical salts of potassium (chloride, sulfate and of potash).

13. Production of rubber foot-wear without application/use of organic solvents and rubber compounds without application/use of carbon black.

14. Production of mineral fertilizers of liquid ones.

15. Production of vanillin and saccharin.

16. Production of oil gas in quantity to 1000 m^3/h.

17. Production of pressing materials (phenol-formaldehyde, urea and melamine-formaldehyde, organosilicon, etc.).

18. Production of artificial leather on basis of polyvinylchloride and other resins without application/use of volatile organic solvents.

19. Productions of polychlorovinyl plasticizer, polyvinyl chloride plastic, miplastic separators of expanded polyurethane, expanded plastics, fiberglass materials, styrcfoam.

20. Production of alkaloids and galenic preparations.

21. Production of mineral natural color/paints (chalk, ocher, mummy, etc.).

22. Production of perfumery.

23. Production of tanning extract.

24. Production of articles made of synthetic resins, polymeric materials and plastics by different methods (pressing, extrusion, press casting vacuum- molding, etc.).

25. Production of synthetic powder-like cleaning agents.

Class V. Sanitary-protection zone by the size/dimension of 50 m.

1. Production of inorganic reagents in the absence of chlorine shops.

2. Productions according to vulcanization of rubber without application/use of carbon disulfide.

3. Production of carbonic acid and "dry ice".

4. Production of artificial pearl.

5. Production of articles made of plastics and synthetic resins (only machining).

6. Production photochemical (photographic plates, motion picture films and photographic papers).

7. Production of mineral fertilizers of carbonate ones.

8. Points of purification, flushing and steaming of cisterns (with transport of oil and petroleum products).

9. Production of different forms of paper and carton from imported semi-finished products; manufacture of mechanical wood pulp and hemicellulose with application/use of soda or mono-sulfite during obtaining of finished mono-sulfite and without combustion of waste sulfur-containing lyes and other materials and without application/use of liquid sulfur dioxide.

10. Plants of polygraphic color/paints.

11. Production of finished medicinal forms.

12. Production of compressed and liquified products of separation of air.

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Metallurgical, machine-building and metalworking enterprises and productions.

Class I. Sanitary-protection zone by the size/dimension of 1000 m.

1. Enterprises for secondary processing/treatment of nonferrous metals (copper, lead, zinc, etc.) in quantity more than 3000 t/yr.

2. Production on burning out of coke.

3. Production on smelting of cast iron with total volume of blast furnaces is more than 1500 m^3.

4. Combine of ferrous metallurgy with full/total/complete metallurgical cycle in power of more than 1 million t/yr of cast iron they became.

5. Production they became open-hearth and direct spinning methods with shops for processing/treatment of by-products (grinding of Thomas slag, etc.) during issue of basic production from 1 million t/yr and more.

6. Production on smelting of nonferrous metals is direct from ores and concentrates (among other things lead, tin, copper, nickel).

7. Production of aluminum by method of electrolysis of fused salts of aluminum (alumina).

8. Production on smelting of special-cast irons; production of

ferro alloys.

9. Enterprises for agglomeration of ores of ferrous and nonferrous metals and burnt ore.

10. Production of alumina (oxide of aluminum).

11. Production of pig iron mold casting in quantity of more than 100,000 t/yr.

Class II. Sanitary-protection zone by the size/dimension of 500 m.

1. Production of magnesium (by all methods, except chloride).

2. Production of nonferrous metals in quantity of more than 2000 t/yr.

3. Enterprises for secondary processing/treatment of nonferrous metals (copper, lead, zinc, etc.) in quantity from 2000 to 3000 t/yr.

4. Production on smelting of cast iron with total volume of blast furnaces from 500 to 1500 m^3.

5. Combine of ferrous metallurgy with full/total/complete metallurgical cycle in power to 1 million t/yr of cast iron and steel.

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6. Production they became open-hearth, electrosmelting and direct spinning methods with shops for reworking of departure/withdrawals (grinding of Thomas slag, etc.) with issue basic production in quantity to 1 million t/yr.

7. Production of lead batteries.

8. Production for guiding Thomas slag.

9./Production of autimony by the pyro-metallurgical method.

]0. Production of cast-iron shaped casting in the amount of more than 20,000 to 100,000 ton per year.

11. Production of zinc, copper, nickel, and cobalt by the electrolysis of afueous soluctions method.

Class III. Sanitary - protective zone with a dimension of 300 m.

1. Production in beneficiating metals without hot working.

2. Production of lead-sheathed cables or with rubber insulation.

3 Production of cast-iron shaped castings in the amount from 10,000 to 20,000 ton per year.

4. Enterprises for secondary processing of non-ferrous metals (copper, lead, zinc and others) in the amount of up to 1000 tons per year.

5. Production of non-ferrous metals in the amount of from 100 to 2,000 tons per year.

6. Production of mercury and instruments with mercury (mercury rectifiers, thermometers, lamps and so forth).

7. Production in founding pig iron with total volume of blast furnaces of less than 500 m .

8. Production of shaped colored press casting in power 10000 t of founding per annum (9500 t of press casting from aluminum alloys and 500 t of founding from zinc alloys).

9. Production of metal electrodes (with utilization of manganese).

Class IV. Sanitary-protection zone by the size/dimension of 100 m.

1. Production of machines and instruments of electrical

engineering industry (dynamos, condenser/capacitors, transformers, projectors, etc.) in presence of small foundry and other metallurgical plants.

2. Production of cable of bare.

3. Production of boilers.

4. Production of metal electrodes.

5. Enterprises of metal fabrication industry with pig iron, steel (in quantity to 10,000 t/yr) and colored (in quantity to 100 t/yr) founding.

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6. Production of antimony electrolytically.

7. Type-casting plants (with possible ejections of lead in the atmosphere).

Class V. Sanitary-protection zone by the size/dimension of 50 m.

1. Enterprises of metal fabrication industry with heat

processing/treatment without foundries.

2. Production of alkaline batteries.

3. Type-casting plants.

4. Production of instruments for electric industry (electric lamps, lamp/canopies, etc.) in the absence of foundries and without application/use of mercury.

5. Production of hard alloys and refractory metals in the absence of shops of chemical treatment of ores.

6. Printing houses.

Enterprises for the yield of ores and nonmetallic ores.

Class I. Sanitary-protection zone by the size/dimension of 1000 m.

1. Enterprises for yield of oil with ejection of hydrogen sulfide from 0.5 to 1 t/24 hrs, and also with large content of volatile hydrocarbons.

2. Enterprises for yield of lead ores, mercury, arsenic, manganese.

3. Enterprises for yield of natural gas.

Class II. Sanitary-protection zone by the size/dimension of 500 m.

1. Enterprises for yield it is phosphorite, apatite, pyrites without chemical treatment.

2. Enterprises for yield of bituminous shale.

3. Enterprises for yield of stone, brown and other carbon/coals.

4. Enterprises for yield of iron and polymetallic ores (with exception of lead ones, mercury, arsenic and manganese) and rocks of VIII-XI categories by open pit mining.

Class III. Sanitary-protection zone by the size/dimension of 300 m.

1. Enterprises for yield of oil with ejection of hydrogen sulfide to 0.5 t/24 hrs with small content of volatile hydrocarbons.

2. Enterprises for yield of rocks of VI-VII category: dolomite, magnesite, asbestos, ⁺ars, asphalt by open pit mining.

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3. Enterprises for yield of metalloids in an open manner.

4. Production of briquettes from small/fine peat and carbon/coal.

5. Hydro-shaft/mines and concentrating plants with wet process of enrichment.

Class IV. Sanitary-protection zone by the size/dimension of 100 m.

1. Enterprises for yield of stone common salt.

2. Enterprises to to yield of peat by milling.

3. Enterprises for yield of ores of metals and metalloids in a mine/shaft manner, with exception of lead ores, mercury, arsenic and manganese.

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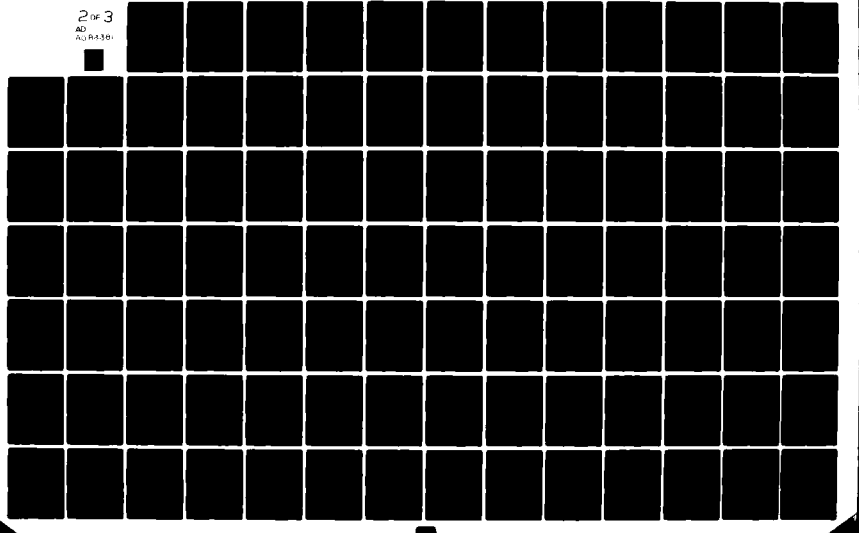

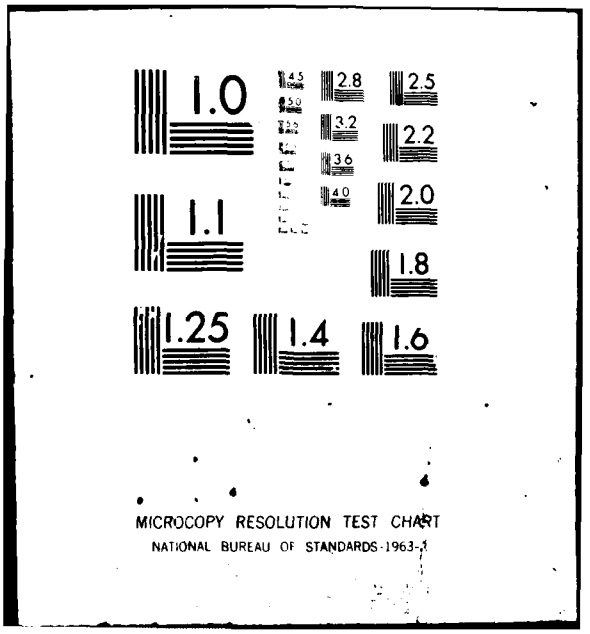
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Productions of building industry.

Class 1. Sanitary-protection zone by the size/dimension of 1000 m.

1. Production of portland cement, portland slag cement and pozzolana cement in quantity of more than 150,000 t/yr.

2. Production of magnesite, dolomite and fireclay with firing in shaft, rotary and other kilns.

Class II. Sanitary-protection zone by the size/dimension of 500 m.

1. Production of gypsum (alabaster).

2. Production of asbestos.

3. Production of lime (calciferous plants with shaft and rotary kilns).

4. Production of portland cement, portland slag cement, etc. in quantity to 150,000 t/yr.

5. Production of aspnalt concrete at not stationary plants.

Class III. Sanitary-protection zone by size/dimension 300 m.

1. Production of artificial fillers (kerasite, etc.).

2. Production of glass wool and slag wool.

3. Production of local cements (clay cement, roman cement, gypsum slag, etc.) in quantity to 5000 t/yr.

4. Production of tar paper and Ruberoid.

5. Production of asphalt concrete at stationary plants.

Class IV. Sanitary-protection zone by size/dimension 100 m.

1. Production of artificial stones and concrete articles.

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2. Elevators of cements and other dusty building materials.

3. Production of building materials from departure/withdrawals

of heat and power plant.

4. Production of asbestos cement articles.

5. Production of polymeric building materials.

6. Production of porcelain and faience articles.

7. Production of red and silicate brick.

8. Production of ceramic and refractory articles and marls.

9. Stone-foundry.

10. Production of glass.

Class V. Sanitary-protection zone by size/dimension 50 m.

1. Enterprises for yield of stone nonexplosively and enterprise for processing/treatment of natural stones.

2. Production of gypsum articles.

3. Production of reed pressboard, pressed straw, trim,

fibrolite, etc.

4. Production of clayey articles.

Productions according to processing/treatment are woody.

Class 1. Sanitary-protection zone by size/dimension 1000 m.

1. Lumber-industry economies (production with chemical processing of wood and obtaining charcoal).

Class II. Sanitary-protection zone by size/dimension 500 m.

1. Production of charcoal in a retort manner.

Class III. Sanitary-protection zone by size/dimension 300 m.

1. Enterprises for wood preservation by impregnation.

2. Production of articles made of wood wool: particle boards, wood fiberboard with utilization as connecting/cementing synthetic resins.

Class IV. Sanitary-protection zone by size/dimension 100 m.

1. Production of wood wool.

2. Plants saw-mill, plywood and parts of wooden standard buildings.

3. Ship-building shipyards for producing wooden vessels.

4. Production transport.

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5. Production of coniferous-vitamin flour, chlorophyll-carotine paste, coniferous extract.

Class V. Sanitary-protection zone by size/dimension 50 m.

1. Enterprises of woodworking-carpentry, furniture, parquet, box.

2. Enterprises for wood preservation by salt and aqueous

solutions (without salts of arsenic) and by supercoating.

3. Production of articles made of wood wool: particle, wood fiberboard, cement-fiber boards, etc.

4. Production of cooper articles made of finished stave.

5. Production cloth-weaving.

6. Ship-building shipyards for producing of wooden launches and boats.

Textile productions and productions of light industry.

Class I. sanitary-protection zone by size/dimension 1000 m.

1. Enterprises for primary processing/treatment of knock with device of shops for processing/treatment of seeds by mercury-organic preparations.

Class II. Sanitary-protection zone of size 500 m.

1. Enterprises for chemical impregnation and processing/treatment of fabrics by carbon disulfide.

2. Production of artificial leather and film materials, oil cloth, artificial leather with application/use of volatile organic solvents to 2 t/24 hrs.

Class III. Sanitary-protection zone by size/dimension 300 m.

1. Enterprises for continuous impregnation of fabrics and papers by oil, oil-asphalt, Bakelite and other varnishes volume of production are more than 300 t/yr of impregnated material.

2. Enterprises for primary processing/treatment of vegetable fiber (flax, hemp, cotton and Indian hemp).

3. Enterprises for the impregnation and processing/treatment of fabrics (leatherette, leather substitute, etc.) by chemical substances, with exception of carbon disulfide.

4. Enterprises bleaching and dying.

5. Production of polyvinylchloride one-sided reinforced films and films from combined polymers, rubbers for bottom of foot-wear, regenerate with application/use of solvents to 1 t/24 hrs.

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Class IV. Sanitary-protection zone by size/dimension 100 m.

1. Enterprises for continuous impregnation of fabrics and papers by oil, oil-asphalt, Bakelite and other varnishes in volume of production to 300 t/yr of impregnated material.

2. Enterprises of cottonized fibers.

3. Enterprises coccon-cooking and silk-unwinding.

4. Mixed enterprises.

5. Enterprises of hemp-jute winding, rope, binding twine, string and according to processing/treatment of ends.

6. Production of yarn and fabrics from wool, knock and flax in presence of dye, bleaching and foundry shops.

7. Production of haberdashery-tanning carton with finishing with polymers with application/use of organic solvents to 0.5 t/24 hrs and

production of rubbers for bottom of shoes without application/use of volatile organic solvents.

Class V. Sanitary-protection zone by size/dimension 50 m.

1. Production of yarn and fabrics from knock, flax and wool in the absence of dye and bleaching shops.

2. Enterprises knitted and lace.

3. Silk-weaving productions.

4. Sewing factories.

5. Production of carpets and artificial astrakan.

6. Production of shoe cartons on tanning and tanning-cellulose filament without application/use of solvents.

7. Production of foot-wear.

Productions according to the processing/treatment of animal products.

Class I. Sanitary-protection zone by size/dimension 1000 m.

1. Plants of glue boiling, preparing glue from residue/remainders skin/leatner, field and dumping bone and other animal departure/withdrawals and discards.

2. Production of technical gelatin from field rotted bone, fleshings, residue/remainders of skin/leather and other animal departure/withdrawals and discards with their storage on warehouse and in open air.

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3. Reclaim plants according to processing/treatment fell animals, fishes, their parts and other animal departure/withdrawals and discards (conversion into grease, feed for animals, fertilizer, etc.).

Class II. Sanitary-protection zone by size/dimension 500 m.

1. Plants bonecalcinating and bone grinding.

2. Enterprises fatmelting (production of technical grease) in quantity more than 30 t/yr.

Class III. Sanitary-protection zone by size/dimension 300 m.

1. Enterprises for processing/treatment of damp/crude fur hides of animals and dying/coloring: sheepskin-fur, sheepskin-tanned, fur, production of chamois, saffian, cheverel and sc forth - with processing/treatment of by-products.

2. Enterprises for processing/treatment of damp/crude skin/leather of large/coarse animals: skin-tawing and skin-tanning (production of bottom material, russet, kip and calf leathers) - with processing/treatment of by-products.

3. Enterprises fatmelting (production of technical grease) in quantity to 30 t/yr.

4. enterprises for wash of wool.

5. Warehouses of wet-brine and unfinished skin/leather (more than 200 pieces).

Class IV. Sanitary-protection zone by size/dimension 100 m.

1. Production of skeletons and visual aids from corpses of animals.

2. Mixed feed plants (production of feeds for animals from food residue/remainders).

3. Production fulling and edging- felt.

4. Production of gelatin of highest type from fresh undecayed bones with minimum period of storage on specially arranged warehouses with cooling.

5. Enterprises according to processing/treatment of hair, bristle, down, pen, horns and hooves.

6. Productions intestinal-string and catgut.

Class V. Sanitary-protection zone by size/dimension 50 m.

1. Production of lacquered skin/leather.

2. Production of articles made of finished leather.

3. Production of brushes from bristle and hair.

4. Warehouses of wet-brine skin/leather (to 200 pieces) for time/temporary storage (without processing/treatment).

5. Fulling workshops.

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Productions according to the processing/treatment of foodstuffs and food flavorings.

Class II. Sanitary-protection zone by size/dimension 500 m.

1. Cattle base are more than 1000 heads of given cattle.

2. Slaughter houses (large/coarse and small/fine cattle), meat-packings plant and slaughterhouses, including bases for pre-slaughter content of cattle within limits to three-day supply of beef cattle.

3. Enterprises on melting of grease from marine animals.

4. Enterprises intestinal-washing.

5. Stations and points of decontamination and flushing of cars after transport of cattle (disinfection-washing stations and points).

Class III. Sanitary-protection zone by size/dimension 300 m.

1. Enterprises beet sugar.

2. Plants of feed antibiotics.

3. Fish trades.

4. Cattle bases to 1000 heads of given cattle.

5. Shops for production of ferments with surface method of cultivation.

6. Slaughter houses of small/fine animals and birds.

Class IV. Sanitary-protection zone by size/dimension 100 m.

1. Mills, hulling mill, grain-hulling enterprises and mixed feed plants.

2. Elevators.

3. Enterprises coffee-roasting.

4. Enterprises for boiling of cheese.

5. Production of oleomargarine and margarine.

6. Enterprises meat-smoking.

7. Production of food alcohol.

8. Enterprises fish-canning and fish-sirloin with scrap processing shops, fisheries.

9. Shops for production of ferments with deep method of cultivation.

10. Beet sugar plants without pulp storage.

11. Maize- starch, maize-sirup plants.

12. Production of albumin.

13. Enterprises for processing/treatment of vegetables (to drying, to salting to leavening).

14. Production of dextrin, glucose and sirup.

15. Production of starch.

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Class V. Sanitary-protection zone by size/dimension 50 m.

1. Confectionery factories.

2. Production of table vinegar.

3. Enterprises tobacco-low-grade tobacco (tobacco-fermentation plants, tobacco and cigarette-low-grade tobacco factories).

4. Tea-weighing factories.

5. Plants distillery.

6. Enterprises oil (vegetable oils).

7. Canneries.

8. Vegetable storages.

9. Sugar-refining plants.

10. Plants of cognac brandy.

11. Breweries (without malthouse).

12. Macaroni factories.

13. Milky and butter-making plants (animal oils).

14. Sausage factories by productivity are more than 3 t into exchange.

15. Bread-baking plants.

16. Factories food procurement.

17. Coolers capacitance than 600 t.

18. Plants of primary wine-making.

19. Wine plants.

20. Plants of grape juice.

21. Plants of fruit and vegetable juices and alcohol-free beverages.

22. Enterprises for boiling of commercial malt and preparation of yeast.

23. Fish-smoking plants.

THERMAL POWER STATIONS AND BOILER HOUSES.

8.3. Sanitary-protection zones for thermal power stations and boiler houses should be defined by calculation of scattering in the atmosphere of containing in ejections harmful substances on the basis of standard documents, affirmed in routine.

SANITARY-ENGINEERING CONSTRUCTIONS AND INSTALLATIONS OF MUNICIPAL

DESIGNATION

8.4. For sanitary-engineering constructions and installations of municipal designation/purpose sanitary-protection zones should be establish/installed in dependence on their sanitary classification and power.

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Class I. Sanitary-protection zone by size/dimension 1000 m.

1. Controlled/inspected unimproved dumps for impurities and liquid economic discards of organic origin and solid putrefying discards.

2. Fields of plowing-in and field of sanitation.

Class II. Sanitary-protection zone by size/dimension 500 m.

1. Cattle cemeteries with burial/concealment in pits.

2. Reclaim plants for liquidation of corpses of animals and meat waste.

3. Rubbishincinerating and rubbish-processing plants central.

4. Perfected dumps for solid waste.

5. Sections of composting of solid wastes and impurities of populated area (central).

Class III. Sanitary-protection zone by size/dimension 300 m.

1. Cemeteries.

2. Rubbishincinerating and rubbish-sorting plants of district designation/purpose.

3. Central bases for collection of reclaimable scrap.

4. Cattle burial with biological by camera/chambers.

5. Drainage stations.

6. Sections for greenhouses, hot-houses with utilization of debris.

7. Sections for greenhouses, hot-houses with utilization of

debris.

Class IV. Sanitary-protection zone by size/dimension 100 m.

1. Basis of district designation/purpose for collection of reclaimable scrap.

2. Mechanized transport park/fleets according to decontamination of cities.

3. Warehouses of time/temporary storage of reclaimable scrap without its processing/treatment.

4. Enterprises for servicing of automobiles (trucks, and also buses of urban transport).

Class V. Sanitary-protection zone by size/dimension 50 m.

1. Enterprises for servicing of automobiles (passenger automobiles, besides those belonging to citizens, and buses, besides buses of urban transport).

SEWAGE PURIFICATION CONSTRUCTIONS.

8.5. Sanitary-protection zones for sewage purification constructions should be accepted on Table 1.

Pages 50-51 missing.

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8.6. Sanitary discontinuity/interruptions from buildings of pumping plants of sewerage should be accepted:

a) with design capacity to 50,000 m^3/day - 20 m;

b) the same, more than 50,000 m^3/day - 30 m.

Note. For pumping plants with output to 200 m^3 in a 24 hour period it is allow/assumed to accept sanitary discontinuity/interruption the equal to 15 m.

STORAGE BUILDINGS AND CONSTRUCTIONS.

8.7. Sanitary-protection zones for storage buildings and constructions should be establish/installed in accordance with acting standard documents according to design of storage buildings and constructions of different designation/purpose, affirmed or matched

with GOSSTROY of the USSR.

AGRICULTURAL PRODUCTIONS AND OBJECTS.

8.8. Sanitary-protection zones for agricultural enterprises and objects of agricultural designation/purpose should be accepted on table 2 (see pg. 51).

9. Maximum permissible concentrations of harmful substances in atmospheric air of populated points.

9.1. In atmospheric air of populated areas, are establish/installed maximum permissible concentrations of harmful substances, asserted by Ministry of Pub. Health of USSR, given in table 3 whose excess is not allow/assumed.

9.2. During combined presence in atmospheric air of several substances, which possess summation of action/effect, sum of their concentrations must not exceed 1 (unity) during calculation according to formula (1)

$$\frac{C_1}{ПДК_1} + \frac{C_2}{ПДК_2} + \ldots + \frac{C_n}{ПДК_n} \leqslant 1, \qquad (1)$$

where $C_1, C_2, \ldots, C_n$ — actual concentrations of harmful substances in atmospheric air;

$ПДК_1, ПДК_2, ..., ПДК_n$ — maximum permissible concentrations of harmful substances in atmospheric air.

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Table 3. Maximum permissible concentrations of haraful substances in atmospheric air of the populated areas.

Вещества (a)	Предельно допустимые концентрации в мг/м³ (b)	
	максимальная разовая (c)	среднесуточная (d)
1	2	3
1. Азота двуокись	0,085	0,085
2. Азотная кислота:	0,4	0,4
по молекуле HNO_3	0,006	0,006
по водородному иону	0,03	0,03
3. Акролеин	0,04	0,04
4. Альфаметилстирол	0,005	0,005
5. Альфанафтохинон	0,1	0,1
6. Амилацетат	1,5	1,5
7. Амилен	0,2	0,2
8. Аммиак	0,05	0,03
9. Анилин	0,01	0,01
10. Ацетальдегид	0,35	0,35
11. Ацетон	0,003	0,003
12. Бензол	1,5	0,8
13. Бензин (нефтяной, малосернистый в пересчете на С)	5	1,5
14. Бензин сланцевый (в пересчете на С)	0,05	0,05
15. Бутан	200	—
16. Бутилацетат	0,1	0,1
17. Бутилен	3	3
18. Бутиловый спирт	0,1	—
19. Бутифос	0,01	0,01
20. Валериановая кислота	0,03	0,01
21. Ванадия пятиокись	—	0,002
22. Винилацетат	0,15	0,15
23. Гексаметилендиамин	0,001	0,001
24. Гексахлорциклогексан	0,03	0,03
25. Дивинил	3	1
26. Дикетен	0,007	—
27. Диметиланилин	0,0055	0,0055
28. Диметилсульфид	0,08	—
29. Диметиламин	0,005	0,005
30. Диметилдисульфид	0,7	—
31. Диметилформамид	0,03	0,03
32. Дипил	0,01	0,01
33. Дихлорэтан	3	1
34. 2,3 дихлор — 1,4 нафтохинон	0,05	0,05
35. Диэтиламин	0,05	0,05
36. Изопропилбензол	0,014	0,014

Key: (a). Substances. (b). Maximum permissible concentrations in

mg/m³. (c). maximum one-time. (d). Mean-daily. (1). Nitrogen dioxide. (2). Nitric acid: on molecule HNO_3 on hydrogen ion. (3). Acrolein. (4). Alphamethylstyrene. (5). Alphanaphthaquinone. (6). Amylacetate. (7). Amylon. (8). Ammonia. (9). Anilin. (10). Acetaldehyde. (11). Acetone [?]. (12). Illegible. (13). Illegible. (14). Gasoline (petroleum, low-sulfur, converted to C). (15). Gasoline shale (converted to C). (16). Butane. (17). Butylacetate. (18). Butylene. (19). Butyl alcohol. (20). Butyphos. (21). Valeric acid. (22). Vanadium pentoxide. (23). Vinyl acetate. (24). Hexamethylenediamine. (25). Hexachlorocyclohexane. (26). Divinyl. (27). Diketene. (28). Dimethylaniline. (29). Dimethylsulfide. (30). Dimethylamine. (31). Dimethyldisulfide. (32). Dimethyl formamide. (33). Dowtherm. (34). Dichloroethane. (35). 2.3 dicnloro- 1.4 naphthoquinones. (36). Diethylamine. (37). Isopropyl benzene.

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Continuation table 3.

38. Изооктанол	0,15	—
39. Изопропилбензола гидроперекись	0,007	0,007
40. Изопропиловый спирт	0,6	0,6
41. Капролактам (пары, аэрозоль)	0,06	0,06
42. Капроновая кислота	0,01	0,005
43. Карбофос	0,015	—
44. Ксилол	0,2	0,2
45. М-81 (гитратион)	0,001	0,001
46. Малеиновый ангидрид (пары, аэрозоль)	0,2	0,05
47. Марганец и его соединения (в пересчете на MnO_2)	—	0,01
48. Масляная кислота	0,015	0,01
49. Мезидин	0,003	0,003
50. Метанол	1	0,5
51. Метафос	0,008	—
52. Метахлорфенилизоцианат	0,005	0,005
53. Метилакрилат	0,01	0,01
54. Метилацетат	0,07	0,07
55. Метилмеркаптан	$9 \cdot 10^{-6}$	—
56. Метилметакрилат	0,1	0,1
57. Монометиланилин	0,04	0,04
58. Моноэтиламин	0,01	0,01
59. Мышьяк (неорганические соединения, кроме мышьяковистого водорода, в пересчете на As)	—	0,003
60. Нафталин	0,003	0,003
61. Нитробензол	0,008	0,008
62. Нитрохлорбензол (пара и орто)	—	0,004
63. Парахлоранилин	0,04	0,01
64. Парахлорфенил изоцианат	0,0015	0,0015
65. Пентан	100	25
66. Пиридин	0,08	0,08
67. Пропилен	3	3
68. Пропиловый спирт	0,3	0,3
69. Пыль нетоксическая	0,5	0,15
70. Ртуть металлическая	—	0,0003
71. Сажа (копоть)	0,15	0,05
72. Свинец и его соединения (кроме тетраэтилсвинца, в пересчете на Pb)	—	0,0007
73. Свинец сернистый	—	0,0017
74. Серная кислота:		
по молекуле H_2SO_4	0,3	0,1
по водородному иону	0,006	0,002
75. Сернистый ангидрид	0,5	0,05
76. Сероводород	0,008	0,008
77. Сероуглерод	0,03	0,005
78. Синильная кислота	—	0,01

Key: (38). Isooctanol. (39). Isopropyl benzene hydroperoxide. (40). Isopropyl alcohol. (41). Caprolactam (vapor, aerosol). (42). Caproic acid. (43). Carbophos. (44). Xylene. (45). (gitrathion). (46). Maleic anhydride (vapor, aerosol). (47). Manganese and its compound (in recalculation on MnO_2). (48). Butyric acid. (49). Mesidine. (50). Methanol. (51). Metafos. (52). Metachlorophenylisocyanate. (53). Methylacrylate. (54). Methyl acetate. (55). Methylmercaptan. (56). Methylmethacrylate. (57). Mono-methyl aniline. (58). Mono-ethylamine. (59). Arsenic (inorganic compounds, besides hydrogen arsenide, in recalculation on As). (60). Napnthalene. (61). Nitrobenzene. (62). Nitrochlorobenzene (para and ortho). (63). Parachloraniline. (64). Parachlorophenyl isocyanate. (65). Pentane. (66). Pyridine. (67). Propylene. (68). Propyl alcohol. (69). Dust nontoxic. (70). Mercury metallic. (71). Carbon black (soot). (72). Lead and its compound (besides tetraethyl lead, in recalculation on RV). (73). Lead sulfurous. (74). Sulfuric acid cn molecule on hydrogen ion. (75). Sulfurous anhydride. (76). Hydrogen sulfide. (77). Carbon disulfide. (78). Hydrocyanic acid.

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Continuation table 3.

79. Соляная кислота:		
по молекуле HCl	0,2	0,2
по водородному иону	0,006	0,006
80. Стирол	0,003	0,003
81. Тетрагидрофуран	0,2	0,2
82. Тиофен	0,6	—
83. Толуилендиизоцианат	0,05	0,02
84. Толуол	0,6	0,6
85. Триэтиламин	0,14	0,14
86. Трихлорэтилен	4	1
87. Углерода окись	3	1
88. Углерод четыреххлористый	4	2
89. Уксусная кислота	0,2	0,06
90. Уксусный ангидрид	0,1	0,03
91. Фенол	0,01	0,01
92. Формальдегид	0,035	0,012
93. Фосфорный ангидрид	0,15	0,05
94. Фталевый ангидрид (пары, аэрозоль)	0,1	0,1
95. Фтористые соединения (в пересчете на F)		
Газообразные соединения (HF, SiF_4)	0,02	0,005
Хорошо растворимые неорганические фториды (NaF, Na_2SiF_6)	0,03	0,01
Плохо растворимые неорганические фториды (AlF_3, Na_3AlF_6, CaF_2)	0,2	0,03
При совместном присутствии газообразного фтора и фторсолей	0,03	0,01
96. Фурфурол	0,05	0,05
97. Хлор	0,1	0,03
98. Хлорбензол	0,1	0,1
99. Хлоропрен	0,1	0,1
100. Хлоранилин (мета)	—	0,01
101. Хлороформ	0,04	0,02
102. Хлортетрациклин (кормовой)	0,05	0,05
103. Хром шестивалентный (в пересчете на CrO_3)	0,0015	0,0015
104. Циклогексан	1,4	1,4
105. Циклогексанол	0,06	0,06
106. Циклогексанон	0,04	—
107. Циклогексаноноксим	0,1	—
108. Эпихлоргидрин	0,2	0,2
109. Этанол	5	5
110. Этилацетат	0,1	0,1
111. Этилбензол	0,02	0,02
112. Этилен	3	3
113. Этилена окись	0,3	0,03
114. Этиленимин	0,001	0,001

Key: (79). Hydrochloric acid: per molecule HCl; per hydrogen ion. (80). Styrene. (81). Tetrahydrofuran. (82). Thiophene. (83). Toluenediisocyanate. (84). Toluene. (85). Triethylamine. (86). Trichloroethylene. (87). Carbon oxide. (88). Carbon (tetrachloride. (89). Acetic acid. (90). Acetic anhydride. (91). Phenol. (92). Formaldehyde. (93). Phosphoric anhydride. (94). Phthalic anhydride (vapor, aerosol). (95). Fluoride compounds (in recalculation on F). Gaseous compounds (HF, SiF). Readily soluble inorganic fluorides (NaF, Na_2SiF_6). Badly/poorly soluble inorganic fluorides (AlF_3, Na_3AlF_6, CaF_2). During the combined presence of gaseous fluorine and fluorosalt. (96). Furfural. (97). Chlorine. (98). Chlorobenzene. (99). Chloroprene. (100). Chloroaniline (meta). (101). Chlorophos. (102). Chlorotetracycline (feed). (103). Chromium hexavalent (in recalculation on CrO_3). (104). Cyclohexane. (105). Cyclohexanol. (106). Cyclohexanone. (107). Cyclohexanonoxime. (108). Epichlorohydrin. (109). Etnanol. (110). Ethylacetate. (111). Ethylbenzene. (112). Ethylene. (113). Ethylene oxide. (114). Ethylenimine.

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9.3. Effect of summation of action/effect possess following of combination of harmful substances:

a) acetone and phenol;

b) acetaldehyde and vinyl acetate;

c) valeric, caproic and butyric acids;

d) ozone, nitrogen dioxide and formaldehyde;

e) sulfur dioxide and phenol;

f) sulfur dioxide and nitrogen dioxide;

g) sulfur dioxide and hydrogen fluoride;

h) sulfur dioxide and aerosol of sulfuric acid;

i) hydrogen sulfide and Dowtherm;

j) sulfur dioxide and hydrogen sulfide;

k) isopropyl benzene and hydroperoxide of isopropylbenzene;

l) furfural, methanol and ethanol;

m) cyclohexane and benzene;

n) powerful mineral acids (sulfuric, salt and nitrogen) in concentration on hydrogen ion;

o) ethylene, propylene, butylene and amylene;

p) 2.3 dichloro - 1.4 naphthoquinone and 1.4 naphthoquinone;

q) acetic acid and acetic anhydride;

r) acetone and acetophenone;

s) benzene and acetophenone;

t) phenol and acetophenone;

u) sulfuric and sulfurous anhydride, ammonia, nitrogen oxides.

9.4. For harmful substances whose maximum permissible concentrations are not affirmed, time/temporary maximum permissible concentrations of these substances in each specific case are establish/installed by Ministry of Pub. Health of USSR.

10. Maximum permissible concentrations of harmful substances in air of working zone.

10.1. In air of working zone of industrial rooms, are establish/installed maximum permissible concentrations of harmful substances, asserted by Ministry of Pub. Health of USSR, given in tables 4 and 4a whose excess is not allow/assumed.

Table 4. Maximum permissible concentrations of harmful substances in air of working zone.

Вещества (a)	Величина предельно допустимой концентрации в мг/м³ (b)	Класс опасности (c)	Агрегатное состояние (d)
1	2	3	4
1. Азота окислы (в пересчете на NO_2)	5	2	п
2. Акролеин	0,7	2	п
3. Амрофол (цис-β-хлоракрилат натрия)	0,5	2	а
4. Акриловая кислота	5	3	п
5. Аллил цианистый	0,3+	2	п
6. Алдрин (гексахлордигидодиметиленгексагидронафталин)	0,01+	1	п+а
7. Аллодан (бисхлорметилгексахлорбициклогептан)	0,5+	2	п+а
8. Аминацетат	100	4	п
9. Аминазин (10-гидрогидрат — 3-диметиламинопропил — 2-хлорфенотиазин)	0,3+	2	а
10. Амины алифатические первичные (C_7—C_9)	1	2	п
11. Амины алифатические высшие (C_{10}—C_{16})	1	2	п+а
12. α-Аминоантрахинон	5	3	а
13. м-Аминобензотрифторид	0,5	2	п
14. 5-Амино — 8-окси — 3.7-дибром — 1,4-нафтохинонимин	1	2	а
15. Аминопеларгоновая кислота	5	3	а
16. Аминопласты, фенопласты (пресспорошки)	6	3	а
17. Аминопиримидин (2-метил — 4-амино — 5-этоксиметилпиримидин)	1	2	п+а
18. Аминоэнантовая кислота	5	3	а
19. Аммиак	20	4	п
20. Анабазин-сульфат [3-(2-пиперидил) пиридилсульфат]	0,1	1	п+а
21. п-Анизидин (п-Аминоанизол)	1+	2	п
22. Анилин	0,1+	2	п
23. 9, 10-Антрахинон	5	3	а
24. Антрахиноновый дисперсный краситель синий «К» (смесь 50% 1-Метиламино — 4-оксиэтиламиноантрахинона и 50% динатриевой соли динафтиламин дисульфокислоты)	5	3	а
25. Атразин (2-хлор — 4-этиламино — 2.6-изопропиламиносимтриазин)	2	3	а
26. Ацетальдегид	5	3	п
27. Ацетон	200	4	п
28. Ацетонамин (2.2.4-триметил — 1.2-дигидрохинолин)	1	2	а
29. Ацетонитрил	10	3	п
30. Ацетонциангидрин	0,9+	2	п
31. Ацетоуксусный эфир	5	3	п
32. Ацетофенон	5+	3	п
33. Ацилат-1 (N-ацетоксиизопропилкарбамат)	2	3	п+а
34. Бензальхлорид	0,5	1	п
35. Бензил хлористый	0,5	1	п
36. Бензил цианистый	0,8+	2	п
37. Бензин-растворитель (в пересчете на С)	300	4	п
38. Бензин топливный (сланцевый, крекинг и др.) (в пересчете на С)	100	4	п
39. Бензоил хлористый	5	3	п
40. Бензоил	5+	2	п

Note. Table 4 gives preferred states of aggregation of substance under conditions for the production: p - vapors and (or) gases, a - aerosols, p+a - mixture of vapors and aerosol; "+" - are dangerous

also after the admission through the skin/leather.

Key: (a). Substances. (b). Magnitude of maximum permissible concentration in mg/m^3. (c). Class of danger. (d). State of aggregation. (1). Nitrogen oxides (in recalculation on NO_2). (2). Acrolein. (3). Acrophol (cis-β-chloroacrylate of sodium). (4). Acrylic acid. (5). Allyl cyanic. (6). Aldrin (hexachlorodidomethylene hexahydronaphthalene). (7). Allodan (bischloromethylhexachlorobicycloheptane). (8). Amylacetate. (9). Aminazine (10-hydrochloride-3-dimetnyl-aminopropyl-2-chlorophenothiazine). (10). Amines aliphatic primary C_7-C_9). (11). Amines aliphatic highest (C_{15}-C_{19}). (12). a-Aminoanthraquinone. (13). m-Aminobenzotrifluoride. (14). 5-Amino-8-oxy-3,7-dibromo-1,4-naphthoquinoneimine. (15). Aminopelargonic acid. (16). Aminoplasts, phenoplasts (molding powders). (17). Aminopyrimidine (2-methyl-4-amino-5-ethoxymethylpyrimidine. (18). Aminoenanthic acid. (19). Ammonia. (20). Anabasine-sulfate [3-(2-piperidyl) pyridylsulfate]. (21). p-Anisidine (p-Aminoanisole). (22). Aniline. (23). Anthraquinone. (24). Anthraquinone disperse colorant blue "K" (mixture 50o/o 1-Methylamino-4-oxyethylaminoanthraquinone and 50o/o of disodium salt of dinaphthylamine disulfonic acid). (25). Atrazene (2-chloro-4-ethylamino-2-isopropylaminosymtriazine). (26). Acetaldehyde. (27). Acetone. (28). Acetonanyl

(2,2,4-trimethyl-1,2-dihydroquinoline). (29). Acetonitride. (30). Illegible. (31). Acetylpropyl acetate. (32). Aceophenone. (33). Acylate-1 (N-acetoxyisopropylcarbamate). (34). Benzal chloride. (35). Benzyl chloride. (36). Benzyl cyanide. (37). Gasoline-solvent (in recalculation on C). (38). Gasoline fuel (shale, cracking, etc.) (in recalculation on C). (39). Benzoyl chloride. (40). Benzoyl.

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Continuation Table 4.

41. Бензотрифторид	100	4	п
42. Бензотрихлорид	0,2	2	п
43. в-Бензохинон	0,05	1	п
44. Бериллий и его соединения (в пересчете на Be)	0,001	1	а
45. Бисхлорметилбензол	1	2	п
46. Бисхлорметилксилол	1	2	п
47. Бисхлорметилнафталин	0,5	2	а
48. Бор фтористый	1	2	м
49. Борная кислота	10	3	п+а
50. Борный ангидрид	6	3	а
51. Бромацетопропилацетат	0,5	2	п
52. Бромбензол	3	2	п
53. Бромоформ	5	3	п
54. Бутилацетат	200	4	п
55. Бутилкантакс (2-бутилтиобензтиазол)	2	3	п
56. Бутиловый эфир акриловой кислоты	10	3	п
57. Бутиловый эфир 5-хлорметил — 1-фуранкарбоновой кислоты	0,5	2	а
58. Бутиловый эфир 2-фуранкарбоновой кислоты	0,5	2	а
59. Бутиловый эфир 2,4 Д	0,5	2	п+а
60. 1,4-Бутиндиол	1	2	п+а
61. Бутифос (трибутилтритиофосфат)	0,2+	2	п+а
62. Валериановая кислота	5	3	п
63. Ванадий и его соединения:			
а) дым пятиокиси ванадия	0,1	1	а
б) пыль трехокиси и пятиокиси ванадия	0,5	2	а
в) феррованадий	1	2	а
г) пыль ванадийсодержащих шлаков	4	3	а
64. Винилацетат	10	3	п
65. Винилбутиловый эфир	20	4	п
66. 2-Винилпиридин	0,5+	2	п
67. Винилтолуол	50	4	п
68. Винил хлористый	30	4	п
69. Вольфрам, карбид вольфрама	6	3	а
70. Гексаметилендиамин	1	2	а
71. Гексаметилендиизоцианат	0,05+	1	п
72. Гексаметиленимин	0,5+	2	п
73. Гексахлоран (гексахлорциклогексан)	0,1+	1	п+а
74. γ -Гексахлоран (γ -гексахлорциклогексан)	0,05+	1	п+а
75. Гексахлорацетон	0,5	2	п
76. Гексахлорбензол	0,9+	2	п+а
77. Гексахлорциклопентадиен	0,01+	1	п
78. Гексафторпропилен	5	3	п
79. Гексоген (циклотриметилентринитроамин)	1	2	п+а
80. Гептахлор (гептахлор-тетрагидроэндометилениндан)	0,01+	1	п
81. Германий, окись германия	2	3	а
82. Германий четыреххлористый (в пересчете на Ge)	1	2	а
83. Гидразин-гидрат, гидразин и его производные	0,1+	1	п
84. β-гидроксиэтилмеркаптан	1+	2	п
85. Гидроперекись изопропилбензола	1	2	п
86. 2—4 Д (аминная соль 2,4 дихлорфеноксиуксусной кислоты)	1	2	а
87. ДДВФ (0,0-диметил — 2,2-дихлорвинилфосфат)	0,2+	2	п

Key: (41). Benzotrifluoride. (42). Benzotrichloride. (43). p-Quinone. (44). Beryllium and its compound (in recalculation on). (45). Bischloromethylbenzene. (46). Bischloromethylxylene. (47). Bischloromethylnaphthalene. (48). Boron fluoride. (49). Boric acid. (50). Boron anhydride. (51). Bromoacetopropylacetate. (52). Bromobenzene. (53). Bromoform. (54). Butyl acetate. (55). Butyl Captax (2-butylthiobenzothiazole). (56). Butyl acrylic ester. (57). Butyl ester 5-methyl chloride-1-furancarboxylic acid. (58). Butyl ester 2-furancarboxylic acid. (59). Butyl ester 2,4 D. (60). 1,4-Butynediol. (61). Butyphos (tributyltrithiophosphate). (62). Valeric acid. (63). Vanadium and its compound: a) fume of vanadium pentoxide b) dust of trioxide and pentoxide of vanadium c) ferrovanadium d) ferrovanadium e) dust of vanadium-containing slag. (64). Vinyl acetate. (65). Vinyl butyl ester. (66). 2-Vinylpyridine. (67). Vinyltoluene. (68). Vinyl chloride. (69). Tungsten, carbide of tungsten. (70). Hexamethylenediamine. (71). Hexamethylenediisocyanate. (72). Hexamethyleneimine. (73). Hexachloran (hexachlorocyclohexane). (74). γ-Hexachloran (γ-hexachlorocyclohexane). (75). Hexachloroacetone. (76). Hexachlorobenzene. (77). Hexachlorocyclopentadiene. (78). Hexafluoropropylene. (79). Cyclonite (cyclotrimethylenetrinitro amine). (80). Heptachlor (heptachlor-tetrahydroendomethyleneindan). (81). Germanium, oxide of germanium. (82). Germanium tetrachloride (in recalculation on Ge). (83). Hydrazine-hydrate, hydrazine and its

derivatives. (84). β-hydronydroxyethyl mercaptan. (85). Hydroperoxide of isopropylbenzene. (86). 2-4 D (amino salt of 2,4 dichlorophenoxyacetic acid). (87). DDVP (0,0-dimethyl-2,2-divinylchloride phosphate).

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Continuation table 4.

88. ДДТ (дихлордифенилтрихлорэтан)	0,1+	1	п+а
89. Декалин	100	4	п
90. 1,2-Дибромпропан	5	3	п
91. Дибутилфталат (дибутиловый эфир о-фталевой кислоты)	0,5	2	п+а
92. Диванил (1,3-бутадиен псевдобутилен)	100	4	п
93. Дигидрат перфторацетона	2+	3	п
94. Диизопропиламин	5	2	п
95. Диизопропилбензол	50+	4	п
96. Дикобальтоктакарбонил (по содержанию Co)	0,01	1	п+а
97. Дикумилметан	5+	3	а
98. Дилдрин (гексахлорэпоксидигидрометиленгидронафталин)	0,01+	1	п+а
99. Диметиламин	1	2	п
100. Диметиланилин	0,2+	2	п
101. Диметилбензиламин	5	3	п
102. Диметилдиоксан	10	3	п
103. Диметилсульфид	50+	4	п
104. Диметилтерефталат	0,1	1	п+а
105. Диметилформамид	10	2	п
106. Диметилхлортиофосфат	0,5	2	п
107. Диметилэтаноламин	5	3	п
108. Динил (смесь 25% дифенила и 75% дифенилоксида)	10	3	п+а
109. Динитробензол	1+	2	п+а
110. 4,6-Динитро — 2-изопропилфенол	0,05+	1	п+а
111. Динитро-о-крезол	0,05+	1	п+а
112. Динитротолуол	1+	2	п+а
113. Динитрофенол	0,05+	1	п+а
114. Динитро-втор-бутилфенол	0,05+	1	п+а
115. Динитрил адипиновой кислоты	20	4	а
116. Динитрил перфторглютаровой кислоты	0,05	1	п
117. Динитрил перфторадипиновой кислоты	0,1	1	п
118. Динитророданбензол	2+	2	а
119. Диоксан	10+	3	п
120. Диптал (диизопропилтрихлораллилтиокарбамат)	1	2	п+а
121. Ди-н-пропиламин, три-н-пропиламин	2	2	п
122. Дитразин цитрат (1-метил — 4-диэтил карбамил пиперазина цитрат)	5	3	а
123. Дитретбутилперекись	100	4	п
124. Дитолилметан	1	2	п+а
125. Дифенилы хлорированные	1+	2	п
126. Дифенила хлорированная окись	0,5+	2	п
127. Дифенилолпропан	5	3	а
128. Ди (2-этилгексил) фенилфосфат	1+	2	п
129. 3,4-Дихлоранилин	0,5+	2	п
130. Дихлорбензол	20+	4	п
131. 1,3-дихлорбутен-2	1	2	п
132. Дихлоргидрин	5	3	п
133. 1,2-Дихлоризобутан	20	4	п
134. 1,3-Дихлоризобутилен	0,5	2	п
135. 3-3-Дихлоризобутилен (симметричный изомер)	0,3	2	п
136. 3,3-Дихлорметилоксациклобутан	0,5	2	п
137. 2,3-Дихлор — 1,4-нафтохинон	0,5	2	а
138. 3,4-Дихлорнитробензол	1+	2	п
139. 1,2-Дихлорпропан	10	3	п

Key: (88). DDT (dichlorodiphenyltrichloroethane). (89). Decalin. (90). 1,2-Dibrompropane. (91). Dibutyl phthalate (dibutyl ester of o-phthalic acid). (92). Divinyl (1,3-butadiene pseudo-butylene). (93). Dihydrate of perfluoroacetone. (94). Diisopropyl amine. (95). Diisopropyl benzene. (96). Dicobalt octacarbonyl (in content of CO). (97). Dicumyl methane. (98). Dildrin (hexachloroepoxy diendomethylene octohydronaphthalene). (99). Dimethylamine. (100). Dimethylaniline. (101). Dimethylbenzylamine. (102). Dimethyldioxane. (103). Dimethylsulfide. (104). Dimethylterephthalate. (105). Dimethyl formamide. (106). Dimethylchlorothiophosphate. (107). Dimethylethanolamine. (108). Dowtherm (mixture 25o/o diphenyl and 75o/o diphenyloxide). (109). Dinitrobenzene. (110). 4,6-Dinitro-2-isopropylphenol. (111). Dinitro-o-cresol. (112). Dinitrotoluene. (113). Dinitrophenol. (114). Dinitro-sec-butylphenol. (115). Dinitrile of adipic acid. (116). Dinitrile of perfluoroglutaric acid. (117). Dinitrile of perfluoroadipic acid. (118). Dinitrothiocyanobenzene. (119). Dioxane. (120). Diptal (diisopropyltrichloroallylthiocarbamate). (121). Di-n-propylamine, tri-n-propylamine. (122). Ditrazine citrate (1-methyl-4-diethylcarbamyl of piperazine citrate). (123). Ditertbutyl peroxide. (124). Ditolylmethane. (125). Diphenyl, chlorinated. (126). Diphenyl chlorinated oxide. (127). Diphenylol propane. (128). Di(2-ethylhexyl)phenylphosphate. (129). 3,4-Dichloroaniline. (130). Dichlorobenzene. (131).

1,3-Dichlorobutene-2. (132). Dichlorohydrin. (133).

1,2-Dichloroisobutane. (134). 1,3-Dichloroisobutylene. (135).

3-3-Dichloroisobutylene (symmetrical isomer). (136).

3,3-Dichloromethyloxacyclobutane. (137).

2,3-Dichloro-1,4-naphthaquinone. (138). 3,4-Dichloropropane. (139).

1,2-Dichloropropane.

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Continuation Table 4.

140. 1,3-Дихлорпропилен	5	3	н
141. 2,3-Дихлорпропилен	3	3	н
142. 3,4-Дихлорфенилизоцианат	0,3	2	н
143. Дихлорфенилтрихлорсилан (обязателен контроль HCl)	1	2	н
144. Дихлорэтан	10+	2	н
145. 1,1-Дихлорэтилен (винилидендихлорид)	50	4	н
146. Дициклопентадиен	1+	2	н
147. Диэтиламин	30	4	н
148. β-Диэтиламиноэтилмеркаптан	1+	2	н
149. Диэтиламиноэтилметакрилат	800	4	н
150. Диэтилбензол	10	3	н
151. Диэтиловый эфир перфторадипиновой кислоты	0,1	1	н
152. Диэтиловый эфир перфторглютаровой кислоты	0,1	1	н
153. Диэтилхлортиофосфат	1	2	н
154. Диэтилэтаноламин	5	3	н
155. Додецилмеркаптан (третичный)	5	3	н
156. Изобутилен	100	4	н
157. Изобутилен хлористый	0,3	2	н
158. Изомасляный альдегид	5	3	н
159. Изопрен	40	4	н
160. Изопропиламинодифениламин	2	3	а
161. Изопропилбензол (кумол)	50	4	н
162. Изопропилнитрат	5	3	н
163. Изопропилнитрит	1+	2	н
164. Изопропилхлоркарбонат	0,1	1	н
165. Изопропил-N-фенилкарбамат	2	3	н+а
166. Изопропил-N-3-хлорфенилкарбамат	2	3	н+а
167. Иод	1	2	н
168. Ипазин (2-хлор — 4-изопропил — 2-амино — 6-диэтиламино-симметриазин)	2	3	а
169. Кадмия стеарат (по Cd)	0,1	1	а
170. Кадмия окись	0,1	1	а
171. Камфара	3	3	н
172. Капролактам	10	3	а
173. Капроновая кислота	5	3	н
174. Карбатион (метилдитиокарбамат натрия) (по метилизотиоцианату)	0,1+	1	а
175. Карбофос (0,0-диметилдикарбоэтокси-этилдитиофосфат)	0,5+	2	н+а
176. Карбин (хлорбутинилхлорфенилкарбамат)	0,5	2	а
177. Керосин (в пересчете на C)	300	4	н
178. Кобальт металлический и окись кобальта	0,5	2	а
179. Кобальта гидрокарбонил и продукты его распада (по Co)	0,01	1	п
180. Кротоновый альдегид	0,5	2	п
181. Ксантогенат калия бутиловый	10	3	а
182. Ксилидин	3+	3	п
183. Ксилол	50	3	н
184. Лигроин (в пересчете на C)	300	4	н
185. Манеб (этилен-N, N'-бисдитиокарбамат марганца)	0,5	2	а
186. Марганец	0,3	2	а
187. Масляный альдегид	5	3	н
188. Масляный ангидрид	1	2	н
189. Масляная кислота	10	3	н

Key: (140). 1,3-dichloropropylene. (141). 2,3-dichloropropylene. (142). 3,4-dichlorophenylisocyanate. (143). Dichlorophenyltrichlorcsilane (is necessary HCl control). (144). Dichloroethane. (145). 1,1-dichloroethylene (vinylidenedichloride). (146). Dicyclopentadiene. (147). Diethylamine. (148). β-Diethylaminoethyl mercaptan. (149). Diethylaminoethylmethacrylate. (150). Diethylbenzene. (151). Diethyl ether of perfluoroadipic acid. (152). Diethyl ether of perfluoroglutaric acid. (153). Diethylchlorothiophosphate. (154). Diethylaminoethanol. (155). Dodecylmercaptan (tertiary). (156). Isobutylene. (157). Isobutylene chloride. (158). Isobutyric aldehyde. (159). Isoprene. (160). Isopropylaminodiphenylamine. (161). Isopropyl benzene (cumol). (162). Isopropylnitrate. (163). Isopropyl nitrite. (164). Isopropylchlorocarbonate. (165). Isopropyl-N-phenylcarbamate. (166). Isopropyl-N-3-chlorophenylcarbamate. (167). Iodine. (168). Ipazin (2-chloro-4-isopropyl-2-amino-6-diethylamine-symtriazin). (169). Cadmium stearate (No. CD). (170). Cadmium oxide. (171). Camphor. (172). Caprolactam. (173). Caproic acid. (174). Carbathione (methyldithiocarbamate of sodium) (on (0,0-dimethyldicarboethoxyethyldithiophosphate). (176). Carbyne (chlorobutyneylchlorophenylcarbamate). (177). Kerosene (in recalculation on C). (178). Cobalt metallic and oxide of cobalt. (179). Cobalt hydro-carbonyl and products of its decomposition/decay (on CO). (180). Crotonic aldehyde. (181). Xanthogenate of potassium

(butyl. (182). Xylidine. (183). Xylol. (184). Ligroin (in recalculation on C). (185). Maneb (ethylene-N,N'-bisdithiocarbamate of manganese). (186). Manganese. (187). Butyraldehyde. (188). Oil anhydride. (189). Butyric acid.

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Continuation Table 4.

199. Малеиновый ангидрид	1	2	а+в
201. Медь	1	2	а
202. Мезидин (2-амино — 1, 3, 5-триметилбензол)	1+	3	в
203. Мезитила окись (изопропилиденацетон)	1+	3	в
204. Меркаптофос (смесь тионового и тиолового изомеров 0,0-диэтила — β-этилмеркаптоэтилтиофосфата)	0,02+	1	а+в
205. Меркурам (смесь этилмеркурхлорида и γ-изомера гексахлорциклогексана) (по содержанию ртути в воздуху)	0,005+	1	а+в
206. Метакриловая кислота	10	3	в
207. Метакриловой кислоты ангидрид	1	2	в
208. Метафос (0,0-диметил-о-нитрофенилтиофосфат)	0,1+	1	а+в
209. Метилацетофос (0,0-диметил-о-этоксикарбоксиметилтиофосфат)	1+	2	а+в
209. Метилацетат	100	4	в
201. Метил бромистый	1	1	в
202. Метил хлористый	5	2	в
203. 2-Метил — 5-винилпиридин	2+	3	в
204. 6-Метил — 2-винилпиридин	0,5+	2	в
205. Метилгексилкетон	200	4	в
206. Метилен бромистый	10	3	в
207. Метилен хлористый	50	4	в
208. Метилвинилкетон	0,1+	1	в
209. Метилтиофен (2 и 3 изомеры)	20	4	в
210. Метилдигидропиран	5+	3	в
211. Метилизотиоцианат	0,1+	1	в
212. Метилизоцианат	0,05	1	в
213. М-81 (0,0-диметил — β-этилмеркаптоэтилдитиофосфат)	0,1+	1	а+в
214. Метилмеркаптофос (смесь тионового и тиолового изомеров 0,0-диметилэтилмеркаптоэтилтиофосфата)	0,1+	1	а+в
215. 1-Метилнафталин, 2-Метилнафталин	20	4	в
216. N-метилморфолин	5	3	в
217. Метилнитрофос (0,0-диметил — 4-нитро — 3-метилфенилтиофосфат)	0,1+	1	а+в
218. Метиловый эфир акриловой кислоты	20	4	в
219. Метиловый эфир валериановой кислоты	1+	2	в
220. Метиловый эфир изовалериановой кислоты	5+	3	в
221. Метиловый эфир изомасляной кислоты	10+	3	в
222. Метиловый эфир капроновой кислоты	1+	3	в
223. Метиловый эфир масляной кислоты	5+	3	в
224. Метиловый эфир пропионовой кислоты	10+	3	в
225. Метилпирролидон	100	4	в+в
226. Метилпропилкетон	200	4	в
227. Метилфторфенилдихлорсилан (обязателен контроль HCl)	1	2	в
228. Метилхлорацетат	5	3	в
229. Метилхлороформ	20	4	в
230. Метилциклогексан	50	4	в
231. Метилэтилкетон	200	4	в
232 2 Метил — 5-этилпиридин	2+	3	в
233. Метилэтилтиофос (0-метил — 0-этил — 0 нитрофенилтиофосфат)	0,03+	1	а+в
234. Молибден, растворимые соединения в виде аэрозоля конденсации	2	3	а
235. Молибден, растворимые соединения в виде пыли	4	3	а

Key: (190). Maleic anhydride. (191). Copper. (192). Mesidine (2-amino-1,3,5-trimethylbenzene). (193). Mesityl oxide (isopropylidene acetone). (194). Mercaptophos (mixture of thion and thiol isomers of 0,0-diethyl-β-ethylmercaptoethylthiophosphate). (195). Mercuran (mixture of ethylmercurochloride and γ-isomer of hexachlorocyclohexane) (in content of mercury in air). (196). Metacrylic acid. (197). Metacrylic acid anhydride. (198). Metaphos (0,0-dimethyl-o-nitrophenylthiophosphate). (199). Methylacetophos (0,0-dimethyl-o-ethylcarboxymethylthiophosphate). (200). Methyl acetate. (201). Methyl (bromide. (202). Methyl chloride. (203). 2-Methyl-5-vinylpyridine. (204). 6-Methyl-2-vinylpyridine. (205). Methylhexylketone. (206). Methylene bromide. (207). Methylene chloride. (208). Methyl vinyl ketone. (209). Methylthiophene (2 and 3 isomers). (210). Methyldihydropyrane. (211). Methylisothiocyanate. (212). (213). M-81 (0,0-dimethyl-β-ethylmercaptoethyldithiophosphate). (214). Methylmercaptophos (mixture of thionic and thiol isomers of 0,0-dimethylethylmercaptoethylthiophosphate). (215). 1-Methylnaphthalene, 2-Methylnaphthalene. (216). N-methylmorpholine. (217). Methylnitrophos (0,0-dimethyl-4-nitro-3-methylphenylthiophosphate). (218). Methyl acrylic ester. (219). Methyl ether of valeric acid. (220). Methyl ether of isovaleric acid. (221). Methyl ether of isobutyric acid. (222). Methyl ether of caproic acid. (223). Methyl ether of butyric

acid. (224). Methyl ether of propionic acid. (225). Methylpyrrolidone. (226). Methylpropylketone. (227). Methylfluorophenyldichlorosilane. (is necessary HCl control). (228). Methylchloroacetate. (229). Methylchloroform. (230). Methylcyclohexane. (231). Methylethylketone. (232). 2-Methyl-5-ethylpyridine. (233). Methylethylthiophos (O-methyl-O-ethyl-Onitrophenylthiophosphate). (234). Molybdenum, soluble compounds in the form of aerosol of condensation. (235). Molybdenum, soluble compounds in the form howled.

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Continuation Table 4.

236. Молибден нерастворимые соединения	6	3	а
237. Монобутиламин	10	3	н
238. Моновинилацетилен	20	4	н
239. Моноизопропиламин	1	2	н
240. Монометиламин	1	2	н
241. м-Монометиловый эфир резорцина	0,5+	2	н
242. Монохлордибромтрифторэтан	50	4	н
243. Монохлордиметиловый эфир (по хлору с пересчетом на молекулу)	0,5	2	н
244. Монохлор-, дихлорстирол	50	4	н
245. Монохлорциклогексан	50	4	н
246. Морфолин	0,5+	2	н
247. Мышьяковый и мышьяковистый ангидриды	0,3	2	а
248. Мышьяковистый водород	0,3	2	а
249. Натрий роданистый (технический)	50	4	а
250. Нафталин	20	4	н
251. Нафталины хлорированные (высшие)	0,5+	2	н
252. α -Нафтохинон	0,1	1	н
253. Никель и его окись, закись, сульфид (в пересчете на Ni)	0,5	2	а
254. Никеля карбонил	0,0005	1	н
255. Никеля соли в виде гидроаэрозоля (в пересчете на Ni)	0,005	1	а
256. Никотин-сульфат [3 (1-метил — 2-пирролидилпиридинсульфат)]	0,1	1	н+а
257. Нитрофен (содержание алкилфенолов 72,5—67,5%)	1	2	а
258. Нитрил акриловой кислоты	0,5+	2	н
259. п-Нитроанизол	3	3	н
260. п-Нитроанилин	0,1+	1	а
261. о-Нитроанилин	0,5+	2	а
262. м-Нитробензотрифторид	1	2	н
263. Нитрометан, нитроэтан, нитропропан, нитробутан	30	4	н
264. Нитроксилол	5+	2	н
265. Нитросоединения бензола	3+	2	н
266. Нитроформ	0,5	2	н
267. Нитрофоска азотносернокислотная	5	3	а
268. Нитрофоска фосфорная, сульфатная и бесхлорная	2	3	а
269. Нитрохлорбензол, динитрохлорсоединения бензола	1+	2	н
270. Нитроциклогексан	1	2	н
271. Озон	0,1	1	н
272. п-Оксидифениламин	0,5	2	н
273. Оксикарбамат	0,5	2	н+а
274. Октаметил (октаметилтетрамид пирофосфорной кислоты)	0,02+	1	н+а
275. Октафтордихлорциклогексен	1	2	н
276. Октиловый эфир 2.4 Д	1	2	н+а
277. Пентафторпропионовая кислота	2	3	н
278. Пентахлорацетон	0,5	2	н
279. Пентахлорнитробензол	0,5	2	н+а
280. Пентахлорфенол	0,1+	1	н+а
281. Пентахлорфенолят натрия	0,1+	1	н+а
282. Перфторизобутилен	0,1	1	н
283. Перхлорметилмеркаптан	1	2	н
284. Пиколины (смесь изомеров)	50	3	н
285. Пиперазин адипинат	5	3	а
286. Пиперидин	0,2+	2	н
287. Пиридин	5	2	н
288. Поливинилхлорид	6	3	а

Key: (236). Molybdenum insoluble compounds. (237). Mono-butylamene. (238). Mono-vinylacetylene. (239). Mono-isopropylamine. (240). Monomethylamine. (241). m-Monomethyl ester of resorcinol. (242). Monochlorodibromtrifluoroetnane. (243). Monochlorodimethyl ester (on chlorine with recalculation to molecule). (244). Monochlorostyrene, dichlorostyrene. (245). Monochlorocyclohexane. (246). Morpholine. (247). Arsenic and arsenous acid anhydride. (248). Hydrogen arsenide. (249). Sodium thiocyanate (technical). (250). Naphthalene. (251). Naphthalenes, chlorinated (highest). (252). α-Naphthaquinone. (253). Nickel and its oxide, oxide, sulfide (in recalculation on NI). (254). Nickel carbonyl. (255). Nickel of salt in the form of hydro-aerosol (in recalculation on NI). (256). Nicotine sulfate [3 (1-methyl-2-pyrolidylpyridinesulfate)]. (257). Nitrophene (content of alkyl phenols 72.5-67.5o/o). (258). Nitrile of acrylic acid. (259). p-Nitroanisole. (260). p-Nitroaniline. (261). o-Nitroaniline. (262). m-Nitrobenzotrifluoride. (263). Nitromethane, nitroethane, nitropropane, nitrobutane. (264). Nitroxylene. (265). Nitro-compounds of benzene. (266). Nitroform. (267). Nitrophoska nitrosulfuric acid. (268). Nitrophoska phosphoric, sulfate, and chlorine-free. (269). Nitrochlorobenzene, dinitrochloro-compound of benzene. (270). Nitro cyclohexane. (271). Ozone. (272). p-Hydroxydiphenylamine. (273). Hydroxycarbamate. (274). Octametnyl (octamethyltetramide of pyrophosphoric acid). (275). Octafluorodichlorocyclohexene. (276). Octyl ester 2,4 D. (277). Pentafluoropropionic acid. (278).

Pentachloroacetone. (279). Pentachloronitrobenzene. (280). Pentachlorophenol. (281). Pentachlorophenolate of sodium. (282). Perfluoroisobutylene. (283). Perchloromethylmercaptan. (284). Picolines (mixture of isomers). (285). Piperazine adipinate. (286). Piperidine. (287). Pyridine. (288). Polyvinyl chloride.

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Continuation Table 4.

289. Полипропилен (нестабилизированный)	10	3	а
290. Полиформальдегид	5	3	а
291. Полихлорпинен	0,2+	2	п+а
292. Полиэтилен низкого давления	10	3	а
293. Порофор ЧХЗ-5 (п-метилуретанбензол-сульфогидразин)	0,05	1	а
294. Пропазин — 10 — (3-диметиламинопропил) — фенотиазина гидрохлорид	5	3	а
295. Прометрин (2-метилтио — 4,6-бисизопропиламино-симметриазин)	5	3	а
296. Пропанид (3,4-дихлорпропионанилид)	0,1	1	а
297. Пропиленa окись	1+	2	п
298. н-Пропиламин	5	2	п
299. Пропилацетат	200	4	п
300. Пропилпропионат	70	4	п
301. Пропионовый альдегид	5	3	п
302. Ренацит II (смесь трихлортиофенола-дисульфида трихлортиофенола и парафина)	5	3	а
303. Ренацит IV (цинковая соль пентахлортиофенола)	2	3	а
304. Ртуть металлическая	0,01	1	п
305. Сантофлекс-77 (N, N'-ди — 1,4-диметилпентил-п-фенилендиамин)	5	3	п+а
306. Сулема (ртуть двухлористая)	0,1	1	а
307. Свинец и его неорганические соединения	0,01	1	а
308. Семия (1-нафтил — N-метилкарбамат)	1	2	а
309. Селен аморфный	2	3	а
310. Селенистый ангидрид	0,1	1	а
311. Серная кислота, серный ангидрид	1	2	а
312. Сернистый ангидрид	10	3	п
313. Сероводород	10+	2	п
314. Сероводород в смеси с углеводородами C_1—C_5	3	3	п
315. Сероуглерод	10	2	п
316. Сильван (2-Метилфуран)	1	2	п
317. Симазин (2-хлор — 4,6-бисэтиламино-симметриазин)	2	3	а
318. Скипидар (в пересчете на С)	300	4	п
319. Сольвент-нафта (в пересчете на С)	100	4	п
320. Соляная кислота	5	2	п
321. Сополимер стирола с α-метилстиролом	5	3	а
322. Спирты непредельные жирного ряда (аллиловый, кротониловый и др.)	2	3	п
323. Спирт метиловый (метанол)	5+	3	п
324. Спирт этиловый	1000	4	п
325. Спирт пропиловый	10	3	п
326. Спирт амиловый	10	3	п
327. Спирт ацетопропиловый	10	3	п
328. Спирт бутиловый	10	3	п
329. Спирт н-гексиловый	10	3	п
330. Спирт н-гептиловый	10	3	п
331. Спирт н-октиловый	10	3	п+а
332. Спирт п-нониловый	10	3	п+а
333. Спирт н-дециловый	10	3	п+а
334. Спирт пропаргиловый	1	2	п
335. Спирт октафторамиловый	20	4	п
336. Спирт трифторбутиловый	20	4	п
337. Спирт трифторэтиловый	10	3	п
338. Спирт тетрафторпропиловый	20	4	п
339. Спирт изооктиловый (2-этилгексанол)	50	4	п
340. Стирол, α-метилстирол	5	3	п
341. Стрептомицин	0,1	1	а
342. Сульфамат аммония	10	3	а

Key: (289). Polypropylene (not stabilized). (290). Polyformaldehyde. (291). Polychloropinene. (292). Low-pressure polyethylene. (293). foaming agent ChKhZ-5 (p-metnylurethanebenzenesulfohydrazine). (294). Propazine-10-(3-dimethylaminopropyl)-phenothiazine hydrochloride. (295). Promethryn (2-methylthio-4,6-bisisopropylamino-symmtriazine). (296). Propanide (3,4-dichloropropionanilide). (297). Propylene oxide. (298). n-Propylamine. (299). Propylacetate. (300). Propylpropionate. (301). Propionic aldehyde. (302). Renacit II (mixture of trichlorothiophenoladisulfide, trichlorothiophenol and paraffin). (303). Renacit IV (zinc salt of pentachlorothiophenol). (304). Mercury metallic. (305). Santoflex-77 (N,N'-di-1,4-dimethylpentyl-p-phenylene diamine). (306). Corrosive sublimate (mercury bichloride). (307). Lead and its inorganic compound. (308). Sevin (1-naphthyl-N-methylcarbamate). (309). Selenium (amorphous). (310). Selenious anhydride. (311). Sulfuric acid, sulfuric anhydride. (312). Sulfurous anhydride. (313). Hydrogen sulfide. (314). Hydrogen sulfide in mixture with hydrocarbons C_1-C_5. (315). Carbon disulfide. (316). Sylvan (2-Methylfuran). (317). Cymazene (2-chloro-4,6-bisethylaminosymmtriazine). (318). Turpentine (in recalculation on C). (319). Solvent naphtha (in recalculation on C). (320). Hydrochloric acid. (321). Copolymer of styrene with α-methylstyrene. (322). Alcohols unlimited of aliphatic series (allyl, crotonyl, etc.). (323). Alcohol methyl (methanol). (324). Alcohol (ethyl. (325). Alcohol propyl. (327). Alcohol acetopropyl.

(328). Alcohol butyl. (329). Alcohol n-hexyl. (330). Alcohol heptyl. (331). Alcohol octyl. (332). Alcohol n-nonyl. (333). Alcohol decylic. (334). Alcohol (propargylic. (335). Alcohol octafluoroamyl. (336). Alcohol trifluorobutyl. (337). Alcohol trifluorcethyl. (338). Alcohol tetrafluoropropyl. (339). Alcohol isoactyl. (2-ethylhexanol). (340). Styrene, α-methyl styrene. (341). Streptomycin. (342). Sulfamate of ammonium.

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Continuation table 4.

343. Сурьма, фториды, хлориды (трех- и пятивалентные (в пересчете на Sb) с обязательным контролем HCl и HF)	0,3	2	п+а
344. Сурьма металлическая (в виде пыли)	0,5	2	а
а) сурьма [трехвалентные окислы и сульфиды в виде пыли (в пересчете на Sb)]	1	2	а
б) сурьма [пятивалентные окислы и сульфиды (в виде пыли) в пересчете на Sb]	2	3	а
345. Сульфаниламидные препараты: стрептоцид белый, норсульфазол, сульфацил, сульфадимезин, сульгин	1	2	а
346. Табак	3	3	а
347. Талия иодид, бромид	0,01	1	а
348. Теллур	0,01	1	а
349. Терефталевая кислота	0,1	1	п+а
350. Тетрабромэтан	1	2	п
351. Тетрагидрофуран	100	4	п
352. Тетралин	100	4	п
353. Тетранитрометан	0,3	2	п
354. Тетрахлоргексатриен	0,3+	2	п
355. Тетрахлорпропан, тетрахлорпентан, тетрахлоргептан	1	2	п
356. Тетрахлорнонан	1	2	п+а
357. Тетрахлорундекан	5	3	п+а
358. Тетрахлорэтан	5+	3	п
359. Тетрахлорэтилен	10	3	п
360. Тетраэтилсвинец	0,005+	1	п
361. Тетраэтоксисилан	20	4	п
362. Тиолам (S-пропил — N-этил — N-н-бутилтионкарбамат)	1	2	п+а
363. Тиогликолевая кислота	0,1+	1	п+а
364. Тиодан	0,1+	1	п+а
365. Тиофен	20	4	п
366. Тиофос (0,0-диэтил — 0-нитрофенилтиофосфат)	0,05+	1	а
367. Тиурам, ТМТД (тетраметилтиурамдисульфид)	0,5	2	а
368. Титан четыреххлористый (по содержанию HCl в воздухе)	1	2	п
369. Толуидин	3+	3	п
370. Толуилендиамин	2+	3	п+а
371. Толуилендиизоцианат	0,5	2	п
372. Толуол	50	3	п
373. Торий	0,05	1	а
374. Третбутилацетат	0,1	1	п
375. Третбутилбензоат	1	2	п
376. Трибутилфосфат (трибутиловый эфир ортофосфорной кислоты)	0,5+	2	п
377. Трикрезилфосфат, содержащий свыше 3% ортоизомеров	0,1+	1	а
378. Трикрезилфосфат, содержащий менее 3% ортоизомеров	0,5+	2	а
	1,5+	3	а
379. Трикселенилфосфат	5	2	п
380. Триметиламин	50	4	п
381. Триметилолпропан (этриол)	1+	2	п
382. Тринитротолуол	0,3	2	п
383. 1, 1, 3-Трихлорацетон	10	3	п
384. Трихлорбензол	2	3	п
385. Трихлорпропан	3	3	п
386. Трихлорпропилен			
387. Трихлорсилан (обязателен контроль HCl)	1	2	п

Key: (343). Antimony, fluorides, chlorides (tri- and pentavalent (in recalculation on Sb) with the necessary check HCl and HF). (344). Antimony metallic (in the form of dust). a) antimony [trivalent oxides and sulfides in the form of dust (in recalculation on Sb)] b) antimony [pentavalent oxides and sulfides (in the form of dust) in recalculation on Sb]. (345). Sulfanilamide preparations: streptocide white, norsulfazole, sulfacyl, sulfadimesine, sulgin. (346). Tobacco. (347). Thallium iodide, bromide. (348). Tellurium. (349). Terephthalic acid. (350). Tetrabromoethane. (351). Tetrahydrofuran. (352). Tetralin. (353). Tetranitromethane. (354). Tetrachlorohexatriene. (355). Tetrachloropropane, Tetrachloropentane, Tetrachloroheptane. (356). Tetrachlorononane. (357). Tetrachloroundecane. (358). Tetrachloroethane. (359). Tetrachloroethylene. (360). Tetraethyl lead. (361). Tetraethoxysilane. (362). Tyllam to (S-propyl-N-ethyl-N-n-butylthiocarbamate). (363). Thioglycolic acid. (364). Thiodan. (365). Thiophene. (366). Thiophos (0,0-ethyl-O-nitrophenylthiophosphate). (367). Thiuram, TMTD (tetramethylthiuramdisulfide). (368). Titanium tetrachloride (in content of HCl in air). (369). Toluidine. (370). Toluylenediamine. (371). Toluylenediisocyanate. (372). Toluene. (373). Thorium. (374). Tertbutylperacetate. (375). Tertbutylperbenzoate. (376). Tributylphosphate (tributyl ester of organic phosphoric acid). (377). Tricresylphosphate, containing more than 3o/o orthoisomers. (378).

Tricresylphosphate, which contains is less than 3o/o orthoisomers. (379). Trixelenylphosphate. (380). Trimethylamine. (381). Trimethylol propane (etriol). (382). Trinitrotoluene. (383). 1,1,3-Trichloroacetone. (384). Trichlorobenzene. (385). Trichloropropane. (386). Trichloropropylene. (387). Trichlorosilane (is required HCl contrcl).

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Continuation Table 4.

388. Трихлорэтилен	10	3	п
389. Трихлорметафос-3 (0-метил — 0-этил — 0-трихлорфенилтиофосфат)	0,3+	2	п+а
390. Трихлорнафталин (смесь тетра- и пентахлорнафталинов)	1+	2	п+а
391. Трихлорфенолят меди	0,1	1	а
392. Трифтазин [2-трифторметил — 10-3 — (4-метил — 1-пиперидинил) пропил фенотиазин дигидрохлорид]	0,01	1	а
393. Трифторпропиламин	5	3	п
394. Трифторуксусная кислота	2	3	п
395. Трифторхлорпропан	1+	2	п
396. Трифторэтиламин	100	4	п
397. Триэтиламин	10	3	п
398. Триэтоксисилан	1	2	п
399. Уайт-спирит (в пересчете на С)	300	4	п
400. Углерода окись *	20	4	п
401. Углеводороды алифатические предельные $C_1 - C_{10}$ (в пересчете на С)	300	4	п
402. Углерод четыреххлористый	20+	2	п
403. Уксусная кислота	5	3	п
404. Уран (растворимые соединения)	0,015	1	а
405. Уран (нерастворимые соединения)	0,075	1	а
406. п-Фенетидин солянокислый	0,5	2	а
407. п-Фенетидин	0,2+	2	п
408. Фенилметилдихлорсилан (обязателен контроль HCl)	1	2	п
409. м-Феноксифенол	1+	2	п
410. Фенол	5+	3	п
411. Фозалон (0,0-диэтил — S-6-хлорбензоксазолинилметилдитиофосфат)	0,5	2	п
412. Формальдегид	0,5	2	п
413. Формальгликоль (диоксолан-1,3)	50+	4	п
414. Формамид	3	3	п
415. Фосген	0,5	2	п
416. Фосфористый водород	0,1	1	п
417. Фосфор желтый	0,03	1	п
418. Фосфорный ангидрид	1	2	а
419. Фосфамид (0-0-диметил — β-метилкарбамидоэтилдитиофосфат)	0,5+	2	п+а
420. Фталевый ангидрид	1	2	п+а
421. Фталофос (0,0-диметил — β-фталимидодитиофосфат)	0,3	2	п+а
422. Фторопласт-4	10	3	а
423. Фтористый водород	0,5	2	п
424. Фторметоводородной кислоты соли (в пересчете на HF)	1	2	а
425. Фуран	0,3	2	п
426. Фурфурол	10	3	п
427. Хлор	1	2	п
428. Хлора двуокись	0,1	1	п
429. Хлоразин (2-хлор — 4,6-бисдиэтиламиносимтриазин)	2	3	а
430. п-Хлоранилин	0,3+	2	п
431. Хлорангидрид трихлоруксусной кислоты	0,1+	1	п
432. Хлорангидрид акриловой, метакриловой кислот	0,3	2	п
433. м-Хлоранилин	0,05+	1	п
434. Хлорацетопропилацетат	2	3	п
435. Хлорбензол	50+	3	п
436. Хлорекс (β, β'-дихлордиэтиловый эфир)	5+	3	п

Key: (388). Trichloroethylene. (389). Trichlorometaphos-3 (O-methyl-O-ethyl-O-trichlorophenylthiophosphate). (390). Trichloronaphthalene (mixture of tetra- and pentachloronaphthalene). (391). Trichlorophenolate of copper. (392). Triphthazine [2-trifluoromethyl-10-3-4-methyl-1-piperidinyl) propyl phenothiazine of dihydrochloride). (393). Trifluoropropyl amine. (394). Trifluorine acetic acid. (395). Trifluorochloropropane. (396). Trifluoroethylamine. (397). Triethylamine. (398). Triethoxysilane. (399). Mineral spirits (in recalculation on C). (400). Carbon oxide. (401). Hydrocarbons aliphatic maximum C_1-C_{10} (in recalculation on C). (402). Carbon (tetrachloride. (403). Acetic acid. (404). Uranium (soluble compounds). (405). Uranium (insoluble compounds). (406). p-Phenetidine hydrochloride. (407). p-Phenetidine. (408). Phenylmethyldichlorosilane. (is necessary HCl control). (409). m-Phenoxyphenol. (410). Phenol. (411). Fozalon (0,0-diethyl-S-6-chlorobenzoxazolinylmethyldithiophosphate). (412). Formaldehyde. (413). Ethyleneglycol formal (dioxolane-1,3). (414). Formamide. (415). Phosgene. (416). Hydrogen phosphide. (417). Phosphorus (yellow. (418). Phosphoric anhydride. (419). Phosphamide (O-O-dimethyl-βmethylcarbamidemethyldithiophosphate). (420). Phthalic anhydride. (421). Phthalophos (0,0-dimethyl-βphthalimidodithiophosphate). (422). Teflon. (423). Hydrogen fluoride. (424). Hydrofluoric acid of salt (in recalculation on HF). (425). Furan. (426). Furfural. (427). Chlorine. (428).

Chlorine dioxide. (429). Chloroazine (2-chloro-4,6-bisdiethylaminosymmtriazine). (430). p-Chloraniline. (431). Acid chloride of trichloroacetic acid. (432). Acid chloride of acrylic, metacrylic acids. (433). m-Chloraniline. (434). Chloroacetopropylacetate. (435). Chlorobenzene. (436). Chlorex (β,β'-dichlorodiethyl ester).

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Continuation Table 4.

437. 1,3-Хлорбромпропан	3	3	п
438. 4-Хлорбензофенон — 2-карбоновой кислоты	1	2	а
439. γ-Хлоркротиловый эфир 2,4 Д	1	2	п+а
440. Хлористый водород	5	2	п
441. Хлористый 5-этоксифенил — 1,2-тиазтионий	0,2	2	а
442. Хлориндан (октахлорэндометилентетрагидроиндан)	0,01+	1	п+а
443. Хлорметилтрихлорсилан (обязателен контроль HCl)	1	2	п
444. Хлоропрен	2	2	п
445. Хлорофос [0,0-диметил (1-окси — 2, 2, 2 трихлорэтил) фосфонат]	0,5+	2	п+а
446. Хлорпропионовая кислота	5	3	п
447. Хлорпеларгоновая кислота	5	3	п
448. м-Хлорфенилизоцианат, п-Хлорфенилизоцианат	0,5	2	п
449. п-Хлорфенол	1+	2	п
450. Хлортэн (хлорированные бициклические соединения)	0,2	2	п+а
451. 2-Хлорэтансульфохлорид	0,3+	2	п
452. Хромовый ангидрид, хроматы, бихроматы (в пересчете на CrO_3)	0,01	1	а
453. Хромаммоний сернокислый (хромаммиачные квасцы) (в пересчете на CrO_3)	0,02	1	а
454. Хром хлорный (гексагидрат трихлорид хрома) (в пересчете на CrO_3)	0,01	1	а
455. Цианистый водород, соли синильной кислоты (в пересчета на HCN)	0,3+	2	п
456. Цианурхлорид (трихлортриазин)	0,1	1	п
457. Цианамид свободный	0,5+	2	п+а
458. Цидиал (этиловый эфир 0,0-диметилдитиофосфорил — 1 фенилуксусной кислоты)	0,15	2	п+а
459. Цинеб (этилен — N, N'-бис-дитиокарбамат цинка)	0,5	2	а
460. Циклогексан	80	4	п
461. Циклогексанон	10	3	п
462. Циклогексиламин	1	2	п
463. Циклогексиламина карбонат	10	3	п
464. Циклогексиламина хромат	2+	3	п
465. Циклогексаноноксим	10	3	п
466. Циклопентадиенилтрикарбонил марганца	0,1	1	п
467. Циклопентадиен	5	3	п
468. Цинка окись	6	3	а
469. Цирконий металлический и его нерастворимые соединения (циркон, двуокись, карбид)	6	3	а
а) фторцирконат	1	2	а
470. Чай	3	3	а
471. Щелочи едкие (растворы) (в пересчете на NaOH)	0,5	2	а
472. Экстралин	3	3	п
473. Эпихлоргидрин	1	2	п
474. Эптам (S-этил — N-N-пропилтиокарбамат)	2	3	п+а
475. 2-Этилгексаналь	3	3	п
476. Этилацетат	200	4	п

Key: (437). 1,3-Chlorobromopropane. (438). 4-Chlorobenzophenone-2-carboxylic acid. (439). γ-Chlorocrotyl ester 2,4 D. (440). Hydrogen chloride. (441). 5-Ethoxyphenyl-1,2-thiazthionium chloride. (442). Chlorindan (octachloroendomethylenetetrahydropidan). (443). Chloromethyltrichlorosilane (is necessary HCl control). (444). Chloroprene. (445). Chlorophos [0,0-dimethyl (1-hydroxy-2,2,2-trichloroethyl) phosphonate]. (446). Chloropropionic acid. (447). Chloropelargonic acid. (448). m-Chlorophenylisocyanate, p-Chlorophenylisocyanate. (449). p-Chlorophenol. (450). Chloroten (chlorinated bicyclic compounds). (451). 2-Chloroethanesulfochloride. (452). Chromium bihydride, chromates, dichromates (in recalculation on CrO_3). (453). Chromoammonium sulfate (chromoammonium alum) (in recalculation on CrO_3). (454). Chromium chlorine (hexahydrate of trichloride of chromium) (in recalculation on CrO_3). (455). Hydrogen cyanide, salts of hydrocyanic acid (in recalculation on HCN). (456). Cyanurchloride (trichlorotriazine). (457). Cyanamid free. (458). Cydeal (ethyl ether of 0.0-dimethyldithiophosphoryl-1-phenylacetic acid). (459). Zineb (ethylene-N,N'-bis-dithiocarbamate of zinc). (460). Cyclohexane. (461). Cyclohexanone. (462). Cyclohexamine. (463). Cyclohexamine carbonate. (464). Cyclohexamine chromate. (465). Cyclohexanoneoxime. (466). Cyclopentadienyltricarbonyl of manganese. (467). Cyclopentadiene. (468). Zinc oxide. (469). Zirconium metallic and its insoluble compcunds (zircon, dioxide, carbide). (470). Tea.

(471). Caustic sodas (solutions) (in recalculation on NaOH). (472). Extraline. (473). Epichlorhydrin. (474). Eptam (S-ethyl-N-N-propylthiocarbamate). (475). 2-Ethylhexanal. (476). Ethylacetate.

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Continuation Table 4.

477. Этилена окись	1	2	н
478. Этилендиамин	2	3	н
479. Этиленимин	0,02+	1	н
480. Этиленсульфид	0,1+	1	н
481. Этиленциангидрин	10	3	н+а
482. Этилендиацетат	30	4	н
483. Этиленхлоргидрин	0,5+	2	н
484. Этилмеркаптан	1	2	н
485. Этилмеркурхлорид (по содержанию ртути в воздухе)	0,005+	1	н+а
486. Этилмеркурфосфат (по содержанию ртути в воздухе)	0,005+	1	н+а
487. N-Этилморфолин	5	3	н
488. Этиловый, диэтиловый эфир	300	4	н
489. Этилтолуол	50	4	н
490. Этил бромистый	5	3	н
491. Этил хлористый	50	4	н
492. β-этоксипропионитрил	50	4	н
493. Эфирсульфанат (п-хлорфенил — п-хлорбензосульфанат)	2	3	н+а
494. Ялан (S-этил — N-гексаметиленкарбамат)	0,5	2	н+а

Key: (477). Ethylene oxida. (478). Ethylene diamine. (479). Ethylenimine. (480). Ethylenesulfide. (481). Ethylene cyanohydrin. (482). Ethylenediacetate. (483). Ethylenechlorohydrine. (484). Ethyl mercaptan. (485). Ethylmercurochloride (in content of mercury in air). (486). Ethylmercurophosphate (in content cf mercury in air). (487). N-Ethylmorpholine. (488). Ethyl, diethyl ether. (489). Ethyltoluene. (490). Etnyl (oromide. (491). Ethyl chloride. (492). β-Ethoxypropionitrile. (493). Ethersulfanate

(p-chlorophenyl-p-chlorobenzosulfanate). (494). Yalan (S-ethyl-N-hexamethylenethiocarbamate).

FOOTNOTE [1]. For the duration of work in the atmosphere, containing carbon monoxide, not more than 1 h the maximum permissible concentration of carbon monoxide can be raised to 50 mg/m^3, for the duration of work, it is not more than 30 min - to 100 mg/m^3, for the duration of work not more than 15 to 200 mg/m^3. Repeated works under conditions of the increased content of carbon monoxide in air of working zone can be conducted with interruption not less than in 2 h. ENDFOOTNOTE.

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Table 4a.

(a) Наименование вещества	(b) Величина предельно допустимой концентрации в мг/м³	(c) Класс опасности
1	2	3
1. Алюминий и его сплавы (в пересчете на Al)	2	4
2. Алюминия окись (в том числе с примесью двуокиси кремния) в виде аэрозоля конденсации	2	4
3. Алюминия окись (электрокорунд) в смеси со сплавом никеля до 15%	4	4
4. Аэросил, модифицированный бутиловым спиртом (бутосил)	1	3
5. Алюминия окись в виде аэрозоля дезинтеграции (глинозем, электрокорунд, монокорунд)	6	4
6. Аэросил, модифицированный диметилдихлорсиланом	1	3
7. Барит	6	4
8. Бора карбид	6	4
9. Вольфрамокобальтовые сплавы в смеси с алмазом до 5%	4	4
10. Доломит	6	4
11. Диатомит	1	3
12. Железа окись с примесью окислов марганца до 3%	6	4
13. Железа окись с примесью фтористых или от 3 до 6% марганцевых соединений	4	4
14. Железный и никелевый агломераты	4	4
15. Известняк	6	4
16. Кремнеземсодержащие пыли:		
а) Кремния двуокись кристаллическая: кварц, кристобалит, тридимит при содержании ее в пыли свыше 70% (кварцит, динас и др.)	1	3
b) Кремния двуокись аморфная в виде аэрозоля конденсации при содержании ее в пыли свыше 70% (возгоны электротермического производства кремния и кремнистых ферросплавов, аэросил-175, аэросил-300 и др.)	1	3
c) Кремния двуокись аморфная в смеси с окислами марганца в виде аэрозоля конденсации с содержанием каждого из них более 10%	1	3
d) Кремния двуокись кристаллическая при содержании ее в пыли от 10 до 70% (гранит, шамот, слюда-сырец, углепородная пыль и др.)	2	4

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e a) Кремния двуокись кристаллическая при содержании ее в пыли от 2 до 10% (горючие кукерситные сланцы, медно-сульфидные руды, углепородная и угольная пыли, глина и др.)	4	4
17. Кремнемедистый сплав	4	4
18. Кремния карбид (карборунд)	6	4
19. Легированные стали и их смеси с алмазом до 5%	6	4
20. Магнезит	10	4
21. Силикаты и силикатсодержащие пыли:		
а) асбест природный и искусственный, а также смешанные асбестопородные пыли при содержании в них асбеста более 10%	2	4
b б) асбестоцемент	6	4
c в) асбестобакелит (волокнит), асбесторезина	8	4
d г) тальк, слюда-флагопит и мусковит	4	4
e д) стеклянное и минеральное волокно	4	4
f е) цемент, оливин, апатит, форстерит, глина	6	4
22. Пыль растительного и животного происхождения:		
а) с примесью двуокиси кремния более 10% (зерновая, лубяная, хлопковая, хлопчатобумажная, льняная, шерстяная, пуховая и др.)	2	4
b б) с примесью двуокиси кремния от 2 до 10%	4	4
c в) с примесью двуокиси кремния менее 2% (мучная, хлопчатобумажная, древесная и др.)	6	4
23. Тантал и его окислы	10	4
24. Титан и его двуокись	10	4
25. Трепел	1	3
26. Углерода пыли:		
а) кокс нефтяной, пековый, сланцевый, электродный	6	4
b б) алмазы природные и искусственные	8	4
c в) каменный уголь с содержанием двуокиси кремния менее 2%	10	4
27. Фосфорит	6	4
28. Циркония нитрид	4	4
29. Чугун	6	4
30. Чугун в смеси с электрокорундом до 20%	6	4
31. Электрокорунд в смеси с легированными сталями	6	4

Key: (a). Designation of substance. (b). Magnitude of maximum permissible concentration in mg/m^3. (c). Class of danger. (1). Aluminum and its alloys (in recalculation on Al). (2). Aluminum oxide (among other things with impurity/admixture of dioxide of silicon) in the form of aerosol of condensation. (3). Aluminum oxide (electrocorundum) in mixture with nickel alloy to 15o/o. (4). Aerosils, modified by butyl alcohol (butosyl). (5). Aluminum oxide in the form of aerosol of disintegration (alumina, electrocorundum, monocorundum). (6). Aerosils, modified by dimethyldichlorosilane. (7). Barite. (8). Bohr carbide. (9). Tungsten-cobalt alloys in mixture with diamond to 5o/o. (10). Dolomite. (11). Diatomite. (12). Iron oxide with impurity/admixture of manganese oxides to 3o/o. (13). Iron oxide with impurity/admixture of fluoride or from 3 to 6o/o of manganese compounds. (14). Iron and nickel agglomerates. (15). Limestone. (16). Silica-containing dust: a). Silicon dioxide crystal: quartz, cristobalite, tridymite with its content in dust is more than 70o/o (quartzite, dinas brick, etc.).

b). Silicon dioxide amorphous in the form of aerosol of condensation with its content in dust is more than 70o/o (sublimates of electrothermal production of silicon and silicide ferro alloys, aerosils-175, aerosils-300, etc.).

c). Silicon dioxide amorphous in mixture with manganese oxides in the form of aerosol of condensation with content of each of them is more than 10o/o.

d). Silicon dioxide crystal with its content in dust from 10 to 70o/o (granite, fireclay, mica-raw material, carbonaceous dust, etc.).

e). Silicon dioxide crystal with its content in dust from 2 to 10o/o (combustible kukersite slates, copper sulfide ores, carbon and coal dust, clay, etc.). (17). Silicocopper alloy. (18). Silicon carbide (carborundum). (19). Alloy of steels and their mixtures with diamond to 5o/o. (20). Magnesite. (21). silicates and silicate-containing dust:

a) asbestos natural and artificial, and also mixed asbestos rock dust with content in them of asbestos are more than 10o/o.

b) asbestos-cement.

c) asbestos-bakelite (Voloknit), asbestos rubber.

d) talc, mica-flagopite and muscovite.

e) glass and mineral filament.

f) cement, olivine, apatite, forsterite, clay. (22). Dust of plant and animal origin:

a) with impurity/admixture of dioxide of silicon is more than 10o/o (granular, bast, cotton, cotton, linoleic, wool, downy, etc.).

b) with the impurity/admixture of the dioxide of silicon from 2 to 10o/o.

c) with the impurity/admixture of the dioxide of silicon are less than 2o/o (flour, cotton, woody, etc.). (23). Tantalum and its oxide. (24). Titanium and its dioxide. (25). Tripoli. (26). Carbon of bullet:

a) coke petroleum, pitch, schist, electrode.

b) diamonds natural and artificial.

c) Coal with the content of the dioxide of silicon is less than 2o/o. (27). Phosphorite. (28). Zirconium nitride. (29). Cast iron. (30). Cast iron in mixture with electrocorrundum to 20o/o. (31). Electrocorundum in mixture with alloy steels.

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10.2. Maximum permissible concentrations of harmful substances in air of working zone are such concentrations which with daily to work in limits of 8 h during entire working length of service cannot cause in of working diseases or deviations in health status, detected by contemporary methods of investigation, it is direct in work or within distant periods.

10.3. Maximum permissible concentrations of harmful substances in air of working zone are maximally one-time.

10.4. According to degree of effect on human organism harmful substances should be subdivided into 4 classes:

1 - substance extremely dangerous.

2 - substance highly dangerous.

3 - substance moderately dangerous.

4 - substance little dangerous.

10.5. By working zone should be considered space in high to 2 m above level of floor or area/site, on which are located places of permanent or sojourn of workers.

10.6. With simultaneous content in air of working zone of several harmful substances of unidirectional action/effect, calculation of general/total exchange ventilation is to produce via addition of air volumes, necessary for dilution of each substance individually to its maximum permissible concentration taking into account contamination of additional air. In this case, as permissible for design and sanitary supervision should be considered such concentrations (C) of the harmful substances which answer formula (2)

$$\frac{C_1}{ПДК_1}+\frac{C_2}{ПДК_2}+\cdots+\frac{C_n}{ПДК_n}\leqslant 1, \qquad (2)$$

i.e., the sum of the ratios of the actual concentrations of harmful substances $(C_1, C_2, \ldots, C_n)$ in air of rooms toward their maximum permissible concentrations $(ПДК_1, ПДК_2, \ldots, ПДК_n)$, which are

establish/installed for the isolated/insulated presence, must not exceed I (unity).

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10.7. During codeposition into air of working zone of rooms of several harmful substances, which do not possess unidirectional character of action/effect, quantity of air during calculation of general/total exchange ventilation is allow/assumed to accept on that harmful substance, for which is required feed of greatest volume of pure air.

10.8. For harmful substances whose maximum permissible concentrations are not affirmed, time/temporary maximum permissible concentrations and conditions of applying these substances in each specific case are established by Ministry of Pub. Health of USSR.

10.9. To harmful substances of unidirectional action/effect, as a rule, should be related harmful substances, close in chemical structure and character of biological effect on human organism.

Examples of the combinations of the substances of unidirectional action they are:

a) hydrogen fluoride and salt of hydrofluoric acid.

b) sulfurous and sulfuric anhydride.

c) formaldehyde and hydrochloric acid.

d) different chlorinated hydrocarbons (maximum and unlimited).

e) different brominated hydrocarbons (maximum and unlimited).

f) different alcohols.

g) different acids.

h) different alkalies.

I) different aromatic hydrocarbons (toluene and xylene, benzene and toluene).

j) different amino-compounds.

k) different nitro-compounds.

l) amino- and nitro-compound.

m) Thiophos and carbophos.

n) hydrogen sulfide and carbon disulfide.

o) carbon monoxide and amino-compound.

p) carbon monoxide and nitro-compound.

q) bromide methyl and carbon disulfide.

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11. Meteorological conditions in the working zone of industrial rooms.

11.1. Meteorological conditions - optimum and permissible temperatures, relative humidity and speed of air motion are established for working zone of industrial rooms.

Meteorological conditions in cattle-breeding and poultry-breeding buildings, and also in buildings for storing agricultural production, coolers and the like (in the rooms of

storage) are established in accordance with the norms of technological design, affirmed in routine. If the parameters of meteorological conditions in these rooms differ from those establish/installed in Table 5, then for workers must be provided for rooms for heating in accordance with the demands of chapter SNIP for the design of auxiliary buildings and rooms of industrial enterprises.

11.2. Temperature, relative humidity and speed of air motion should be accepted upon warm, cold and transition periods of year on the basis of category of work on heaviness, according to designation/purpose of rooms, on surpluses of explicit heat according to Table 5.

The optimum parameters of air medium in rooms should be accepted in accordance with the instructions of chapter SNIP according to the design of heating, ventilation and air conditioning.

11.3. By working zone should be considered space in high to 2 m above level of floor or area/sites, on which are located work sites.

The as permanent work site is considered the place, at which worker is located the large part (more than 50o/o, or more than 2 h continuously) of his operating time. If in this case the maintenance

production is carried out in different points of working zone, then the as permanent work site is considered entire/all working zone.

11.4. Surpluses of explicit heat (from equipment, heated materials, insolations and people) should be considered residual quantities of explicit heat (minus heat losses), which comes rooms in calculated parameters of surrounding air after realization of all technological and structural measures for their decrease, and also on thermal insulation of equipment, installations and conduit/manifolds, sealing/pressurization of equipment and device of local suction from technological equipment and other measures.

Page 73. Table 5. Norms of temperature, relative humidity and speed of air motion in the working zone of industrial rooms.

(3) Характеристика производственных помещений	(4) Категория работы	(1) Холодный и переходный периоды года (температура наружного воздуха ниже +10°С)						(7) Допустимая температура воздуха в °С вне постоянных рабочих мест
		(2) На постоянных рабочих местах						
		(5) оптимальные			(6) допустимые			
		(8) температура воздуха в °С	(9) относительная влажность воздуха в %	(10) скорость движения воздуха в м/сек	(8) температура воздуха в °С	(9) относительная влажность воздуха в %	(10) скорость движения воздуха в м/сек	
1	2	3	4	5	6	7	8	9
(11) Помещения, характеризуемые незначительными избытками явного тепла (20 ккал/м³·ч и менее)	(12) Легкая	20—22	60—30	(13) Не более 0,2	17—22	(13) Не более 75	(13) Не более 0,3	15—22
	(14) Средней тяжести	17—19	60—30	(13) Не более 0,3	15—20	(15) То же	(13) Не более 0,5	13—20
	(16) Тяжелая	16—18	60—30	(15) То же	13—18	»	(15) То же	12—18

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Continuation Table 5.

(3) Характеристика производственных помещений	(4) Категория работы	(17) Теплый период года (температура наружного воздуха +10°С и выше)						(7) Допустимая температура воздуха в °С вне постоянных рабочих мест
		(2) На постоянных рабочих местах						
		(5) оптимальные			(6) допустимые			
		(8) температура воздуха в °С	(9) относительная влажность воздуха в %	(10) скорость движения воздуха в м/сек	(6) температура воздуха в °С	(9) относительная влажность воздуха в %	(10) скорость движения воздуха в м/сек	
1	2	10	11	12	13	14	15	16
(11) Помещения, характеризуемые незначительными избытками явного тепла (20 ккал/м³·ч и менее)	(12) Легкая	22—25	60—30	0,2—0,5	(18) Не более чем на 3°С выше средней температуры наружного воздуха в 13 часов самого жаркого месяца, но не более 28°С	(19) При 28°С не более 55%. (19) При 27°С не более 60%. (19) При 26°С не более 65%. (19) При 25°С не более 70%. (20) При 24°С и ниже не более 75%	0,3—0,5	(21) Не более, чем на 3°С выше средней температуры наружного воздуха в 13 часов самого жаркого месяца
	(14) Средней тяжести	20—23	60—30	0,2—0,5	(15) То же	(15) То же	0,3—0,7	(15) То же
	(16) Тяжелая	18—21	60—30	0,3—0,7	(22) То же, но не более 26°С	(19) При 26° С не более 65%. (19) При 25° С не более 70%. (20) При 24° С и ниже не более 75%.	0,5—1	»

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Continuation table 5.

(3) Характеристика производственных помещений	(4) Категория работы	(1) Холодный и переходный периоды года (температура наружного воздуха ниже +10°С)						(7) Допустимая температура воздуха в °С вне постоянных рабочих мест
		(2) На постоянных рабочих местах						
		(5) оптимальные			(6) допустимые			
		(8) температура воздуха в °С	(9) относительная влажность воздуха в %	(10) скорость движения воздуха в м/сек	(8) температура воздуха в °С	(9) относительная влажность воздуха в %	(10) скорость движения воздуха в м/сек	
1	2	3	4	5	6	7	8	9
(23) Помещения, характеризуемые значительными избытками явного тепла (более 20 ккал/м³·ч)	(12) Легкая	20—22	60—30	(13) Не более 0,2	17—24	(13) Не более 78	(13) Не более 0,5	15—26
	(14) Средней тяжести	17—19	60—30	(13) Не более 0,3	16—22	(15) То же	(13) Не более 0,6	15—24
	(16) Тяжелая	16—18	60—30	(15) То же	13—17	»	(15) То же	12—19

Notes: 1. The characteristic of industrial rooms on the categories of the fulfilled in them works depending on expenditure of energy one should be established in accordance with the departmental standard documents, matched in routine on the basis of the category of works, done by 50o/o and more working in the appropriate room.

2. In table 5 high speed of air motion corresponds to maximum temperature of air less - to minimum temperature of air.

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Continuation of Table 5.

(3) Характеристика производственных помещений	(4) Категория работы	(17) Теплый период года (температура наружного воздуха + 10°С и выше)						(7) Допустимая температура воздуха в °С вне постоянных рабочих мест
		(2) На постоянных рабочих местах						
		(5) оптимальные			(6) допустимые			
		(8) температура воздуха в °С	(9) относительная влажность воздуха в %	(10) скорость движения воздуха в м/сек	(8) температура воздуха в °С	(9) относительная влажность воздуха в %	(10) скорость движения воздуха в м/сек	
1	2	10	11	12	13	14	15	16
(23) Помещения, характеризуемые значительными избытками явного тепла (более 20 ккал/м³·ч)	(12) Легкая	22—25	60—30	0,2—0,5	(18) Не более, чем на 5°С выше средней температуры наружного воздуха в 13 часов самого жаркого месяца, но не более 28°С	(19) При 28°С не более 65%. При 27°С не более 60%. При 26°С не более 65%. При 25°С не более 70%. При 24°С и ниже, не более 75%	0,3—0,7	(27) Не более, чем на 5°С выше средней температуры наружного воздуха в 13 часов самого жаркого месяца
	(14) Средней тяжести	20—23	60—30	0,2—0,5	(15) То же	То же	0,5—1,0	(15) То же
	(16) Тяжелая	18—21	60—30	0,3—0,7	(22) То же, но не более 26°С	При 26° С не более 65%. При 25° С не более 70%. При 24° С и ниже не более 75%	0,5—1,0	»

3. In regions with increased relative humidity of surrounding air, it is allow/assumed during natural ventilation of buildings and constructions to accept, during definition/determination of required exchange of air, for warm period of year (calculated parameters A) relative atmospheric humidity in working zone by 10o/o it is higher, establish/installed in table 5 for permissible parameters of air medium.

4. Parameters of air in industrial rooms (temperature, relative

humidity and speed of air motion) out of working zone are not standardized.

Key: (1). Cold and transition periods of year (temperature of surrounding air lower than +10°C). (2). At permanent work sites. (3). Characteristic of industrial rooms. (4). Category of work. (5). optimum. (6). permissible. (7). Permissible temperature of air in °C out of permanent work sites. (8). temperature of air in °C. (9). relative atmospheric humidity in o/o. (10). speed of air motion in m/s. (11). Rooms, characterized by insignificant surpluses of explicit heat (20 kkal/m³•h and less). (12). Light. (13). It is not more. (14). Average/mean heaviness. (15). Then. (16). Heavy. (17). Warm period of year (temperature of surrounding air of +10°C it is above). (18). It is not more than on 3°C higher than mean temperature of surrounding air 13 hours of hottest month, but it is not more than 28°C. (19). At to more than . (20). At 24°C it is below not more than 75o/o. (21). It is not more than on 3°C higher than mean temperature of surrounding air 13 hours of hottest month. (22). Then, but is not more than 26°C. (23). Rooms, characterized by considerable surpluses of explicit heat (more than 20 kkal/m³•h). (24).

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Insignificant are considered the surpluses of explicit heat in the

quantity, which does not exceed 20 kkal/m³•h.

Explicit is the heat, which affects a change in the temperature of air in rooms.

11.5. All works, produced in enterprises, on heaviness are subdivided into three categories:

a) to category light works (expenditure of energy to 150 kcal/h) are related works, produced sitting, standing or connected with walking, but not requiring systematic physical voltage/stress or elevation and transference of heaviness (basic processes of sewing production, fine mechanics and machine-building, printing trade, work of controller/inspectors, workers of communication/connection, office works, etc.).

b) to the category of the works of average/mean heaviness (expenditure of energy more than 150 and to 250 kcal/h) are related works, connected with permanent walking, transference of small heaviness (to 10 kg.) and fulfilled standing (basic processes in spinning and weaving production, in assembly shops, during the machining of wood, in welding shops, in the mechanized open-hearth, foundry, rolled, forging, heat-treating shops, etc.).

c) to the category of punishments (expenditure of energy it is more than 250 kcal/h) are related the works, connected with systematic physical voltage/stress, and also with permanent movements and transference of considerable (it is more than 10 kg.) heaviness (shops forging with smith forging, foundry with manual gasket/filling and drenching of argillaceous clays, etc.).

11.6. In heated industrial rooms, and also in rooms with considerable surpluses of evident heat where to each worker it is necessary for effective area from 50 to 100 m², is allow/assumed to provide for in cold and transition periods of year decrease in temperature of air out of permanent work sites against those calibrated to 12°C in light works, to 10°C - in works of average/mean heaviness and to 8°C - in punishments.

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In this case, at permanent work sites, it is to provide for the maintenance of the meteorological conditions, establish/installed in table 5, for the cold and transition periods of year.

11.7. In industrial rooms with a floor space of to one worker, are more than 100 m² of norm of temperature, relative humidity and speeds of air motion, provided for in table 5, it is allow/assumed to

provide only at permanent work sites.

11.8. In idle time in heated industrial rocms, temperature of air in cold and transitien periods of year is not standardized.

11.9. In rooms with considerable moisture removal, is allow/assumed at permanent work sites improvement in relative atmospheric humidity, given in table 5, for warm period of year:

in hygrothermal sense (ratio of total quantity of explicit and concealed/latent heat toward quantity of releasing moisture) less than 2000, but is more than 1000 kcal/kg - maximally by 10o/o, but not higher 75o/o.

in hygrothermal sense is less than 1000 kcal/kg - maximally by 20o/o, but not higher 75o/o.

In this case, the temperature of air in rooms must not exceed 28°C in the works light and average/mean heaviness and 26°C - in punishment.

11.10. In unheated industrial and storage areas it is necessary to provide for devices for heating of workers at permanent work sites or special rooms in accordance with demands of chapter SNIP for

design of auxiliary buildings and rooms of industrial enterprises.

11.11. In industrial rooms, in which according to conditions of technology of production is required artificial maintenance of permanent temperature or temperature and relative atmospheric humidity, it is allow/assumed in all periods of year to accept meteorological conditions (temperature and relative atmospheric humidity) in limits of optimum parameters (±2°C, but it is not more than 25°C) for warm and cold periods of year according to this category of works and characteristic of industrial room.

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Deviations with respect to the conditions for technological process from the norms of the indicated in Table 5 parameters of air medium at large values are allow/assumed in accordance with the departmental standard documents, affirmed in routine.

11.12. Permissible temperatures, relative humidities and speeds of air motion in working zone, provided for in Table 5, must be provided for in parameters of surrounding air in accordance with instructions of chapter SNiP according to design of heating, ventilation and air conditioning.

11.13. In the case when mean temperature of surrounding air in 13 h of hottest month exceeds 25°C [1], permissible temperatures of air in industrial rooms at permanent work sites, indicated in table 5, it is possible to raise in warm period of year with preservation/retention/maintaininy of indicated in the same table values of relative atmospheric humidity:

FOOTNOTE [1]. 23°C for punishments. ENDFOOTNOTE.

on 3°C, but not higher 31°C, in rooms with the insignificant surpluses of explicit heat.

on 5°C, but not higher 33°C, in rooms with the considerable surpluses of explicit heat.

on 2°C, but not higher 30°C, in the rooms, in which according to the conditions of technology of production is required the artificial maintenance of temperature and relative atmospheric humidity, independent of the magnitude of the surpluses of explicit heat.

11.14. Temperature of heated surfaces of equipment and enclosure/protections at work sites must not exceed 45°C, but for equipment within which temperature is equal or below 100°C, temperature on surface must not exceed 35°C.

With the impossibility on tecanical reasons to achieve the temperatures indicated near tne sources of considerable radiant and convectional heat (melting and heating aggregate of the molten and incandescent metal, etc.) must ne provided for the measures for the defense of workers from possible superheating, somehow: water-air sprinkling, shielding, highly dispersed atomization/pulverization of water for the irradiated surfaces, cabs or surfaces of radiant cooling, room for rest, etc.

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Table 6. Norms of temperatures and speeds of air motion during air sprinkling.

(2) Периоды года	(3) Категории работы	(1) При тепловом облучении									
		(4) от 300 до 600 ккал/м³·ч		(5) более 600 до 1200 ккал/м³·ч		(5) более 1200 до 1800 ккал/м³·ч		(5) более 1800 до 2400 ккал/м³·ч		(6) 2400 ккал/м³·ч и более	
		(7) температура воздуха в °С	(8) скорость движения воздуха в м/сек	(7) температура воздуха в °С	(8) скорость движения воздуха в м/сек	(7) температура воздуха в °С	(8) скорость движения воздуха в м/сек	(7) температура воздуха в °С	(8) скорость движения воздуха в м/сек	(7) температура воздуха в °С	(8) скорость движения воздуха в м/сек
1	2	3	4	5	6	7	8	9	10	11	12
(9) Теплый (температура наружного воздуха + 10° С и выше)	(10) Легкая	22—24	0,5—1,0	21—23	0,7—1,5	20—22	1,0—2,0	19—22	2,0—3,0	19—20	2,5—3,5
	(11) Средней тяжести	21—23	0,7—1,5	20—22	1,5—2,0	19—21	1,5—2,5	18—21	2,0—3,5	18—19	3,0—3,5
	(12) Тяжелая	20—22	1,0—2,0	19—21	1,5—2,5	18—20	2,0—3,0	18—19	3,0—3,5	18—19	3,0—3,5
(13) Холодный и переходный (температура наружного воздуха ниже + 10° С)	(10) Легкая	22—23	0,5—0,7	21—22	0,5—1,0	20—21	1,0—1,5	19—22	1,5—2,0	19—22	1,5—2,0
	(11) Средней тяжести	21—22	0,7—1,0	20—21	1,0—1,5	19—20	1,5—2,0	19—21	2,0—2,5	19—21	2,0—2,5
	(12) Тяжелая	20—21	1,0—1,5	19—20	1,5—2,0	18—19	2,0—2,5	18—19	2,5—3,0	18—19	2,5—3,0

Notes: 1. The intensity of thermal irradiation, indicated in Table 6, is defined as the average for 1 h.

2. Direction of air jet during air sprinkling is recommended to provide for, as a rule, to irradiated body surface.

Key: (1). During thermal irradiation. (2). Periods of year. (3). Category of work. (4). from 300 to 600 kkal/m³•h. (5). more than 600

to 1200 kkal/m³•h. (6). 2400 kkal/m³•h and more. (7). temperature of air in °C. (8). velocity of air motion in m³/s. (9). Warm (temperature of external air+10°C is above). (10). Light. (11). Average/mean heaviness. (12). Heavy. (13). Cold and transient (temperature of surrounding air lower than +10°C).

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11.15. Air sprinkling is to provide for at permanent work sites, characterized by effect of radiant heat on workers of 300 kcal/m² h and more.

Temperatures and speeds of movement of air at the permanent work sites, operated by air showers, should be provided for in accordance with table 6.

The calculated parameters of surrounding air during the design of the systems of air sprinkling should be accepted in accordance with the demands of chapter SNIP according to the design of heating, ventilation and air conditioning.

11.16. In cold and transition periods of year in industrial rooms in which are conducted works of average/mean heaviness and heavy, and also during application/use of heating system and

ventilation with concentrated air supply, it is allow/assumed to provide for increased speeds of air motion to 0.7 m/s at permanent work sites during simultaneous increase in temperature of air on 2°C.

11.17. At work sites, at which are conducted process/operations, connected with permanent contact with wet and cold object/subjects (for example, division of frozen meat, fish), should be provided for devices for heating of hands.

12. Maximum permissible concentrations of harmful substances in water of the basins of the public and domestic sanitation water-use.

12.1. In water of basins of public and domestic sanitation water-use, are established the maximum permissible concentrations of harmful substances, asserted by Ministry of Pub. Health of USSR, given in Table 7 whose excess is not allow/assumed.

12.2. During contamination of water of basins, which use for domestic water-use, by complex of harmful substances with identical limiting indices of harm: organoleptic (according to odor, off-flavor, coloration), on effect on common/general/total sanitary conditions/mode of basin (to self-purification from organic contamination), according to sanitary-toxicological index, given in Table 7 maximum permissible concentrations for separate substances must be accepted taking into account one of of following indications:

Table 7. Maximum permissible concentrations of harmful substances in water of the basins of the public and domestic sanitation water-use.

(a) Наименование вещества	(b) Лимитирующий показатель вредности	(c) Предельно допустимая концентрация в *мг/л*
1. Адипат натрия	(1a) Санитарно-токсикологический	1,0
2. Акриловая кислота	(2a) То же	0,5
3. Анизол	»	0,05
4. Анилин	»	0,1
5. Ацетоциангидрин	»	0,001
6. Ацетофенон	»	0,1
7. Бензол	»	0,5
8. Бериллий (Be^{2+})	»	0,0002
9. Ванадий (V^{V})	»	0,1
10. Винилацетат	»	0,2
11. Вольфрам (Wo^{VI})	»	0,1
12. Гексаметилендиамин	»	0,01
13. Гексанат	»	5
14. Гексахлорбензол	»	0,05
15. Гексоген	»	0,1
16. Гидразин	»	0,01
17. Гидроперекись изопропилбензола	»	0,5
18. Гептахлор	»	0,05
19. Гептиловый спирт	»	0,005
20. Дибутилдилаурат — олово	»	0,1
21. ДДТ	»	0,1
22. Диизопропиламин	»	0,5
23. м-Диизопропилбензол	»	0,05
24. п-Диизопропилбензол	»	0,05
25. Диметиламин	»	0,1
26. Диметилдиоксан	»	0,005
27. Диметилдитиокарбамат	»	0,5
28. Диметилфенилкарбинол	»	0,05
29. Динитрил адипиновой кислоты	»	0,1
30. 2,4-Динитрофенол	»	0,03
31. Дихлордибутилолово	»	0,002
32. 2,3-Дихлор — 1,4-нафтахинон	»	0,25
33. Диэтиламин	»	2
34. Диэтилдиакрилатолово	»	0,01
35. Диэтиленгликоль	»	1
36. Диэтиловый эфир малеиновой кислоты	»	1
37. Диэтилртуть	»	0,0001
38. Изокротонитрил	»	0,1
39. Изопропиламин	»	2
40. Кротонитрил	»	0,1
41. Кобальт (Co^{2+})	»	1
42. 2,5-Лутидин	»	0,05
43. Метакриламид	»	0,1
44. Метилацетат	»	0,1
45. Метилолметакриламид	»	0,1
46. Молибден (Mo^{VI})	»	0,5
47. Монометиламин	»	1
48. Мышьяк (As^{3+})	»	0,05
49. β-Нафтол	»	0,4
50. Нитраты (по азоту)	»	10
51. Нитрил акриловой кислоты	»	2

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Continuation Table 7.

82. м-Нитрофенол	(10) Санитарно-токсикологический	0.08
83. о-Нитрофенол	(29) То же	0.08
84. п-Нитрофенол	»	0.02
85. Нитрохлорбензол	»	0.05
86. Нитроциклогексан	»	0.1
87. Нониловый спирт	»	0.01
88. Парафенилендиамин (урсол)	»	0.1
89. Парахинондиоксим	»	0.1
90. Пентанат	»	2.5
91. Перхлорат аммония	»	5
92. α-Пиколин	»	0.05
93. Пиридин	»	0.2
94. Полихлорпинен	»	0.2
95. Роданиды	»	0.1
96. Ртуть [2] (Hg^{2+})	»	0.005
97. Свинец (Pb^{2+})	»	0.1
98. Селен (Se^{6+})	»	0.001
99. Стронций (стабильный) (Sr^{2+})	»	2
70. Сурьма (Sb^{3+})	»	0.05
71. Теллур (Te^{3+})	»	0.01
72. Тетрахлорбензол	»	0.01
73. Тетраэтилолово	»	0.0002 (74a)
74. Тетраэтилсвинец	»	Отсутствие
75. Триэтиламин	»	2
76. Трифторхлорпропан	»	0.1
77. Уротропин	»	0.5
78. Фенилгидразин	»	0.01
79. Ферроцианиды	»	1.25
80. Формальдегид	»	0.5
81. Фтор [3] (F^-)	»	1.5
82. Фуран	»	0.2
83. м-Хлоранилин	»	0.2
84. п-Хлоранилин	»	0.2
85. Хлорбензол	»	0.02
86. Цианиды [4]	»	0.1
87. Циклогексан	»	0.1
88. Циклогексен	»	0.02
89. Циклогексанол	»	0.5
90. Циклогексанон	»	0.2
91. Циклогексаноноксим	»	1
92. Четыреххлористый углерод	»	0.3
93. Эпихлоргидрин	»	0.01
94. Этиленгликоль	»	1
95. Этилмеркурхлорид (96a)	» (97a)	0.0001
96. Аммиак (по азоту)	Общесанитарный	2
97. Ацетон	»	В пределах, допустимых расчетом на содержание органических веществ в воде водоемов и по показателям БПК и растворенного кислорода
98. Бензойная кислота	»	11
99. Бутилацетат	»	0,1
100. Гексаметилендиаминадипат (АГ-соль)	»	1
101. Дибутилфталат	»	0,2
102. Диметилформамид	»	10

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Continuation table 7.

103. Динитрородинбензол	(96a) Общесанитарный	0,5
104. Диоктилфталат	»	1
105. Дифенилгуанидин	»	1
106. Изобутиловый спирт	»	1
107. Кадмий (Cd^{2+})	»	0,01
108. Капролактам	»	(97a) 1
109. Масляная кислота	»	В пределах, допустимых расчетом на содержание органических веществ в воде водоемов и по показателям БПК и растворенного кислорода
110. Метанол	»	
111. Молочная кислота	»	
112. Муравьиная кислота	»	
113. Медь (Cu^{2+})	»	0,1
114. Метилпирролидон	»	0,5
115. Моноэтиловый эфир этиленгликоля	»	1
116. Никель (Ni^{2+})	»	(97a) 0,1
117. Норсульфазол	»	0,1
118. Пропиленгликоль	»	В пределах, допустимых расчетом на содержание органических веществ в воде водоемов и по показателям БПК и растворенного кислорода
119. Синтетические жирные кислоты ($C_5 - C_{20}$)	»	
120. Солянокислый дефинилгуанидин	»	1
121. Стрептоцид	»	0,5
122. Сультин	»	0,01
123. Сульфиды [4]	»	Отсутствие (74a)
124. Сульфадимезин	»	1
125. Терефталевая кислота	»	0,1
126. Тетрагидрофуриловый спирт	»	0,5
127. Титан (Ti^{3+})	»	0,1
128. Тринитротолуол	»	0,5
129. Трихлорацетат натрия	»	(97a) 5
130. Триэтиленгликоль	»	В пределах, допустимых расчетом на содержание органических веществ в воде водоемов и по показателям БПК и растворенного кислорода
131. Уксусная кислота	»	
132. Фталевая кислота	»	0,5
133. Хлор активный [4]	(35a) »	Отсутствие (74a)
134. Цинк (Zn^{2+})	»	1
135. Авадекс	Органолептический	0,03
136. Алдрин	»	0,002
137. Амины жирного ряда $C_7 - C_9$	»	0,1
138. Амины жирного ряда $C_{10} - C_{14}$	»	0,04
139. Амины жирного ряда $C_{15} - C_{20}$	»	0,03
140. о-Аминофенол	»	0,01
141. п-Аминофенол	»	0,05
142. Ацетальдегид	»	0,2
143. Ацетофос	»	0,03

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Continuation table 7.

144. Барий (Ba^{2+})	(1359) Органолептический	4
145. Бензин	»	0,1
146. Бутилакрилат	»	0,015
147. Бутилбензол	»	0,1
148. Бутилен	»	0,2
149. Бутиловый спирт	»	1
150. Винилсиликонат натрия (ГКЖ-12)	»	2
151. Гексахлоран	»	0,02
152. Гексахлорбутадиен	»	0,01
153. Гексахлорбутан	»	0,01
154. Гексахлорциклопентадиен	»	0,001
155. Гексахлорэтан	»	0,01
156. Гидрохинон	»	0,2
157. Далапон	»	2
158. Дикотекс	»	0,25
159. Диметилдитиофосфорная кислота	»	0,1
160. Диметилдихлорвинилфосфат (ДДВФ)	»	1
161. Диметилтерефталат	»	1,5
162. Динзобутиламин	»	0,07
163. Динзопропилдитиофосфорный калий	»	0,02
164. Динитробензол	»	0,5
165. Динитронафталин	»	1
166. Динитрохлорбензол	»	0,5
167. Дипропиламин	»	0,5
168. Дитиофосфат крезиловый	»	0,001
169. Диурон	»	1
170. Дифенилолпропан	»	0,01
171. 3,4-Дихлоранилин	»	0,05
172 2,5-Дихлоранилин	»	0,05
173. о-Дихлорбензол	»	0,002
174. п-Дихлорбензол	»	0,002
175. Дихлорбутен	»	0,05
176. Дихлоргидрин	»	1
177. Дихлорметан	»	7,5
178. Дихлорфенол	»	0,002
179. Дихлорциклогексан	»	0,02
180. Дихлорэтан	»	2
181. Дициандиамид	»	10
182. Диэтаноламин	»	0,8
183. Диэтилдитиофосфорная кислота	»	0,2
184. Диэтилдитиофосфорный калий	»	0,5
185. Диэтиловый эфир	»	0,3
186. Железо (Fe^{3+})	»	0,5
187. Изобутилен	»	0,5
188. Изопрен	»	0,005
189. Изопропилфенилкарбамат (ИФК)	»	0,2
190. Изопропилхлорфенилкарбамат (Хлор-ИФК)	»	1
191. Карбин	»	0,03
192. Карбофос	»	0,06
193. Керосин	»	0,1
194. Ксантогенат бутиловый	»	0,001
195. Ксилол	»	0,05
196. Малеиновая кислота	»	1

Continuation table 7.

197. β-Меркаптодиэтиламин (1359)	Органолептический	0,1
198. Меркаптофос	»	0,01
199. Метафос	»	0,02
200. Метилакрилат	»	0,02
201. Метилдитиокарбамат (карбатион)	»	0,02
202. Метилнитрофос	»	0,25
203. Метилсиликонат натрия (ГКЖ-11)	»	2
204. Метиленстоке	»	0,01
205. α-Метилстирол	»	0,1
206. Метилэтилкетон	»	1
207. Монопатриевая соль циануровой кислоты	»	25
208. Монопропиламин	»	0,5
209. Монохлоргидрин	»	0,7
210. Моноэтиламин	»	0,5
211. Монурон	»	5
212. Натриевая соль дихлорфеноуксусной кислоты (Na-2, 4 Д)	»	1
213. Нафтеновые кислоты	»	0,3
214. α-Нафтол	»	0,1
215. Нефть многосернистая	»	0,1
216. Нефть прочая	»	0,3
217. п-Нитрофениламиноэтанол (оксамин)	»	0,5
218. п-Нитрофенилхлорметилкарбинол (карбинол)	»	0,2
219. п-Нитрофенилацетиламиноэтанол (оксацетиламин)	»	1
220. Нитроформ	»	0,01
221. О-диметил — S-этилмеркаптоэтилдитиофосфат (М-81)	»	0,001
222. Пентахлорбутан	»	0,02
223. Пентахлорфенол	»	0,3
224. Пентахлорфенолят натрия	»	5
225. Пикриновая кислота	»	0,5
226. Полиметилгидросилоксан (ГКЖ-94м)	»	2
227. Полиметилхлорфенилсилоксан (ХС-2-1)	»	10
228. Полиметилгидросилоксан (ГКЖ-94)	»	10
229. Полиэтилсилоксан (смазка)	»	10
230. Прометрин	»	3
231. Пропазин	»	1
232. Пропилбензол	»	0,2
233. Пропилен	»	0,5
234. Салюзин	»	0,2
235. Севин	»	0,1 (749)
236. Сероуглерод	»	1
237. Симазин (нерастворенный)	»	Отсутствие

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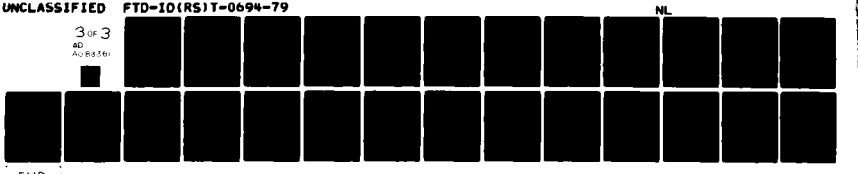

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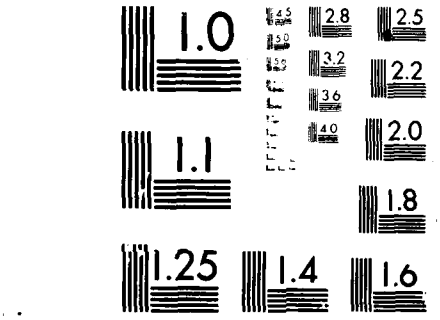
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Continuation table 7.

238. 3-оксипроизводное симазина (нерастворенное)	(1350) Органолептический	(74) Отсутствие
239. Сименидар	»	0,2
240. Стирол	»	0.1
241. Тетрагидрохинон	»	0.05
242. Тетранитрометан	»	0.5
243. Тетрахлоргептан	»	0.0025
244. Тетрахлорнонан	»	0.003
245. Тетрахлорпентан	»	0.005
246. Тетрахлорпропан	»	0.01
247. Тетрахлорундекан	»	0.007
248. Тетрахлорэтан	»	0.2
249. Тиофен	»	2
250. Тиофос	»	0.003
251. Толуол	»	0.5
252. Трибутилфосфат	»	0.01
253. Трихлорметафос-3	»	0.4
254. Триэтаноламин	»	1.4
255. Трихлорэтилен	»	0.5
256. Трихлорфенол	»	0.0004
257. Фенол[7] (карболовая кислота)	»	0.001
258. Фосбутил	»	0.03
259. Фосфамид (рогор)	»	0.03
260. Фталофос	»	0.2
261. Фурфурол	»	1
262. Хлорамин	»	0.01
263. Хлорат натрия	»	20
264. Хлорнитрозоциклогексан	»	0.005
265. Хлоропрен	»	0,1
266. Хлорофос	»	0.05
267. Хлорпеларгоновая кислота	»	0,3
268. Хлорундекановая кислота	»	0,1
269. Хлорэнантовая кислота	»	0.05
270. Хлорэндиковый ангидрид	»	1
271. Хлорциклогексан	»	0.05
272. Хром (Cr^{3+})	»	0.1
273. Хром (Cr^{6+})	»	0,5
274. Целатоке	»	0.5
275. Цианурован кислота	»	6
276. Этилакрилат	»	0.005
277. Этилен	»	0.5
278. Этилбензол	»	0.01
279. Этилсиликонат натрия (ГКЖ-10)	»	2
280. Эфирсульфонат	»	0,2
(2804) Поверхностно активные вещества (ПАВ)		
281. Алкилбензолсульфонаты (АБС)	»	0.5
282. Алкилсульфаты	»	0.5
283. Алкилсульфонаты	»	0,5

284. Динатриевая соль монoалкилсульфоянтарной кислоты (ДНС) (284a) Флотореагенты[a]	Органолептический (35)	0,5
285. АПН	»	0,05
286. ОП-7	»	0,4
287. ОП-10	(96a) »	1,5
288. ОПС-Б	Общесанитарный	2
289. ОПС-М (289a) Флокулянты	(1A) Санитарно-токсикологический (4a)	0,5
290. ВА-2 (полистирольный)	То же	0,5
291. ВА-2-Т (поливинилтолуольный)	»	0,5
292. ВА-102	»	2
293. ВА-212	»	2
294. Полиакриламид	»	2

Key: (a). Designation of substance. (b). Limiting index of harm. (c). Maximum permissible concentration in mg/l. (1). Adipate of sodium. (1A). Sanitary-toxicological. (2). Acrylic acid. (2a). Then. (3). Anisole. (4). Aniline. (5). Acetone cyanohydrin. (6). Acetophenone. (7). Benzene. (8). Beryllium. (9). Vanadium. (10). Vinyl acetate. (11). Tungsten. (12). Hexametnylenediamine. (13). Hexanate. (14). Hexachlorobenzene. (15). Cyclonite. (16). Hydrazine. (17). Hydroperoxide of isopropyl benzene. (18). Heptachlor. (19). Gentyl alcohol. (20). Dibutyldilaurate - tin. (21). DDT. (22). Diisopropylamine. (23). m-Diisopropylbenzene. (24).

p-dypsopropylbenzene. (25). Dimetnylamine. (26). Dimethyldioxane. (27). Dimethyl dithiocarbamate. (28). Dimethylphenyl carbinol. (29). Dinitrile of adipinic acid. (30). 2,4-dinitrophenol. (31). Dichlorodibutyltin. (32). 2,3-Dicnloro - 1,4-naphthaquinone. (33). Diethylamine. (34). Diethyldicaprylatol. (35). Diethylene glycol. (36). Diethyl ether of maleic acid. (37). Diethylmercury. (38). Isocrotonitril. (39). Isopropylamine. (40). Crotonitril. (41). Cobalt. (42). 2.5-lutidine. (43). Methacrylamide. (44). Methyl acetate. (45). Methylolmetnacrylamide. (46). Molybdenum. (47). Monomethylamine. (48). Arsenic[1].

FOOTNOTE [1]. Eliminating organic compounds. ENDFOOTNOTE.

(49). β-Naphthol. (50). Nitrates (on nitrogen). (51). Nitrile of acrylic acid. (52). m-Nitropnenol. (53). o-Nitrophenol. (54). p-Nitrophenol. (55). Nitrochloropenzene. (56). Nitro cyclohexane. (57). Nonyl alcohol. (58). Paraphenylenediamine (ursol). (59). Paraquinonedioxim. (60). Pentanate. (61). Ammonium perchlorate. (62). α-picoline. (63). Pyridine. (64). Polychloropinene. (65). Thiocyanates. (66). Mercury[2].

FOOTNOTE [2]. For inorganic compounds. ENDFOOTNOTE.

(67). Lead. (68). Selenium. (69). Strontium (stable). (70). Antimony.

(71). Tellurium. (72). Tetrachlorobenzene. (73). Tetraethyl tin. (74). Tetraethyl lead. (74a). Absent. (75). Triethylamine. (76). Trifluorochloropropane. (77). Urotropin. (78). Phenylhydrazine. (79). Ferrocyanide. (80). Formaldehyde. (81). Fluorine[3].

FOOTNOTE [3]. Has in mind fluorine also in compounds. ENDFOOTNOTE.

(82). Furan. (83). m-Chloraniline. (84). P-Chloraniline. (85). Chlorobenzene. (86). Cyanides[4].

FOOTNOTE [4]. Cyanides simple and complex (with exception of cyanoferrate) taking into calculation cyanogen. ENDFOOTNOTE.

(87). Cyclohexane. (88). Cyclohexene. (89). Cyclohexanol. (90). Cyclohexanone. (91). Cyclohexanoneoxime. (92). Carbon tetrachloride. (93). Epichlorhydrin. (94). Ethylene glycol. (95). Ethylmercurychloride. (96). Ammonia (on nitrogen). (96a). General health. (97). Acetone. (97a). In the limits, permissible by calculation for the content of organic matter in water of basins and according to indices of BPK and dissolved oxygen. (98). Benzoic acid. (99). Butyl acetate. (100). Hexamethylenediaminadipate (AG-salt). (101). Dibutyl phthalate. (102). Dimethyl formamide. (103). Dinitrhodaninebenzene. (104). Dioctyl phthalate. (105). Diphenylguanidine. (106). Isobutyl alcohol. (107). Cadmium. (108).

Caprolactam. (109). Butyric acid. (110). Menthanol. (111). Lactic acid. (112). Formic acid. (113). Copper. (114). Methylpyrolidone. (115). Monoethyl ether/ester of ethylene glycol. (116). Nickel. (117). Norsulfazole. (118). Propyleneglycol. (119). Synthetic fatty acids. (120). Hydrochloride definylguanidine. (121). Streptocide. (122). Sulgin. (123). Sulfides[5].

FOOTNOTE [5]. Taking into account oxygen conditions/mode for winter conditions. ENDFOOTNOTE.

(124). Sulfadimesine. (125). Terephthalic acid. (126). Tetrahydrofuryl alcohol. (127). Titanium. (128). Trinitrotoluene. (129). Trichloroacetate of sodium. (130). Triethylene glycol. (131). Acetic acid. (132). Phthalonic acid. (133). Chlorine (active[6].)

FOOTNOTE [6]. Taking into account chlorine absorptivity of water of basins. ENDFOOTNOTE.

(134). Zinc. (135). Avadex [di-allate]. (135a). Organoleptic. (136). Aldrin. (137). Amines of aliphatic series. (138). Amines of aliphatic series. (139). Amines of aliphatic series. (140). o-Aminophenol. (141). p-Aminophenol. (142). Acetaldehyde. (143). Acetophos. (144). Barium. (145). Gasoline. (146). Butylacrylate. (147). Butyl benzene. (148). Butylene. (149). Butyl alconol. (150). Vinylsiliconate of

sodium. (151). Hexachloran. (152). Hexachlorobutadiene. (153). Hexachlorobutane. (154). Hexachlorcyclopentadiene. (155). Hexachloroethane. (156). Hydroquinone. (157). Dalapon. (158). Dicotex. (159). Dimethyldithiophosphoric acid. (160). Dimethyldichlorovinylphosphate. (161). Dimethylterephthalate. (162). Diisobutylamine. (163). Diisopropyldithiophosphoric potassium. (164). Dinitrobenzene. (165). Dinitronaphthalene. (166). Dinitrochlorbenzene. (167). Dipropylamine. (168). Dithiophosphate (cresyl blue. (169). Diuron. (170). Diphenylol propane. (171). 3,4-Dichloroaniline. (172). 2,5-Dichloroaniline. (173). o-Dichlorobenzene. (174). p-Dichlorobenzene. (175). Dichlorobutene. (176). Dichlorohydrin. (177). Dichloromethane. (178). Dichlorophenol. (179). Dichlorocyclohexane. (180). Dichloroethane. (181). Dicyandiamide. (182). Diethanolamine. (183). Diethyldithiophosphoric acid. (184). Diethyldithiophosphoric potassium. (185). Diethyl ether. (186). Iron. (187). Isobutylene. (188). Isoprene. (189). Isopropylphenylcarbamate. (190). Isopropylchlorophenyl-carbamate (chlorine-IPK). (191). Cardyne. (192). Carbophos. (193). Kerosene. (194). Xanthogenate (butyl. (195). Xylene. (196). Maleic acid. (197). β-Mercaptodiethylamine. (198). Mercaptophos. (199). Metafos. (200). Methylacrylate. (201). Methyldithiocarbamate (carbathio). (202). Methylnitrophos. (203). Methylsiliconate of sodium. (204). Methyl mercaptophos. (205). α-metnyl styrene. (206). Methylethylketone. (207). Monosodium salt of cyanuric acid. (208). Mono-propylamine.

(209). Mono-chlorohydrin. (210). Mono-ethylamine. (211). Monuron. (212). Sodium salt of dichlorophenoacetic acid. (213). Naphthene acids. (214). α-Naphthol. (215). Oil polysulfide. (216). Oil other. (217). p-nitrophenylaminoethanol (oxiamine). (218). p-Nitrophenylmethyl chloridecarbinol (carbinol). (219). p-Nitrophenylacetylaminoethanol (oxyacetylamine). (220). Nitroform. (221). O-dimethyl-S-ethylmercaptoethyldithiophosphate. (222). Pentachlorobutane. (223). Pentachlorophenol. (224). Pentachlorophenolate sodium. (225). Picric acid. (226). Polymethylhydrosiloxane. (227). Polymethyldichlorophenylsiloxane. (228). Polyethylhydrosiloxane. (229). Polyethylsiloxane (lubrication). (230). Promethrine. (231). Propazine. (232). Propylbenzene. (233). Propylene. (234). Saponin. (235). Sevin. (236). Carbon disulfide. (237). Cymazene (undissolved). (238). 2-hydroxyderivative of simazine (undissolved). (239). Turpentine. (240). Styrene. (241). Tetranydroquinone. (242). Tetranitromethane. (243). Tetrachloroheptane. (244). Tetrachlorononane. (245). Tetrachloropentane. (246). Tetrachloropropane. (247). Tetrachloroundecane. (248). Tetrachloroethane. (249). Thiophene. (250). Thiophos. (251). Toluene. (252). Tributylphosphate. (253). Trichlorometaphos-3. (254). Trietnanolamine. (255). Trichloroethylene. (256). Trichlorophenol. (257). Phenol' (carbolic acid).

FOOTNOTE [7]. For the points of water-use, which use a basin as the sources of the household drinking water supply. ENDFOOTNOTE.

(258). Phosbutyl. (259). Phospnamide (Rogor). (260). Phthalophos. (261). Furfural. (262). Chloranil. (263). Sodium chlorate. (264). Chloronitrosocyclohexane. (265). Chloroprene. (266). Chlorophos. (267). Chloropelargonic acid. (268). Chloroundecanic acid. (269). Chloroapentic acid. (270). Chloroandic anhydride. (271). Chlorocyclohexane. (272). Chromium. (273). Chromium. (274). Celatox. (275). Cyanuric acid. (276). Ethylacrylate. (277). Ethylene. (278). Ethylbenzene. (279). Ethylsiliconate of sodium. (280). Ovotran [chlorophenylchlorobenzenesulfonate]. (280a). Surface-active substances. (281). Alkylbenzenesulfonate. (282). Alkylsulfate. (283). Alkyl sulfonates. (284). Disodium salt of monoalkylsulfosuccinic acid. (284a). Flotation reagents[8].

FOOTNOTE [8]. Flotation reagents, which have constant composition. ENDFOOTNOTE.

(285). APN. (286). OP-7. (287). OP-10. (288). OPS-B. (289). OPS-M. (289a). Flocculants. (290). VA-2 (polystyrene). (291). VA-2-T (polyvinyltoluol). (292). VA-102. (293). VA-212; (294) Polyacrylamide.

a) with the realization of preventive/warning sanitary supervision - the magnitude of the maximum permissible concentration of each substance, entering the complex, must be decreased to as much time, as harmful substances with the identical limiting indices of harm are planned to descent with effluents or is contained in basin.

b) with the realization of the current sanitary supervision - the sum of the concentrations of all substances, expressed in percentages of the appropriate maximum permissible concentrations for each substance individually, must not exceed 100o/o.

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13. Noise, ultrasound and vibration.

13.1. During design of newly projected and reconstructed enterprises, their separate buildings and constructions, should be provided for measures, preventing harmful effect on workers of noise, vibration and ultrasound when their levels exceed permissible, provided for in present norms.

13.2. Measures for decrease in excess sound pressure levels,

ultrasound and vibration, which are generated during realization of technological process of production to values, establish/installed in present norms, must be provided for first of all in technological aspect of project, and also in volumetric-planning and constructive solutions of buildings and constructions.

NOISE.

13.3. Standardized parameters of noise are levels in decibels (L dB) of root-mean-square sound pressures, measured on linear characteristic of audio-noise meter (or to scale of "C") in octave frequency bands with geometric mean frequencies 63, 125, 250, 500, 1000, 2000, 4000 and 8000 Hz, determined according to formula

$$L = 20 \lg \frac{P}{2 \cdot 10^{-5}} \text{ dB} \qquad (3)$$

where P - sound pressure in N/m^2; $2 \cdot 10^{-5}$ - threshold quantity of the rms sound pressure.

Note. For the rough estimate of noise, it is allow/assumed to put to use its common/general/total level, measured according to the scale by "A" of audio-noise meter and named "level of sound" in dBA.

13.4. Permissible sound pressure levels and levels of sound at

permanent work sites in rooms and in territory of enterprises should be accepted on Table 8.

13.5. During design of newly projected and reconstructed enterprises, their separate buildings and constructions, should be provided for measures whose execution must provide in territory of habitable building-up sound pressure level not not exceeding permissible, established by present norms.

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Table 8. Permissible sound pressure levels and levels of sound at permanent work sites.

(a) Наименование	(2) Среднегеометрические частоты октавных полос в Гц								Уровни звука в дБА
	63	125	250	500	1000	2000	4000	8000	
	(d) Уровни звукового давления в дБ								
1. При шуме, проникающем извне помещений, находящихся на территории предприятий:									
(1a) а) конструкторские бюро, комнаты расчетчиков и программистов счетно-электронных машин, помещения лабораторий для теоретических работ и обработки экспериментальных данных, помещения приема больных здравпунктов	71	61	54	49	45	42	40	38	50
(1b) б) помещения управлений (рабочие комнаты)	79	70	63	58	55	52	50	49	60
(1c) в) кабины наблюдения и дистанционного управления	94	87	82	78	75	73	71	70	80
(1d) г) то же, с речевой связью по телефону	83	74	68	63	60	57	55	54	65
2. При шуме, возникающем внутри помещений и проникающем в помещения, находящиеся на территории предприятий:									
(2a) а) помещения и участки точной сборки, машинописные бюро	83	74	68	63	60	57	55	54	65

(26) б) помещения лабораторий, помещения для размещения «шумных» агрегатов счетно-вычислительных машин (табуляторов, перфораторов, магнитных барабанов и т. п.)	94	87	82	78	75	73	71	70	80
3. Постоянные рабочие места в производственных помещениях и на территории предприятий	103	96	91	88	85	83	81	80	90

Notes: 1. Depending on the character of noise and time of its effect of the magnitude of octave sound pressure levels, given in present table, they are subject to refinement according to table 9.

2. Acoustic calculation of ventilation installations should be performed, being guided by requirements of indications according to acoustic calculation of ventilation installations.

3. Permissible sound pressure levels, created in rooms by installations of air conditioning, ventilation and hot-air heating, should be accepted on those 5 dB below indicated in table 8 or actual noise levels in these rooms, if latter do not exceed standard magnitudes, indicated in table 8. Correction for the key of ventilation noise in this case accepted should not be.

Key: (a). Designation. (b). Geometric mean frequencies of octave bands in Hz. (c). Levels of sound into dBA. (d). Sound pressure levels in dB. (1). With noise, which penetrates inside rooms, which are found on territory of enterprises. (1a). a) design offices, rooms of calculations and programmers of calculating-electronic machines, room of laboratories for theoretical works and processing of experimental data, room of method of large public health stations. (1b). b) the room of controls (working room). (1c). c) the cab of observation and remote control. (1d). d) the same, with voice communication on telephone. (2). With noise, which appears indoors and which penetrates into rooms, which are found on territory of enterprises. (2a). a) room and sections of a precise assembly, typewritten offices. (2b). b) room of laboratories, room for location of "noisy" aggregates of accounting and computing machines (tabulators, perforators, magnetic drums, etc.). (3). Permanent work sites in industrial rooms and in territory of enterprises.

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13.6. Permissible sound pressure levels in octave frequency bands and levels of sound in territory of habitable building-up should be accepted on table 10 with corrections on table 11.

13.7. Sound pressure levels, created in territory of habitable building-up by sources of noise (machines, equipment, installations) of enterprises, should be determined from formula

$$L = L_p - 20\lg r - \frac{\beta_a r}{1000} - 8дБ, \qquad (4)$$

where L - sound pressure level, created by sources of noise (installations, machines, equipment) of enterprises in territory of habitable building-up.

L_p — level of the acoustic power, radiated noise sources, in dB relative to 10^{-12} W.

r - distance from noise source to the territory of habitable building-up m.

β_a — fading noise in the atmosphere into dB/km, taken on Table 12.

Table 9. Corrections to octave sound pressure levels and levels of sound in dB and dBA.

(1) Суммарная длительность воздействия за смену (рабочий день)	(2) Характер шума	
	(3) широкополосный	(4) тональный или импульсный
(5) От 4 (6) до 8 ч	0	−5
» 1 » 4 »	+6	+1
» ¼ » 1 » (7)	+12	+7
(8) 5 » 15 мин	+18	+13
Менее 5 мин (9)	+24	+19

Note. The duration of the effect of noise must be substantiated by calculation or confirmed by technical documentation.

Key: (1). Total duration of the effect per shift (workday). (2). Character of noise. (3). broadband. (4). tone or pulse.

Table 10. Permissible sound pressure levels and levels of sound in the territory of residential building.

(1) Наименование	(2) Среднегеометрические частоты октавных полос в Гц								(3) Уровень звука в дБА
	63	125	250	500	1000	2000	4000	8000	
	(4) Уровни звукового давления в дБ								
(5) Территория жилой застройки (в 2 м от ограждающих конструкций жилых и общественных зданий), площадки отдыха микрорайонов и жилых кварталов, площадки детских дошкольных учреждений, участки школ	67	57	49	44	40	37	35	33	45

Key: (1). Designation. (2). Geometric mean frequencies of octave

bands in Hz. (3). Level of sound and dBA. (4). Sound pressure levels in dB. (5). Territory of habitable building-up (2 m of enclosing construction/designs of habitable and public buildings), area/site of rest of city blocks and residential sections, area/site of children's pre-school institutions, sections of schools.

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Table 11. Corrections to the permissible octave sound pressure levels and the levels of sound.

(1) Влияющий фактор	(2) Условия	(3) Поправки в *дБ* или в *дБА*
(4) Характер шума	(5) Широкополосный	0
	(6) Тональный, импульсный (при измерениях стандартным шумомером)	—5
(7) Место расположения объекта	(8) Курортный район	—5
	(9) Новый проектируемый жилой район	0
	(10) Жилая застройка, расположенная в существующем населенном пункте	+5
(11) Время суток	(12) Дневное время — с 7 до 23 ч	+10
	(13) Ночное время — с 23 ч до 7 ч	0
(14) Длительность воздействия шума в дневное время за наиболее шумные ½ ч	(15) Суммарная длительность в %:	
	56—100	0
	18—56	+5
	6—18	+10
	(16) менее 6	+15

Notes: 1. The duration of the effect of noise must be substantiated by calculation or confirmed by technical documentation.

2. Tone ones should be counted noise, in which is heard out sound of specific frequency.

3. Pulse ones should be counted noise, received as separate shocks also of states of one or several momentum/impulse/pulses of sound energy; length of each impulse of less than 1 s.

4. Corrections for period or days are accepted only for territories of habitable building-up and sections of schools.

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ULTRASOUND.

13.8. Permissible sound pressure levels for work sites in ultrasonic installations should be accepted according to Table 13.

Table 12.

(1) Среднегеометрические частоты октавных полос в Гц	63	125	250	500	1000	2000	4000	8000
(2) Затухание шума в дБ/км	0	0,7	1,5	3	6	12	24	48

Key: (1). Geometric mean frequencies octave of bands in Hz. (2). Fading noise in dB/km.

Table 13. Permissible sound pressure levels for work sites in **ultrasonic installations.**

(1) Среднегеометрические частоты 1/3 — октавных полос в Гц		
12 500	16 000	20 000 и выше (2)
(3) Уровни звукового давления в дБ		
75	85	110

Note. With the total time of the effect of ultrasound of less than 4 h into exchange the indicated in table levels should be increased in accordance with table 14.

Key: (1). Mean geometric frequencies 1/3 - octave bands in Hz. (2). and it is above. (3). Sound pressure levels in dB.

Table 14. Corrections to sound pressure levels for work sites in

ultrasonic installations.

(1) Суммарная длительность воздействия ультразвука	(2) Поправка в дБ
(3) От 1 до 4 ч	+6
» ¼ » 1 » (5)	+12
» 5 » 15 мин	+18
» 1 » 5 »	+24

Note. The duration of the effect of ultrasound must be substantiated by calculation or confirmed by technical documentation.

Key: (1). Total duration of the effect of ultrasound. (2). Correction in dB. (3). From. (4). to. (5). min.

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VIBRATION.

13.9. Standardized parameters of vibration are rms magnitudes of vibrational speed in octave bands of frequencies or amplitudes of displacement/movements, excited by work of equipment (machines, machine tools, electric motors, fans, etc.) and transferred to work sites in industrial rooms (seat, sex/floor, working area).

Note: 1. The requirements of present norms do not apply to the means of transport and self-propelled machines, locating in movement.

2. Duration of effect of vibration must be substantiated by calculation or confirmed by technical documentation.

13.10. Permissible magnitudes of parameters of vibration at permanent work sites in industrial rooms under continuous influence during workday (8 h) are given in Table 15.

Notes: 1. The amplitudes of displacement/movement are standardized for the harmonic, and also subharmonic vibrations (when within the limits of each octave band is located not more than one harmonic component) separately on active bands.

For the intermediate values of the frequencies of the harmonic oscillations of the amplitude of the permissible displacement/movements, should be determined linear interpolation.

If into octave band falls more than one harmonic component or vibrations have continuous spectrum, then is standardized root-mean-square vibrational speed for each of the octave bands.

2. With duration of effect of vibrations, smaller 4 h, during workday indicated in Table 15 permissible magnitudes of parameters of

vibration should be increased 1.4 times (on 3 dB), under influence less than 2 h - 2 times (on 6 dB), under influence of less than 1 h - 3 times (on 9 dB).

3. Indicated permissible maynitudes of parameters of vibration are related both to vertical ones and to horizontal vibrations, evaluated separately.

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Table 15. Permissible magnitudes of the parameters of vibration.

(1) Среднегеометрические и граничные (даны в скобках) частоты октавных полос в Гц	2 (1,4÷2,8)					4 (2,8÷5,6)				8 (5,6÷11,2)			
(2) Частота в Гц	1,4	1,6	2	2,5	2,8	3,2	4	5	5,6	6,3	8	10	11,2
(3) Амплитуда (пиковое значение) перемещения при гармонических колебаниях в мм	3,11	2,22	1,28	0,73	0,61	0,44	0,28	0,16	0,13	0,09	0,056	0,045	0,041
(4) Среднеквадратичное значение колебательной скорости	(5) в мм/сек	11,2				5				2			
	(6) в дБ относительно $5 \cdot 10^{-4}$ мм/сек	107				100				92			

(1) Среднегеометрические и граничные (даны в скобках) частоты октавных полос в Гц	16 (11,2÷22,4)					31,5 (22,4÷45)				63 (45÷90)			
(2) Частота в Гц	11,2	12,5	16	20	22,4	25	31,5	40	45	50	63	80	90
(3) Амплитуда (пиковое значение) перемещения при гармонических колебаниях в мм	0,041	0,036	0,028	0,0225	0,02	0,018	0,014	0,0113	0,0102	0,009	0,0072	0,0056	0,005
(4) Среднеквадратичное значение колебательной скорости	(5) в мм/сек	2				2				2			
	(6) в дБ относительно $5 \cdot 10^{-4}$ мм/сек	92				92				92			

Key: (1). Mean geometric and boundary (they are given in brackets) frequencies of octave bands in Hz. (2). Frequency in Hz. (3). Amplitude (peak value) of displacement/movement during harmonic oscillations in mm. (4). RMS value of vibrational speed. (5). in mm/s. (6). in dB relative $5 \cdot 10^{-4}$ mm/s.

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14. The electromagnetic waves of radio-frequencies, which ionize emission/radiations I other harmful factors.

14.1. With planning or newly projected and reconstructed enterprises, their separate buildings and constructions, should be provided for measures, preventing harmful effect on workers of electromagnetic waves of radio-frequencies, ionizing emission/radiation, static electricity and other harmful factors.

14.2. Tolerance levels of electromagnetic waves of radio-frequencies, ionizing emission/radiations, static electricity and other harmful factors are established in appropriate standard documents, affirmed in routine.

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