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EXCERPTS FROM THE INDUSTRIAL HYGIENE CODES OR REGULATIONS

DATED APRIL, 1949

Illumination (Section 15)

1. Seeing tasks requiring discrimination of fine detail under conditions of fair contrast and where the nature of the work is very exacting and prolonged shall be provided with a minimum of 100 foot-candles of illumination.
 2. Similar seeing tasks under conditions of moderate contrast should be provided with a minimum of 50 foot-candles of illumination.
 3. Seeing tasks requiring moderate discrimination of detail over intermittent periods of time under conditions of normal contrast should be provided with a minimum of 30 foot-candles of illumination.
 4. Casual seeing tasks not involving discrimination of fine details should be provided with a minimum of 10 foot-candles of illumination.
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Ventilation and Temperature Requirements (Section 16)

1. Outside air should be provided to all workrooms at the rate of 15 cubic feet per minute per person, or 1-1/2 air changes per hour, whichever is greater.
2. Workers should not be subjected to air velocities exceeding 200 feet per minute.
3. In work rooms where strenuous work is performed, the minimum air temperature should be 60° F.
4. In all other workrooms, unless prohibited by process requirements, minimum air pressure should be 65° F. P.T. off

Sanitation (Section 20)

1. Every place of employment shall be provided with adequate toilet facilities (water closets)* conveniently located and separate for each sex according to the following:

1 to 9 employees	1 facility
10 to 24 "	2 facilities
25 to 49 "	3 facilities
50 to 74 "	4 facilities
75 to 100 "	5 facilities
Over 100 "	1 additional facility for each additional 30 employees

* Where the installation of a water-carriage sewerage system may be impracticable, the authority may designate another type of toilet facility approved by the public health agency having jurisdiction.

(Urinals instead of water closets for male employees may be substituted in a ratio of not more than one-third urinals in the above minimum facility schedule).

2. Every place of employment shall be provided with adequate washing facilities in the ratio of one lavatory (or equivalent wash place) for each 10 employees up to 100 persons and one lavatory (wash place) for each additional 15 persons. Each lavatory (wash place) shall be provided with soap and hot and cold running water.
3. A minimum of one shower bath with ample supply of hot and cold water from one fixture shall be provided for every 15 employees or fraction thereof exposed to excessive heat, or to skin contamination with poisonous, infectious, or irritating material.

Service Facilities (Section 21)

1. Where 10 or more women are employed at any one time, at least one retiring room for their exclusive use shall be provided.
2. Where less than 10 women are employed and a retiring room is not furnished, some equivalent space shall be provided which can be properly screened and made suitable for the use of women employees.
3. The minimum space provided for a retiring room for 10 women shall be 60 square feet. The minimum increased space for more shall be at least 2 square feet for each additional women employed.
4. At least one couch or bed shall be provided in every place where more than 10 women are employed. The number of such beds or couches required shall be as follows: 10 to 100 women, one bed; 100 to 250 women, two beds; and one additional bed for each additional 250 women employed.

Values Recommended by the Committee on Threshold Limits at Eleventh Annual Meeting of the American Conference of Governmental Industrial Hygienists, April 1950.

GASES AND VAPORS

SUBSTANCE	P.P.M.	SUBSTANCE	P.P.M.
Acetaldehyde	200	Benzene (benzol)	35
Acetic Acid	10	Bromine	1
Acetic anhydride	5	1, 3-Butadiene	1000
Acetone	500	n-Butanol	100
Acrolein	0.5	2-Butanone	250
Acrylonitrile	20	n-Butyl acetate	200
Ammonia	100	Butyl celloxolve	200
Amyl acetate	200	Carbon dioxide	5000
Isamyl alcohol	100	Carbon disulfide	20
Aniline	5	Carbon monoxide	100
Arsine	0.05	Carbon tetrachloride	50

SUBSTANCE	P.P.M.	SUBSTANCE	P.P.M.
Cellosolve	200	Mesityl oxide	50
Cellosolve acetate	100	Methanol	200
Chlorine	1	Methyl acetate	200
Chlorobenzene	75	Methyl bromide	20
2-Chlorobutadiene	25	Methyl butanone	100
Chloroform	100	Methyl cellosolve	25
1-Chloro-1-nitropropane	20	Methyl cellosolve acetate	25
Cyclohexane	400	Methyl chloride	100
Cyclohexanol	100	Methylcyclohexane	500
Cyclohexanone	100	Methylcyclohexanol	100
Cyclohexene	400	Methylcyclohexanone	100
Cyclopropane (propene)	400	Methyl formate	100
o-Dichlorobenzene	50	Methyl iso-butyl ketone	100
Dichlorodifluoromethane	1000	Naphtha (coal tar)	200
1,1-Dichloroethane	100	Naphtha (petroleum)	500
1,2-Dichloroethane (ethylene dichloride)	75	Nickel carbonyl	1
1,2-Dichloroethylene	200	Nitrobenzene	1
Dichloroethyl ether	15	Nitroethane	100
Dichloromethane	500	Nitrogen oxides (other than H ₂ O)	25
Dichloromonofluoromethane	1000	Nitroglycerin	0.5
1,1-Dichloro-1-nitroethane	10	Nitromethane	100
1,2-Dichloropropane (propylene dichloride)	75	2-Nitropropane	50
Dichlorotetrafluoroethane	1000	Nitrotoluene	5
Dimethylaniline	5	Octane	500
Dimethylsulfate	1	Ozone	1
Dioxane	100	Pentane	1000
Ethyl acetate	400	Pentanone (methyl propanone)	200
Ethyl alcohol	1000	Phosgene	1
Ethyl benzene	200	Phosphine	0.05
Ethyl bromide	200	Phosphorus trichloride	0.5
Ethyl chloride	1000	Isopropyl alcohol	400
Ethylene chlorohydrin	5	Propyl acetate	200
Ethylene oxide	100	Isopropyl ether	500
Ethyl ether	400	Stibine	0.1
Ethyl formate	100	Standard solvent	500
Ethyl silicate	100	Styrene monomer	200
Fluorotrichloromethane	1000	Sulfur chloride	1
Formaldehyde	5	Sulfur dioxide	10
Gasoline	500	1,1,2,2-Tetrachloroethane	5
Heptane	500	Tetrachloroethylene	100
Hexane	500	Toluene	200
Hydrogen chloride	5	Toluidine	5
Hydrogen cyanide	10	Trichloroethylene	100
Hydrogen fluoride	3	Turpentine	100
Hydrogen selenide	0.05	Vinyl chloride	500
Hydrogen sulfide	20	Xylene	200
Iodine	1		
Isophrene	25		

TOXIC DUSTS, FUMES AND MISTS

SUBSTANCE	Mg. per Cu. M.	SUBSTANCE	Mg. per Cu. M.
Antimony	0.5	Manganese	6
Arsenic	0.5	Mercury	0.1
Barium	0.5	Pentachloronaphthalene	0.5
Cadmium	0.1	Pentachlorophenol	0.5
Chlorodiphenyl	1	Phosphorus (yellow)	0.1
Chromic acid and chromates as CrO ₃	0.1	Phosphorus pentachloride	1
Cyanide as CN	5	Phosphorus pentasulfide	1
Dinitrotoluene	1.5	Selenium, as Se	0.1
o-Dinitrocresol	0.2	Sulfuric acid	1.0
Fluoride	2.5	Tellurium	0.1
Iron oxide fume	15	Tetryl	1.5
Lead	0.15	Trichloronaphthalene	5
Magnesium oxide fume	15	Trinitrotoluene	1.5
		Zinc oxide fume	15

MINERAL DUSTS

SUBSTANCE	M.P.P.C.F.	SUBSTANCE	M.P.P.C.F.
Alundum	50	Talc	20
Asbestos	5	Silica	
Carborundum	60	high (above 50% free SiO ₂)	5
Dust (nuisance, no free silica)	50	medium (5 to 50% free SiO ₂)	20
Mica (below 5% free silica)	50		
Portland cement	50	low (below 5% free SiO ₂)	60
		Slate (below 5% free SiO ₂)	60
		Soapstone (below 5% free SiO ₂)	20
		Total dust (below 5% free SiO ₂)	50

RADIATIONS

MATERIAL OR RADIATION		MATERIAL OR RADIATION	
Gamma (roentgens per week)	0.3	Roentgen ray (roentgens per week)	0.3
Radon (curies per cubic meter)	10 ⁻⁸		
Thoron (curies per cubic meter)	10 ⁻⁸		

Safety Committee
United States Steel Company
Research and Development Laboratory

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