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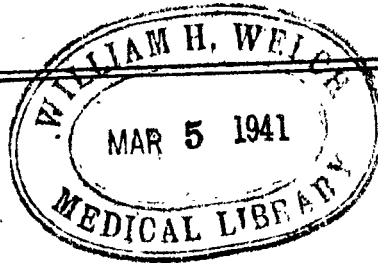
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VIRGINIA HEALTH BULLETIN



Evaluation of the Industrial Hygiene Problems of Virginia



DEPARTMENT OF HEALTH
RICHMOND, VIRGINIA
1938

TABLE 30—Expected number of persons in Virginia exposed

MATERIALS	EXPECTED NUMBER OF PERSONS						
	Total	Coal mines	Extraction of minerals (other than coal)	Chemical and allied	Cigar and tobacco	Clay, glass and stone	Clothing
1930 census data	222,259	13,846	3,486	18,068	13,414	4,471	5,790
Acids, organic.	2,333	0	0	903	0	27	23
Acids, mineral.	3,646	0	0	2,331	0	4	6
Accelerators	529	0	0	0	0	0	0
Aldehydes.	6	0	0	0	0	0	6
Alkaline compounds	8,400	0	28	3,234	0	367	35
Arsenic and its compounds.	501	0	0	361	0	0	0
Other chemicals	3,985	0	21	2,457	0	54	6
Chromium and its compounds	323	0	0	0	0	0	0
Coal tar products.	999	0	0	416	0	0	0
Cyanides.	1,114	0	0	903	0	0	0
Asbestos dust.	343	0	0	0	0	0	0
Coal dust (bituminous).	24,107	12,558	241	1,120	54	617	29
Coal dust (anthracite)	487	429	0	0	0	58	0
Silica dust.	16,285	2,838	805	416	0	353	6
Silicate dust.	40,759	12,503	1,231	2,421	3,273	2,244	64
Non-siliceous dust.	9,473	0	1,572	2,819	0	1,449	0
Organic dust.	57,201	0	14	3,017	9,900	232	1,835
Dyes	2,753	0	3	145	0	0	579
Dermatitis producers.	10,648	42	0	1,427	54	0	0
Fluorides.	163	0	0	163	0	0	0
Carbon monoxide.	23,554	222	303	2,782	54	617	46
Hydrogen sulphide.	1,967	0	0	1,482	0	0	0
Sulphur dioxide.	12,827	152	230	1,409	54	519	29
Other gases.	15,003	97	38	3,885	376	165	23
Lead and its compounds	13,574	83	791	795	13	103	0
Mercury and its compounds	741	0	0	741	0	0	0
Other metals	24,635	180	1,157	687	0	148	12
Hides	298	0	0	18	0	0	0
Infections	2,838	0	0	416	0	0	0
Inks.	2,559	0	0	54	13	0	0
Lacquer and varnishes.	3,372	42	0	361	0	63	0
Medicinals.	305	0	0	235	27	0	0
Oils, fats, and waxes.	4,817	0	14	1,192	13	40	6
Organic solvents.	19,540	69	28	3,975	537	170	0
Paints and enamels.	5,211	28	0	434	0	63	0
Petroleum products.	34,090	457	443	2,475	228	300	185
Inorganic salts.	7,621	42	0	4,047	0	31	35
Sulphur and alkaline sulphides	1,088	0	0	289	0	0	6

to the indicated materials based on data obtained in the survey

EXPOSED TO INDICATED MATERIAL IN TYPES OF INDUSTRIES SHOWN

Food and allied	Iron and steel	Metal industries (except iron and steel)	Leather	Lumber and furniture	Paper and printing	Textiles	Miscellaneous manufacturing industries	Domestic and personal service	Transportation and communication
12,739	66,563	1,020	5,548	26,951	9,766	18,452	10,787	6,646	4,712
522	67	0	411	0	195	92	0	93	0
242	266	0	139	108	205	185	0	0	160
0	0	0	0	0	0	0	529	0	0
0	0	0	0	0	0	0	0	0	0
828	1,331	132	316	323	1,045	277	11	412	0
13	0	127	0	0	0	0	0	0	0
76	200	0	50	0	254	461	54	352	0
0	67	127	33	0	78	18	0	0	0
0	266	0	0	27	20	0	270	0	0
0	133	0	0	0	78	0	0	0	0
0	333	0	0	0	10	0	0	0	0
268	7,388	327	61	270	410	111	259	286	0
0	0	0	0	0	0	0	0	0	0
0	9,053	127	28	2,560	68	0	22	0	0
1,860	11,649	222	89	1,132	547	314	2,254	292	64
25	1,265	0	0	27	0	277	2,030	0	0
4,026	6,323	286	1,409	13,179	1,328	10,960	4,552	126	14
0	0	0	72	916	225	517	97	199	0
4,586	3,528	0	522	27	215	74	173	0	0
0	0	0	0	0	0	0	0	0	0
764	14,111	263	61	835	977	166	723	306	1,324
0	0	0	0	0	0	0	485	0	0
280	8,254	147	61	270	352	406	270	286	108
1,733	5,125	102	0	81	752	590	1,100	239	0
153	8,853	474	6	270	781	37	97	20	1,098
0	0	0	0	0	0	0	0	0	0
89	19,037	764	17	431	1,104	277	129	0	603
102	0	0	178	0	0	0	0	0	0
1,057	0	0	144	0	49	18	1,154	0	0
0	67	0	6	27	1,455	0	173	764	0
25	1,464	0	11	916	68	0	97	0	323
0	0	0	0	0	0	0	43	0	0
1,248	133	132	338	1,078	68	295	43	0	0
293	9,119	0	311	1,294	1,016	129	777	465	1,334
38	4,193	0	22	216	39	37	129	0	0
624	23,030	395	388	1,159	664	1,329	863	0	1,434
1,987	200	0	150	81	684	111	22	220	0
0	0	0	89	0	557	18	129	0	0

TABLE 20—Iron and steel—

MATERIALS	NUMBER AND PERCENTAGE OF					
	All iron and steel plants		Agricultural implements		Automobile bodies	
Number of workers in plants surveyed.	10,947		134		65	
	No.	%	No.	%	No.	%
Acids, organic.....	9	0.1	0	0	0	0
Acids, mineral.....	47	0.4	0	0	0	0
Alkaline compounds.....	216	2.0	0	0	0	0
Other chemicals.....	38	0.3	0	0	0	0
Chromium and its compounds.....	9	0.1	0	0	0	0
Coal tar products.....	46	0.4	0	0	0	0
Cyanides.....	20	0.2	0	0	0	0
✓ Asbestos dust.....	53	0.5	0	0	0	0
Coal dust (bituminous).....	1,220	11.1	55	41.0	4	6.2
Coal dust (anthracite).....	3	0.0	0	0	0	0
Silica dust.....	1,494	13.6	59	44.0	5	7.7
Silicate dust.....	1,919	17.5	66	49.3	4	6.2
Non-siliceous dust.....	211	1.9	10	7.5	0	0
Organic dust.....	1,036	9.5	32	23.9	14	21.5
Dermatitis producers.....	577	5.3	4	3.0	0	0
Carbon monoxide.....	2,321	21.2	50	37.3	4	6.2
Sulphur dioxide.....	1,362	12.4	24	17.9	4	6.2
Other gases.....	841	7.7	14	10.4	4	6.2
Lead and its compounds.....	1,453	13.3	3	2.2	2	3.1
Other metals.....	3,134	28.6	64	47.8	9	13.8
Inks.....	13	0.1	0	0	0	0
Lacquer and varnishes.....	239	2.2	27	20.1	2	3.1
Oils, fats, and waxes.....	19	0.2	0	0	0	0
Organic solvents.....	1,500	13.7	27	20.1	4	6.2
Paints and enamels.....	695	6.3	25	18.7	4	6.2
Petroleum products.....	3,792	34.6	3	2.2	0	0
Inorganic salts.....	51	0.3	0	0	0	0

Exposures to specified materials

WORKERS EXPOSED TO THE SPECIFIED MATERIAL IN EACH INDUSTRIAL SUBDIVISION

Blast furnaces and steel rolling mills		Car and railroad shops		Foundries		Ship and boat building		Wagon and carriage		Other iron, steel and machinery	
43		6,261		2,335		399		209		1,501	
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0	0	9	0.1	0	0	0	0	0	0	0	0
0	0	16	0.3	0	0	0	0	0	0	31	2.1
0	0	195	3.1	13	0.6	0	0	0	0	8	0.5
0	0	25	0.4	12	0.5	0	0	0	0	1	0.0
0	0	9	0.1	0	0	0	0	0	0	0	0
0	0	0	0	12	0.5	34	8.5	0	0	0	0
0	0	10	0.2	0	0	0	0	0	0	10	0.7
0	0	32	0.5	0	0	0	0	0	0	21	1.4
21	48.8	605	9.7	284	12.2	65	16.3	21	10.0	165	11.0
0	0	0	0	0	0	3	0.8	0	0	0	0
20	46.5	259	4.1	1,062	45.5	0	0	76	36.4	13	0.9
21	48.8	832	13.3	759	32.5	84	21.1	21	10.0	132	8.8
0	0	46	0.7	114	4.9	29	7.3	1	0.5	11	0.7
0	0	605	9.7	173	7.4	95	23.8	98	46.9	19	1.3
0	0	243	3.9	108	4.6	75	18.8	34	16.3	113	7.5
21	48.8	1,400	22.4	350	15.0	138	34.6	55	26.3	303	20.2
21	48.8	801	12.8	313	13.4	35	8.8	55	26.3	79	5.3
0	0	421	6.7	151	6.5	124	31.1	0	0	127	8.5
0	0	778	12.4	19	0.8	223	55.9	32	15.3	396	26.4
21	48.8	1,510	24.1	835	35.8	207	51.9	31	14.8	457	30.4
0	0	3	0.0	0	0	2	0.5	0	0	8	0.5
0	0	202	3.2	2	0.1	1	0.3	0	0	5	0.3
0	0	14	0.2	0	0	4	1.0	0	0	1	0.0
0	0	895	14.3	121	5.2	54	13.5	32	15.3	367	24.5
0	0	223	3.6	7	0.3	47	11.8	32	15.3	357	23.8
0	0	2,816	45.0	474	20.3	161	40.4	0	0	398	26.5
0	0	15	0.2	0	0	7	1.8	0	0	9	0.6