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COAL-MINE FATALITIES IN MAY, 1926

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Accidents in the coal-mining industry of the United States in May 1926, caused the death of 161 men, according to information furnished by State mine inspectors to the Bureau of Mines, Department of Commerce. Of this number 122 deaths occurred in bituminous mines and 39 in anthracite mines. The May, 1926, fatality rate for bituminous mines was 3.12, for anthracite, 4.84, and for the industry as a whole, 3.42, based on a production of 39,059,000 tons, 8,054,000 tons, and 47,113,000 tons, respectively. In May 1925 the rates were 4.28, 5.82 and 4.57, based on a production of 35,474,000 tons of bituminous coal, 7,898,000 tons of anthracite, and 43,372,000 tons of bituminous and anthracite combined.

During the first five months of the current year, the production of bituminous coal amounted to 225,514,000 tons, while the anthracite output was 27,317,000 tons. The fatality rate per million tons for this period was 3.81 for bituminous mines as compared with 3.82 for the five-month period last year; the anthracite rate was 4.43 for the present year as compared with 6.31 last year. For the industry as a whole, the rate was 3.88 this year as compared with 4.21 last year.

The records covering "major" disasters for 1926 to date, that is, disasters causing the death of 5 or more men, show that in 8 separate accidents 195 men lost their lives. Last year's record for the same period shows 7 separate disasters and 162 deaths. The per-million-ton death rate for both bituminous and anthracite mines based exclusively on these disasters was 0.77 for 1926 and 0.69 for the period January to May, 1925. One major disaster occurred during the month of May: five men were killed in an explosion at the Randolph Colliery, near Port Carbon, Pennsylvania, in the anthracite field. The explosion was due to blasting.

An examination of the principal causes of accidents reported thus far in 1926 and a comparison of the record with that for January to May 1925, shows

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a decrease in falls of roof or coal, haulage, explosives and electricity and a slight increase in gas or dust explosions. The comparative rates were as follows:

	Year 1925	Jan.--May 1926	Jan.--May 1926
All causes	3.811	4.213	3.880
Falls of roof or coal	1.842	1.868	1.800
Haulage	.615	.686	.649
Gas or dust explosions	.590	.852	.874
Explosives	.174	.205	.119
Electricity	.144	.132	.099

Tables 1 and 2 show the number of fatalities in each State, the number attributable to each of the principal causes of fatalities and the fatality rates per million tons for each of these causes.

Table 3 shows a comparison of fatality rates for May, 1926, for bituminous and anthracite mines, separately, with those for May last year, and for April, 1926, and with the average rate for May for the past ten years. A similar comparison may also be made with the rates for the years 1923, 1924, and 1925 and for the ten-year-period 1916-1925.

Table 4 is a table of index numbers for bituminous and anthracite mines. The figures show how the fatality rates per million tons from the principal causes of accidents from 1922 to date, compare with the average rates for the five-year period 1916-1920. The average rate for each cause during the years 1916-1920 has been taken as a basis for comparison and weighted 100; the death rates for the corresponding cause in later years and months are shown by the index numbers as a certain percentage of the base rate.

TABLE 1.- FATALITY RATES FOR ALL MINES PER MILLION TONS OF COAL PRODUCED.

	Year 1925	Jan.-May 1925	Jan.-May 1926
Falls of Roof and Coal.....	<u>1.842</u>	<u>1.868</u>	<u>1.800</u>
At face.....	1.403	1.484	1.341
In room.....	.253	.201	.253
On entry.....	.172	.179	.206
On slope.....	.014	.004	-----
Haulage.....	<u>.615</u>	<u>.686</u>	<u>.649</u>
Switching and spragging.....	.012	.025	.024
Coupling.....	.009	.004	.008
Falling from trips.....	.039	.038	.012
Run over.....	.207	.209	.237
Caught between car and rib.....	.179	.209	.130
Caught between car and roof.....	.027	.047	.028
Runaway cars.....	.070	.064	.040
Miscellaneous.....	.072	.090	.170
Gas or Dust Explosions.....	<u>.590</u>	<u>.852</u>	<u>.874</u>
Open light.....	.181	.081	.063
Defective safety lamp.....	.002	.004	-----
Electric arc.....	.017	.030	.040
Shot.....	.144	.294	.158
Powder explosion.....	.015	.004	.012
Miscellaneous.....	.231	.439	.601
Explosives.....	<u>.174</u>	<u>.205</u>	<u>.119</u>
Transportation.....	.015	.025	-----
Charging.....	.002	-----	.012
Suffocation.....	.005	.013	.008
Drilling into old holes.....	.010	.004	-----
Striking in loose rock.....	-----	-----	-----
Thawing.....	-----	-----	-----
Caps & detonators.....	.003	.009	.004
Unguarded shots.....	.005	.009	.008
Returned too soon.....	.015	.017	.008
Premature shot.....	.062	.068	.028
Sparks from lamp, etc.....	.009	.009	.008
Delayed shots.....	.010	.004	.008
Shot breaking through rib.....	.014	.030	.004
Miscellaneous.....	.024	.017	.031
Electricity.....	<u>.144</u>	<u>.132</u>	<u>.099</u>
Direct contact with trolley wire.....	.060	.047	.044
Tools striking trolley wire.....	.002	-----	.008
Contact with mining machine.....	.019	.021	.004
Contact with machine feed wire.....	.012	.013	.012
Contact with haulage motor.....	-----	-----	-----
Miscellaneous.....	.051	.051	.031

TABLE 2.- COAL-MINE FATALITIES DURING MAY, 1926, BY CAUSES AND STATES

CAUSE	Ala	Alas	Ark	Col	Ga. and N.C.	Ill	Ind	Ia	Kan	Ky	Md	Mch	Mo	Mnt	NMx	NDk	O	Ok	Pa bit	SDk	Ten	Tex	Ut	Va	Wsh	WVa	Wyo	TOTAL BITUM	Pa anth	GRAND TOTAL	
<u>UNDERGROUND</u>																															
Falls of roof.....	1	-	-	2	-	4	-	-	-	6	1	-	-	-	-	-	3	1	20	-	-	-	3	2	-	23	2	68	14	82	
Falls of side.....	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	5	1	6	
Haulage.....	-	-	-	1	-	5	1	-	-	3	-	-	-	-	-	-	2	-	2	-	3	-	-	1	-	10	-	28	5	33	
Gas or dust explosions...	-	-	-	-	-	2	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	10	15	
Explosives.....	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	3	1	4	
Suffocated by mine gases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	2	3	
Electricity.....	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	
Animals.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mining Machines.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	3	-	3	
Mine fires.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other causes.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	6	7		
TOTAL.....	2	-	-	5	-	12	1	-	4	9	1	-	-	-	-	-	7	2	25	-	3	-	3	3	-	37	2	116	39	155	
<u>SHAFT</u>																															
Persons falling.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Objects falling.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cages, skips.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other causes.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<u>SURFACE</u>																															
Mine cars.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Electricity.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	1	
Machinery.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	
Boiler explosions.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Railway cars.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other causes.....	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	4	-	4	
TOTAL.....	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	3	-	6	-	6	
GRAND TOTAL, May, 1926...	2	0	0	5	0	12	1	0	4	10	1	0	0	0	0	0	8	2	26	0	3	0	3	3	0	40	2	122	39	161	
GRAND TOTAL, May, 1925...	11	0	1	4	53	6	0	0	1	12	1	0	0	0	0	0	3	1	20	0	0	0	1	4	1	33	0	152	46	198	

TABLE 3.- AVERAGE NUMBER OF MEN KILLED PER MILLION TONS OF COAL PRODUCED

Cause of accident	Average for 10 years 1916-1925	Year 1923	Year 1924	Year 1925	Average for May 10 years 1916-1925	1926		1925
						Apr.	May	May
Bituminous Mines								
1. Falls of roof and coal	1.758	1.670	1.749	1.736	1.632	1.572	1.869	1.409
2. Underground haulage	.656	.606	.603	.581	.673	.474	.717	.592
3. Explosions of gas or coal dust	.465	.585	1.005	.578	.312	-----	.128	1.748
4. Explosives	.123	.115	.097	.094	.112	.125	.077	.056
5. Electricity	.146	.124	.151	.153	.153	.125	.051	.113
6. Mining machines	.047	.039	.060	.069	.060	-----	.077	.226
7. Other causes underground	.090	.088	.054	.084	.109	.074	.051	-----
8. All causes underground	3.285	3.227	3.719	3.295	3.051	2.370	2.970	4.144
9. All shaft accidents	.066	.055	.035	.057	.031	.100	-----	-----
10. All accidents on surface	.210	.170	.174	.147	.213	.100	.153	.141
11. All accidents	3.561	3.452	3.928	3.499	3.295	2.570	3.123	4.285
Anthracite Mines								
1. Falls of roof and coal	2.492	2.346	2.456	2.737	2.465	2.191	1.862	2.152
2. Underground haulage	.760	.782	.660	.902	.651	.730	.621	.760
3. Explosions of gas	.470	.450	.569	.692	.443	-----	1.242	1.393
4. Explosives	.763	.525	.603	.853	.498	.365	.124	.380
5. Electricity	.067	.054	.091	.064	.028	-----	-----	-----
6. Other causes underground	.482	.482	.512	.322	.665	.365	.993	.380
7. All causes underground	5.034	4.639	4.891	5.570	4.750	3.651	4.842	5.065
8. All shaft accidents	.145	.161	.136	.064	.208	-----	-----	.126
9. All accidents on surface	.765	.653	.614	.805	.485	.122	-----	.633
10. All accidents	5.944	5.453	5.641	6.439	5.443	3.773	4.842	5.824

TABLE 4.- INDEX NUMBERS, SHOWING COMPARISON OF FATALITY RATES PER MILLION TONS OF COAL PRODUCED, WITH AVERAGE RATE FOR THE FIVE-YEAR PERIOD 1916-1920.

Cause of accident	Per cent 1916-1920	1916-1920		1922	1923	1924	1925	May 10 years 1916-1925	1926		1925		
		Rate per million tons	Index						Apr.	May	May		
Bituminous													
				Index Numbers									
1. Falls of roof and coal	50.38	1.751	100	105	95	100	99	93	90	107	80		
2. Underground haulage	19.83	.690	100	97	88	87	84	98	69	104	86		
3. Explosions of gas or coal dust	9.51	.330	100	214	177	305	175	95	---	39	530		
4. Explosives	3.62	.126	100	102	91	77	75	89	99	61	44		
5. Electricity	3.98	.138	100	122	90	109	111	111	91	37	82		
6. Mining machines	1.26	.044	100	107	89	136	157	136	---	175	514		
7. Other causes underground	2.59	.090	100	100	98	60	93	121	82	57	---		
8. All causes underground	91.17	3.169	100	115	102	117	104	96	75	94	131		
9. All shaft accidents	2.08	.072	100	118	76	49	79	43	139	---	---		
10. All accidents on surface	6.75	.235	100	103	72	74	63	91	43	65	60		
11. All accidents	100.00	3.476	100	114	99	113	101	95	74	90	123		
Anthracite													
1. Falls of roof and coal	40.80	2.476	100	95	95	99	111	100	88	75	87		
2. Underground haulage	11.83	.718	100	148	109	92	126	91	102	86	106		
3. Explosions of gas	6.68	.405	100	59	111	140	171	109	---	307	344		
4. Explosives	13.82	.839	100	83	63	72	102	59	44	15	45		
5. Electricity	1.17	.071	100	77	76	128	90	39	---	---	---		
6. Other causes underground	8.25	.500	100	69	96	102	64	133	73	199	76		
7. All causes underground	82.55	5.009	100	95	93	98	111	95	73	97	101		
8. All shaft accidents	2.74	.166	100	55	97	82	39	125	---	---	76		
9. All accidents on surface	14.71	.893	100	74	73	69	90	54	14	---	71		
10. All accidents	100.00	6.068	100	90	90	93	106	90	62	80	96		