

I.C.C. Bureau of Safety Report

THE director of the Bureau of Safety of the Interstate Commerce Commission has issued his report for the fiscal year ended June 30, 1950. This report, which consists of 34 pages, includes several tables and explanations pertinent to the results of inspections of railroad safety appliances, employee hours of service, signal, interlocking and automatic train stop and control installations, investigation of railroad accidents, train communication systems, and other Bureau of Safety activities.

There were 32,918 false-restrictive

failures, compared with 35,860 during the fiscal year ended June 30, 1949, according to one of the tables. A total of 143 false-proceed failures occurred, compared with 156 the year previous, and there were 12 potential false-proceed conditions, as compared with 16 in 1949. The entire report is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Abstracts of the report are presented in the following paragraphs.

During the year, 569 applications

for approval of modifications of block signal systems and interlockings were filed by the carriers, and at the beginning of the year action was pending on 119 applications, previously filed; of these, 607 applications were acted upon, 40 were withdrawn, and action was pending on 41 at the close of the year.

Inspections

During the year, inspections were made as follows:

Block-signal systems..... 1,222
Interlockings 2,413

Tabulation of False-Restrictive Failures for Year Ending June 30, 1950

| Name of railroad | False restrictive failures | | | | Total | Name of railroad | False restrictive failures | | | | Total |
|---|----------------------------|--------------|--|---------------|-------|---|----------------------------|--------------|--|---------------|--------|
| | Block systems | Interlocking | Automatic train stop, train control, and cab signals | Other systems | | | Block systems | Interlocking | Automatic train stop, train control, and cab signals | Other systems | |
| Alabama Great Southern..... | 24 | 4 | 18 | | 46 | Kentucky & Indiana Terminal..... | | 104 | | | 104 |
| Alton & Southern..... | | 10 | | | 10 | Lake Superior & Ishpeming..... | | 6 | | | 6 |
| Ann Arbor..... | 6 | 4 | | | 10 | Lake Superior Terminal & Transfer..... | 12 | | | | 12 |
| Arkansas & Memphis Ry. Bridge & Terminal..... | 18 | | | | 18 | Lehigh & Hudson River..... | 17 | | | | 17 |
| Atchison, Topeka & Santa Fe..... | 718 | 580 | 195 | | 1,493 | Lehigh & New England..... | 3 | 2 | | | 5 |
| Atlanta & West Point..... | 43 | | | | 43 | Lehigh Valley..... | 68 | 22 | 14 | | 104 |
| Atlanta Terminal..... | | 5 | | | 5 | Litchfield & Madison..... | 3 | 7 | | | 10 |
| Atlantic Coast Line..... | 460 | 229 | 49 | | 738 | Long Island..... | 43 | 85 | 127 | 11 | 266 |
| Baltimore & Ohio..... | 557 | 374 | 74 | 8 | 1,013 | Louisville & Nashville..... | 657 | 68 | 504 | | 1,229 |
| Bamberger..... | 41 | | | | 41 | Maine Central..... | 75 | 4 | | | 79 |
| Bangor & Aroostook..... | 38 | 4 | | 48 | 90 | Memphis Union Station..... | | 3 | | | 3 |
| Belt Ry. of Chicago..... | 5 | 24 | | | 29 | Michigan Central..... | 270 | 71 | 37 | | 378 |
| Bessemer & Lake Erie..... | 2 | | | | 2 | Minneapolis & St. Louis..... | 69 | 1 | | | 70 |
| Birmingham Belt..... | | 8 | | | 8 | Minneapolis, St. Paul & Sault Ste. Marie..... | 204 | 29 | | | 233 |
| Boston & Maine..... | 137 | 129 | 26 | | 292 | Missouri-Kansas-Texas..... | 216 | 30 | | | 246 |
| Boston Terminal..... | | 34 | | | 34 | Missouri-Kansas-Texas of Texas..... | 328 | 75 | | 30 | 433 |
| Butte, Anaconda & Pacific..... | 12 | | | | 12 | Missouri Pacific..... | 22 | | | | 22 |
| Canadian National..... | 12 | 5 | | | 17 | Monongahela..... | 67 | | | | 67 |
| Canadian Pacific..... | 12 | | | | 12 | Monongahela Connecting..... | 12 | 220 | | | 232 |
| Cedar Rapids & Iowa City..... | 48 | | | | 48 | Nashville, Chattanooga & St. Louis..... | 29 | 2 | 14 | | 45 |
| Central of Georgia..... | 55 | 14 | | | 69 | New Orleans & Northeastern..... | 559 | 249 | 83 | | 891 |
| Central R. R. of New Jersey..... | 72 | 117 | 2 | | 191 | New York Central, Eastern Lines..... | 328 | 262 | 84 | | 674 |
| Chesapeake & Ohio..... | 138 | 103 | 33 | | 274 | New York Central, Western Lines..... | 285 | 351 | 37 | 26 | 699 |
| Chicago & Eastern Illinois..... | 73 | 107 | 72 | | 252 | New York, Chicago & St. Louis..... | 163 | 242 | 19 | | 424 |
| Chicago & Illinois Midland..... | 32 | | | | 32 | New York, New Haven & Hartford..... | 74 | | | | 74 |
| Chicago & North Western..... | 250 | 90 | 393 | 15 | 748 | New York, Ontario & Western..... | 28 | | | | 28 |
| Chicago & Western Indiana..... | 5 | 48 | | | 53 | Norfolk & Western..... | 158 | 100 | 43 | | 361 |
| Chicago, Burlington & Quincy..... | 479 | 46 | | | 525 | Northern Pacific..... | 711 | 88 | | | 799 |
| Chicago Great Western..... | 157 | | | | 157 | Northwestern Pacific..... | 2 | 1 | | | 3 |
| Chicago, Indianapolis & Louisville..... | 171 | 23 | | | 194 | New Orleans Public Belt..... | 7 | 1 | | | 8 |
| Chicago, Milwaukee, St. Paul & Pacific..... | 1,301 | 221 | 538 | 13 | 2,073 | Pacific Electric..... | 73 | 64 | | | 137 |
| Chicago, Rock Island & Pacific..... | 863 | 351 | 200 | | 1,414 | Paducah & Illinois..... | 2 | | | | 2 |
| Chicago, St. Paul, Minneapolis & Omaha..... | 74 | 3 | | | 77 | Pennsylvania..... | 418 | 926 | 951 | 17 | 2,312 |
| Chicago, South Shore & South Bend..... | 168 | 26 | | | 194 | Pennsylvania-Reading Seashore Lines..... | 33 | 21 | 28 | 6 | 88 |
| Chicago Union Station..... | | 7 | | | 7 | Peoria & Pekin Union..... | 10 | 13 | | | 23 |
| Chicago Great Western..... | | 106 | | | 106 | Pere Marquette..... | 187 | 83 | 4 | | 274 |
| Cincinnati Union Terminal..... | | 15 | 7 | | 93 | Pittsburgh & Lake Erie..... | 111 | 186 | 62 | | 359 |
| Cincinnati, New Orleans & Texas Pacific..... | 71 | | | | 71 | Pittsburgh & West Virginia..... | 82 | | | | 82 |
| City of St. Louis Municipal Bridge..... | 60 | | | | 60 | Portland Traction..... | 106 | 3 | | | 109 |
| Cleveland, Cincinnati, Chicago & St. Louis..... | 130 | 88 | 9 | | 227 | Portland Terminal..... | 2 | 3 | | | 5 |
| Clinchfield..... | 21 | | | 6 | 27 | Reading..... | 151 | 79 | 3 | 1 | 234 |
| Colorado & Southern..... | 6 | 2 | | | 8 | Richmond, Fredericksburg & Potomac..... | 78 | 53 | 41 | | 172 |
| Dayton Union..... | | 5 | | | 5 | Rutland..... | 12 | 12 | | | 24 |
| Delaware & Hudson..... | 188 | 80 | | | 268 | Sacramento Northern..... | 18 | 14 | | | 32 |
| Delaware, Lackawanna & Western..... | 251 | 151 | 24 | | 426 | St. Louis-San Francisco..... | 467 | 46 | | | 513 |
| Denver & Rio Grande Western..... | 378 | 41 | | | 419 | St. Louis-San Francisco & Texas..... | 1 | 3 | | | 4 |
| Denver Union Terminal..... | | 26 | | | 26 | St. Louis Southwestern..... | 88 | | | | 88 |
| Detroit & Toledo Shore Line..... | 12 | | | | 12 | Seaboard Air Line..... | 547 | 4 | | | 551 |
| Detroit, Toledo & Ironton..... | | 9 | | | 9 | Southern..... | 518 | 20 | 126 | | 664 |
| Duluth, Missabe & Iron Range..... | 17 | 19 | | 10 | 46 | Southern Illinois & Missouri Bridge..... | 2 | | | | 2 |
| Duluth, South Shore & Atlantic..... | | 2 | | | 2 | Southern Pacific..... | 399 | 83 | 102 | | 584 |
| Elgin, Joliet & Eastern..... | 15 | 49 | | | 64 | Spokane, Portland & Seattle..... | 143 | | | | 143 |
| Erie..... | 100 | 75 | 60 | 7 | 242 | Terminal R. R. Association of St. Louis..... | 125 | 412 | | | 537 |
| Florida East Coast..... | 420 | 1 | | | 421 | Texas & New Orleans..... | 449 | 154 | | | 603 |
| Fort Dodge, Des Moines & Southern..... | | 6 | | | 6 | Texas & Pacific..... | 243 | 2 | | | 245 |
| Fort Worth & Denver City..... | 25 | 1 | | | 26 | Toledo, Peoria & Western..... | 12 | 2 | | 2 | 14 |
| Georgia..... | 92 | | | | 92 | Union..... | 1 | 4 | | | 5 |
| Georgia, Southern & Florida..... | 5 | | 20 | | 25 | Union Pacific..... | 741 | 72 | 60 | 222 | 1,085 |
| Grand Trunk Western..... | 114 | 45 | | 1 | 160 | Union Terminal..... | | 1 | | | 1 |
| Great Northern..... | 358 | 36 | | | 394 | Utah..... | 22 | | | | 22 |
| Gulf, Mobile & Ohio..... | 155 | 28 | 15 | | 198 | Virginian..... | 56 | 34 | | 10 | 100 |
| Houston Belt & Terminal..... | | 6 | | | 6 | Wabash..... | 229 | 49 | | | 278 |
| Hudson & Manhattan..... | 55 | 89 | 49 | | 193 | Washington Terminal..... | 946 | 86 | | | 1,032 |
| Illinois Central..... | 543 | 117 | 288 | | 948 | Western Maryland..... | 117 | 9 | | | 126 |
| Illinois Terminal..... | 267 | | | | 267 | Western Pacific..... | 170 | 6 | | | 176 |
| Indianapolis Union..... | | 12 | | | 12 | Western Ry. of Alabama..... | 61 | | | | 61 |
| International-Great Northern..... | 112 | 12 | | | 124 | Youngstown & Northern..... | 6 | | | | 6 |
| Jacksonville Terminal..... | 1 | 175 | | | 176 | Total..... | 19,387 | 8,665 | 4,401 | 435 | 32,918 |
| Kansas City Southern..... | 44 | 44 | | | 88 | | | | | | |
| Kansas City Terminal..... | | 157 | | | 157 | | | | | | |

Causes of False-Proceed Failures for Year Ending June 30, 1950

| Name of railroad | Sand, rust, or other deposit on rails, wheels | Failure of relays and similar devices | Wires broken, open circuits, crossed or grounded, foreign current, et cetera | Apparatus broken, defective, or out of adjustment | Failure of apparatus due to sleet, ice, snow, wet track, weather, or lightning | Failure of apparatus due to obstruction or outside interference | Errors in making connections or adjustments | Undetermined | Total |
|--|---|---------------------------------------|--|---|--|---|---|--------------|------------|
| Atchison, Topeka & Santa Fe..... | | | 4 | 3 | 1 | | 2 | | 10 |
| Baltimore & Ohio..... | 1 | | | 1 | | 1 | 1 | | 4 |
| Bangor & Aroostook..... | | | | | 1 | | | | 1 |
| Boston & Maine..... | | | 1 | | | | | | 1 |
| Chesapeake & Ohio..... | 4 | | | | | | 1 | | 5 |
| Chicago & North Western..... | | | | | 1 | | | | 1 |
| Chicago, Burlington & Quincy..... | 1 | | 1 | 2 | | | 2 | | 6 |
| Chicago Great Western..... | | | | | 1 | | | | 1 |
| Chicago, Indianapolis & Louisville..... | 3 | | 1 | 1 | 4 | | | | 9 |
| Chicago, Milwaukee, St. Paul & Pacific..... | | | 2 | 2 | 2 | | 1 | 2 | 9 |
| Chicago, Rock Island & Pacific..... | | | | 1 | 2 | | 1 | | 4 |
| Cincinnati, New Orleans & Texas Pacific..... | | | | | 1 | | | | 1 |
| Delaware, Lackawanna & Western..... | | | 1 | | | | | | 1 |
| Denver & Rio Grande Western..... | | | | | | | 1 | | 1 |
| Fort Worth & Denver City..... | | | 1 | | | | | | 1 |
| Gulf, Mobile & Ohio..... | | | | | | | 1 | | 1 |
| Illinois Central..... | | | 1 | | | 1 | | 2 | 4 |
| International-Great Northern..... | | | | | 1 | | | | 1 |
| Jacksonville Terminal..... | 1 | | | | | | 1 | | 2 |
| Lehigh Valley..... | | | | | | | 1 | | 1 |
| Louisville & Nashville..... | 2 | | 1 | 2 | 3 | | 3 | 2 | 13 |
| Memphis Union Station..... | 1 | | | | | | | | 1 |
| Missouri Pacific..... | | | | | | 1 | | | 1 |
| New York Central, Eastern Lines..... | 2 | | | | | | | | 2 |
| New York Central, Western Lines..... | | | | | | | 2 | | 2 |
| New York, Chicago & St. Louis..... | | | | | | | | 1 | 1 |
| New York, New Haven & Hartford..... | | | 1 | | | | | | 1 |
| New York, Ontario & Western..... | | | | 1 | | | 1 | | 2 |
| Norfolk & Western..... | | | 1 | | 1 | | | | 2 |
| Pennsylvania..... | 12 | 1 | 4 | 5 | 1 | | 4 | 1 | 28 |
| Pittsburgh & Lake Erie..... | 2 | 1 | | | | | 2 | | 5 |
| Pittsburgh & West Virginia..... | | | | | | | 1 | | 1 |
| Richmond, Fredericksburg & Potomac..... | 2 | | 1 | | | | | | 3 |
| St. Louis-San Francisco..... | | | | 1 | | | | | 1 |
| Seaboard Air Line..... | | | | | | | 1 | | 1 |
| Southern..... | | | 1 | 2 | | | | | 4 |
| Southern Pacific..... | | | | | | | 1 | | 1 |
| Union Pacific..... | | | 1 | 1 | 2 | | 1 | | 5 |
| Washington Terminal..... | 3 | | | | | | | | 3 |
| Western Maryland..... | | | | 1 | | | | | 1 |
| Total..... | 34 | 2 | 22 | 23 | 21 | 4 | 29 | 8 | 143 |

Causes of Potential False-Proceed Conditions for Year Ending June 30, 1950

| Name of railroad | Sand, rust, or other deposit on rails, wheels | Failure of relays and similar devices | Wires broken, open circuits, crossed or grounded, foreign current, et cetera | Apparatus broken, defective, or out of adjustment | Failure of apparatus due to sleet, ice, snow, wet track, weather, or lightning | Failure of apparatus due to obstruction or outside interference | Errors in making connections or adjustments | Undetermined | Total |
|--------------------------------------|---|---------------------------------------|--|---|--|---|---|--------------|-----------|
| Boston & Maine..... | | | | 1 | 1 | 1 | | | 3 |
| Chicago, Burlington & Quincy..... | | | 1 | | | | | | 1 |
| Cincinnati Union Terminal..... | 1 | | | | | | | | 1 |
| Gulf, Mobile & Ohio..... | | | | | 1 | | | | 1 |
| Illinois Central..... | | | | | 1 | | | | 1 |
| Lehigh Valley..... | | | | | 1 | | | | 1 |
| New York Central, Western Lines..... | | | | | 1 | | | | 1 |
| Pennsylvania..... | | | 1 | | | | | | 1 |
| St. Louis-San Francisco..... | | | | 1 | | | | | 1 |
| Western Maryland..... | | | 1 | | | | | | 1 |
| Total..... | 1 | | 3 | 2 | 5 | 1 | | | 12 |

| | |
|---|--------------|
| Automatic train control and cab signal devices..... | 709 |
| Centralized traffic control systems | 387 |
| Other similar appliances, methods, or systems..... | 130 |
| Total | 4,861 |

According to reports submitted by carriers, there were 59 train communication systems in service on 32 different railroads on January 1, 1950. These included three end-to-end communication installations, employing physical wire connections through the train, and five installations providing radio telephone service for passengers through telephone company mobile radio facilities. Considering only radio and inductive systems used in connection with railroad operation, there

were 51 installations in service on 29 railroads. This compares with 28 such installations in service on 19 railroads as of January 1, 1949. There were 111 installations in service in yards and terminals on 50 railroads; 105 of these installations provide communication between fixed stations and switching engines and 6 provide communications between fixed stations and portable pack radios used in several different yard operations. This compares with 84 installations in service on 41 railroads as of January 1, 1949.

Highway Crossing Accidents

During the calendar year, 1949, there were 3,523 accidents at highway crossings, which resulted in the death of 1,507 persons and the injury of 3,774 persons. Automobiles

were involved in 3,171 of these accidents, in which 1,307 persons were killed and 3,607 injured. There were 39 derailments of trains as a result of collisions between trains and automobiles, which caused the death of 16 persons and the injury of 46 persons. Of the total casualties resulting from derailments and other train accidents at highway grade crossings, 4 persons killed and 66 injured were railroad passengers, employees, and persons carried under contract.

Inspectors, engineers, and other members of the staff of the Bureau have performed their many and varied duties in a highly satisfactory manner.

Respectfully submitted.
S. N. MILLS, Director