



What is Boiler and Machinery Insurance, now known as Equipment Breakdown Insurance?

Although there is a historical record of a steam powered device invented by the Greek, Hero of Alexandria over 2,000 years ago the first really useful steam boiler was perfected by James Watts in England in 1765. The contraption he built was used to pump water out of coal mines and it established the principal of creating pressure with heat in a sealed vessel to do work. The pressure was used to move pistons that could push and pull water out of the mines. The pumping action of that first boiler evolved into steam locomotives, steam ships, automated textile looms, lathes, saws and even early automobiles. The steam engine and its associated boiler eventually replaced most windmills and water wheels as the choice generator of mechanical and electric power..

However, the boiler had a problem with pressure. If there was too little, nothing moved and if there was too much, boilers could explode catastrophically. One problem was that metallurgical technology in the 18th and 19th centuries had not caught up with the huge pressures that could be developed using steam. Water expands by about 1,000 times when it turns into steam and the cast iron plates and rivets used in boilers in the 19th century could not contain the pressure consistently. This led to catastrophic explosions that did tremendous damage and killed people. In response, cities and states began to regulate boilers and require annual inspections to check for dangerous conditions. One innovation developed in 1866 was the establishment of the Hartford Steam Boiler company that paired boiler inspections with insurance on the equipment damaged in an explosion or other mechanical accident. A powerful incentive in the Hartford plan was that the inspector could suspend the insurance if a dangerous condition was found in the boiler. The initial insurance coverage offered by Hartford Steam Boiler has evolved into “Equipment Breakdown Insurance” that still covers boilers but extends to several other types of equipment. Equipment covered in the Fund’s policy includes:

- ◆ electrical,
- ◆ air conditioning and ventilation,
- ◆ boilers and pressure vessels,
- ◆ computers and communications equipment,
- ◆ mechanical,
- ◆ renewable and alternative energy and
- ◆ production equipment.

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Loss Control Briefs

New Loss Control Manager

Regan J. Rychetsky, ABCP, is the new Loss Control Manager for York Pooling in Austin, the administrator of the Texas Water Conservation Association Risk Management Fund. Regan has over 28 years of workers' compensation, subrogation, safety and accident investigation experience. For the past 17 years, he has worked with what is now called the Texas Health and Human Services System (HHS), where he served as the Director of Enterprise Risk Management and Safety. He focused on risk management, safety, workers' compensation, workplace violence prevention and emergency management for all HHS agencies. As part of his risk management and safety training program, Regan conducted Threat Management Team training for all regional and direct care facility teams, and conducted training regarding workplace violence, domestic violence and stalking in the workplace for all employees. He also developed guidance and personal safety planning for employees who were victims of domestic violence, stalking and other internal or external threats. Regan served as the Safety Officer of the HHS State Medical Operations Center and developed safety plans for man-made and natural disaster response and recovery personnel. This included the operational response to Hurricane Ike in 2008. Regan is the past president and board chair of the National Public Risk Management Association (PRIMA) and Texas PRIMA, and is a member of PRIMA's National Speaker Bureau and Loss Control Task Force. Regan is a 1987 graduate of Texas A&M University and holds an Associate Business Continuity Professional (ABCP) certification.



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Questions, comments, tips, advice, ideas, opinions, criticism, and news are welcomed and encouraged. Every effort has been made to ensure the accuracy of the information published in *Risk Advisor*.

Opinions on financial, fiscal, and legal matters are those of the editors and others. Professional counsel should be consulted before taking any action or decision based on this material.

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What is Boiler and Machinery Insurance, continued from front cover

The Fund offers this optional insurance on members' equipment as part of the Property Coverage Document. The insuring agreement states:

“We will pay for direct damage caused by a covered cause of loss to covered property located at the covered premises shown in the declarations.”

As always with insurance, definitions of the terms in the agreement determine what is or is not covered. In the current Fund coverage some of the important definitions are:

- ◆ Covered cause of loss – “a breakdown”
- ◆ Breakdown – means “direct physical loss that causes physical damage to covered equipment and necessitates its repair or replacement” as a result of electrical failure including arcing, failure of pressure or vacuum equipment or mechanical failure including rupture or bursting caused by centrifugal force.
- ◆ Covered equipment includes equipment designed to work under internal pressure or vacuum, communication and computer equipment, fiber optic cable and other electrical or mechanical equipment that is used in the generation, transmission or utilization of energy.
- ◆ Computer equipment is “programmable electronic equipment used to store, retrieve and process data” and includes peripheral equipment that provides communication including input and output functions such as printing or data transmission.

There are many other defined terms and limitations in the coverage but it is still a valuable addition to a district's property coverage because Equipment Breakdown responds to events that are otherwise excluded in the Property coverage document. Equipment Breakdown coverage responds to “loss to the covered equipment that essentially begins within the equipment” not something that is external to it. (IRMI, “Equipment Breakdown – More than Just Boiler and Machinery” William K. Austin, September 2011)

As with any other insurance there are exclusions, deductibles and extensions of coverage. Common exclusions include events that would be covered in the property coverage and some of the same exclusions such as war, nuclear hazard, flood and deterioration due to improper maintenance. And in the days of growing awareness of cyber threat, “hacking events” are excluded unless a “covered cause of loss occurs” or a mechanical breakdown of the infected equipment.

Extensions of coverage under an Equipment Breakdown policy include:

- ◆ Loss of Business Income that would have been earned during the period of interruption
- ◆ Extra Expense to resume operations such as rent for temporary quarters, rental of replacement equipment
- ◆ Utility interruption
- ◆ Expediting expense to acquire parts or equipment as quickly as possible
- ◆ Extension to electronic data or media
- ◆ Newly acquired locations to extend automatic coverage to new locations

Deductibles and waiting periods also apply to each coverage document. A “waiting period” is usually 24 hours of time that a piece of equipment is out of service before business interruption coverage begins. The Fund attaches the coverage for the district to the property coverage document. The following are a few examples from Hartford Steam Boiler describing a loss and the way they responded to the claim:

Electrical arcing destroyed three main electrical panels and left an office building without power. Temporary measures were taken to restore power to tenants – particularly to an accounting firm that was in the height of its tax season crunch.

Total Loss: \$ 1,597,389

A control failed on a medical clinic's refrigerator, causing the temperature to dive into single-digit temperatures. Drugs, which normally are stored between 36 to 43 degrees, had to be discarded.

Total Loss: \$ 21,953

Sediment in a boiler caused a low-water condition that resulted in severe over-firing, shutting down the boiler – and a school. A rental unit was needed until the damaged boiler could be replaced.

Property Damage: \$ 98,500

Extra Expense: \$ 25,164

Total Loss: \$ 123,664

Electrical power supply voltage fluctuation caused two telephone system terminal boards to burn out.

Total Loss: \$ 52,500

see [What is Boiler and Machinery Insurance](#) on page 4

What is Boiler and Machinery Insurance, continued from page 3

If your district does not currently carry Equipment Breakdown coverage it might be worth considering as renewal season begins. Contact your customer Service Associate for a quote.

Sources: *IRMI*, "Equipment Breakdown – More than Just Boiler and Machinery" William K. Austin, September 2011;

Rough Notes, "Boiler & Machinery," LeRoy Utschig, 2000; *Live Science*, "Who Invented the Steam Engine" Elizabeth Palermo, March 2014; *Journal of Property Management*, "Boiler and Machinery" Paul Dudley, July 1999; Travelers Insurance, Energy Max 21, Equipment Breakdown Protection Policy.

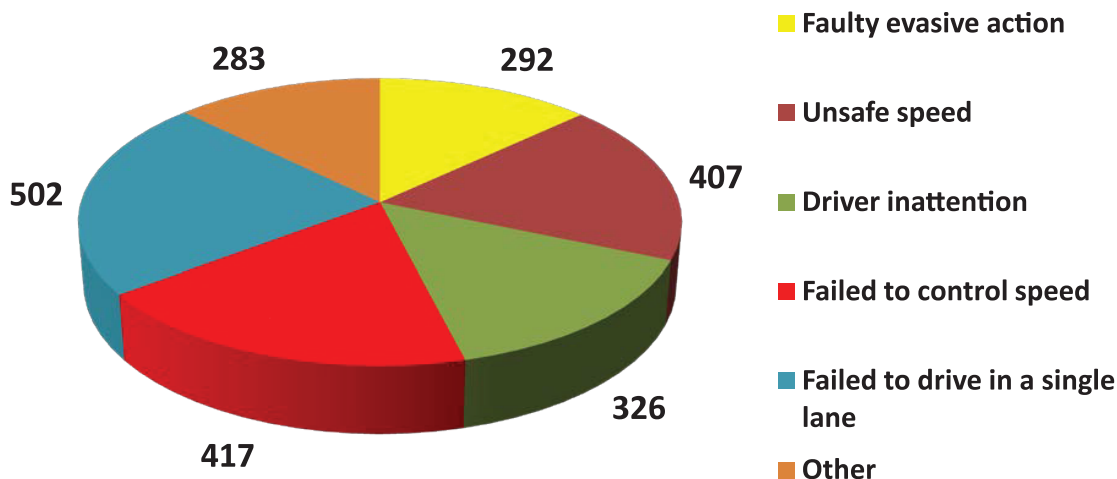
Chaos and Carnage on Texas Roads

As Texas drivers we have all seen the kinds of driving behaviors that lead to accidents. If the truth be known, some of us have even been guilty of behind the wheel transgressions like speeding or following too closely. Despite the best training efforts of the Fund's Loss Control Consultants there are still violations of driving best practices. Although members of the Fund have their own unique driving duties and vehicle types, the Fund's claim experience mirrors the overall patterns of all drivers in Texas. Each year the Texas Department of Public Safety publishes a compilation of all accidents reported to them by local law enforcement authorities. The most recent data is for 2015. It is a sobering file of information about the causes and results of driving accidents. This article will present some of the important highlights of the Texas database and compare it to the recent claim database of the Fund.

Automobile accidents continue to be costly to water districts and authorities. Automobile accidents have three main cost components:

- ◆ The most common in terms of frequency is physical damage to the member's vehicle.
- ◆ The damage your vehicle does to someone else's vehicle or property is another element.
- ◆ But the most costly claims are injuries to occupants of the vehicles involved in an accident. Occupants of the other vehicle are covered by Automobile Bodily Injury Liability and District drivers are covered by Workers' Compensation.

2015 Texas Fatal Crash Data - Top Six Causes Texas Department of Public Safety



Many times all three cost components are seen in an accident. The Texas DPS data base estimates the total economic cost of all accidents but does not record the dollar cost of the different types of accidents. However, they do report the most costly result – fatalities.

The first chart illustrates the number of fatalities by the top six causes in Texas in 2015. These six causes account for 85% of the fatalities in 2015 and 72% of total accidents reported to the database by local law enforcement departments.

The second chart illustrates the frequency of accidents by the top six causes. The largest cause of accidents is “Failed to control speed” which is also the second leading cause of fatalities in 2015.

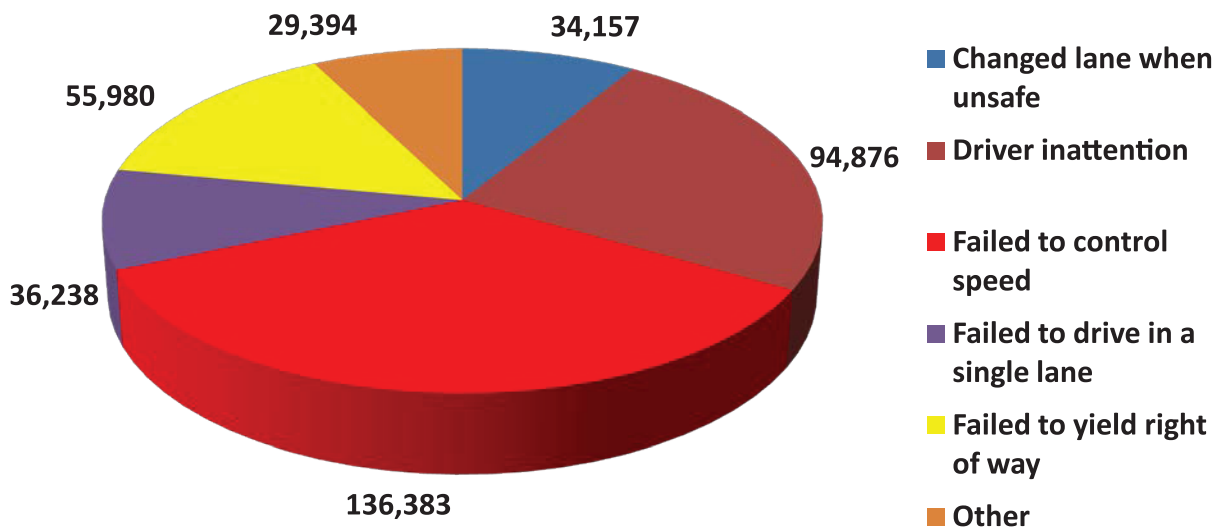
However, the fatality rate in the “Failed to control speed” category is only .37% compared to the fatality rate of 1.4% in the “Failed to drive in a single lane” category. The death rate is even higher for “unsafe speed” at 1.53%. These percentages seem small but they represent hundreds of Texans killed in largely

preventable accidents. Another category that is of growing concern is “Driver Inattention.” One of the primary causes of fatalities and accidents in this category is the use of cell phones while driving.

Over the last five years the Fund’s claims data shows a total of 521 automobile liability and automobile physical damage claims out of a fleet of 2,614 vehicles (2015/16 audited vehicle count). This translates to a rate of 19.9% of all vehicles being involved in some kind of automobile claim over that five year span. A total of \$2,521,522 has been paid so far for all automobile liability and physical damage claims during that period. Fortunately, there were no fatalities from any of the Fund accidents during this time.

The trends and causes observed in 2015 are definitely continuing and the Fund will continue its efforts to help its members prevent automobile accidents that are so costly to the public, district staff and to district property. Elsewhere in this newsletter is a schedule of Safety Workshops that will present important information about the causes and ways to prevent automobile accidents.

2015 Total Statewide Crashes Top Six Causes Texas Department of Public Safety





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Safety Workshops

Each year the Fund presents Safety Workshops around the state, usually hosted by a member. These regional workshops bring topics of current interest and concern to safety officers, supervisors, risk managers and anyone else who has responsibility for safety at their district. Topics are chosen by the Loss Control Consultants to reflect issues that are affecting many members or have been suggested by members at previous workshops. The workshops are staged regionally to provide a convenient venue for anyone wanting to attend. Of course, based on personal schedules anyone is welcome to attend any of the workshops.

Each workshop lasts most of a day, running from 8:30 am to about 3:30 pm. Lunch and snacks are provided for everyone. There is no cost to attend other than the time you invest. Attendance is limited to staff of districts that are members of the Texas Water Conservation Association Risk Management Fund. Final dates for each workshop have been set. You will receive flyers announcing dates, locations and agendas as each event gets closer. Locations and dates for 2017 include:

- ◆ High Plains Underground Water Control District in Lubbock on May 24, 2017
- ◆ Brazoria Drainage District #4 in Pearland on June 14.

- ◆ North Texas Municipal Water District in Wylie on August 30.
- ◆ San Jacinto River Authority in Conroe on October 18.
- ◆ The Rio Grande Valley, Echo Hotel on November 8, 2017.

Topics for this workshop are selected on the criteria mentioned above plus recent claims history and member requests. One of the claims areas that has seen frequent and serious activity is injury and damage due to automobile accidents. That will be one focus of this year's workshops. Topics will include:

- ◆ Summary and analysis of recent claims activity
- ◆ Survival on the Road; Interactive, defensive driving tailored to water districts activities and vehicles
- ◆ Hot Work and Hurricane Preparedness
- ◆ Chemical Handling and Hazard Communication
- ◆ Bites, stings, poisonous plants and mosquitos
- ◆ Don't Be THAT Guy! – Examples of stupid actions that can have catastrophic consequences. What should you do?

The only thing you need to do to attend one of the workshops is to sign up online at twcarmf.org so we will have a count for workbooks and food. If you have questions, don't hesitate to call your Loss Control Consultant or Alicia Smith at 800-580-6467 or e-mail at alicia.smith@yorkrsg.com.