

***EQUIPMENT BREAKDOWN
INSURANCE***

FOR

***CONTINUING EDUCATION
CREDIT***



**© THE TRAVELERS
COMPANIES, INC.**

All rights reserved.





Equipment Breakdown Insurance – Boiler 101



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

DISCLAIMER

*This presentation is intended to introduce you to the key parts of **Equipment Breakdown Insurance** (Boiler & Machinery Insurance). It will also help you understand the equipment covered which will allow you to better underwrite the account.*

*The presentation is only a **GUIDE** and should not be used as a final source of information. You should always consult the **Equipment Breakdown Policy** and / or your local EB Representative.*

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

COURSE OUTLINE

- I. What is Equipment Breakdown Insurance**
 - A. The Type of Equipment that EB Insurance Covers / Equipment Identification**
 - 1. Electrical Systems
 - 2. Boilers and Fired Pressure Vessels
 - 3. Unfired Pressure Vessels
 - 4. Air Conditioning & Refrigeration Equipment
 - 5. Mechanical Equipment
 - 6. Business Equipment
- II. What is Covered; Frequent Kinds of Losses; Common Causes**
 - A. Electrical
 - B. Boilers & Pressure Vessels
 - C. Air Conditioning & Refrigeration
 - D. Mechanical Equipment
 - E. Business Equipment

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

COURSE OUTLINE

- III. Equipment Breakdown Coverages**
 - A. Direct Damage**
 - 1. Covered Cause Of Loss to Covered Property
 - 2. Expediting Expense
 - 3. Ammonia Contamination
 - 4. Hazardous Substances
 - 5. Water Damage
 - 6. Spoilage Damage
 - B. Indirect Damage Coverages**
 - 1. Business Interruption
 - 2. Extra Expense
 - 3. Utility Interruption
- IV. Quiz**

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

SECTION I

What Is Equipment Breakdown Insurance ?

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***A Specialty Property
Coverage That Is Designed
To
FILL CERTAIN GAPS
In Standard Commercial
Property Policies***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

**Why Do
I NEED TO QUOTE
Equipment Breakdown
Insurance ?**



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Because In Many Cases, No One
Has Made Insureds *AWARE* Of
These Coverage Gaps***

OR



***Offered Them Coverage
For It *BEFORE* !!***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

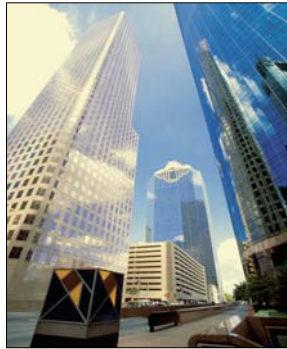
With Equipment Breakdown Insurance almost any type of **MECHANICAL AND ELECTRICAL** equipment qualifies for coverage.



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Technology has changed equipment exposures over The last few decades.....

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED



- ✓ *Buildings operate automatically*
- ✓ *Computers Control Equipment throughout buildings*
- ✓ *Escalators and Elevators operate from a Central Software System*
- ✓ *Newer buildings have Beepers and Floor Announcements*

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***As businesses become more dependent on computerized equipment and other devices –
THEIR NEED FOR ELECTRICITY INCREASES.***



PROBLEM

- ***Systems may not be designed to handle these demands***
 - ***Electrical systems can be overloaded***
 - ***Slow but steady deterioration of infrastructure***
 - ***The system can “cook” itself in a short period***
 - ***Can lead to complete system failure***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

This is why Equipment Breakdown Insurance is so important!

It covers these unforeseen losses that many think would be automatically covered by their Property Insurance Policy.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

SECTION I, A.

The Type Of Equipment That Equipment Breakdown Insurance Covers / Equipment Identification

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

ELECTRICAL SYSTEMS

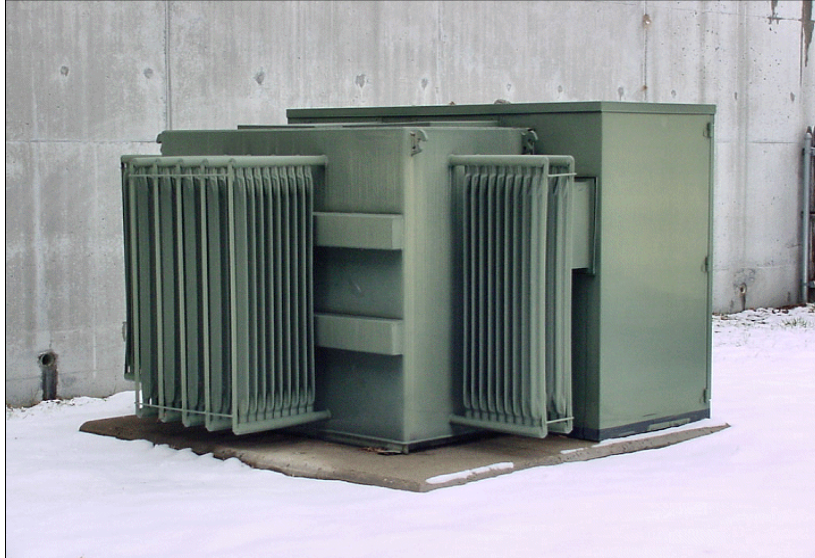
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Electrical Switchgear



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Oil Filled Transformer
With Air Cooling***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Oil Filled Transformer
With Forced Air Cooling***



Furnace Transformers



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

750 MVA Transformers



Oil Filled Circuit Breaker



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

3 Dry Transformers



Dry Transformer



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Bus Structure



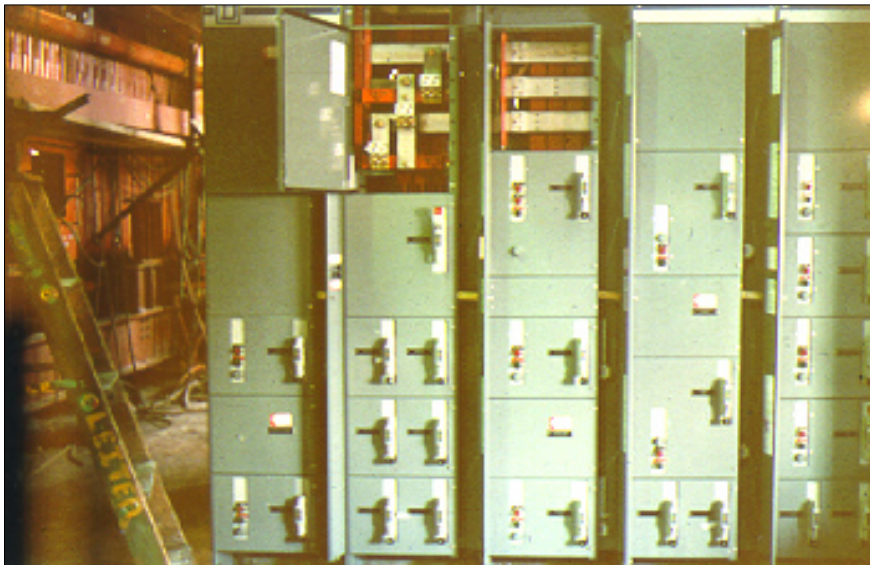
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Distribution Controls & Monitoring Equipment



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Power Panels - Motor Controls



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Bank Of Small Motors



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

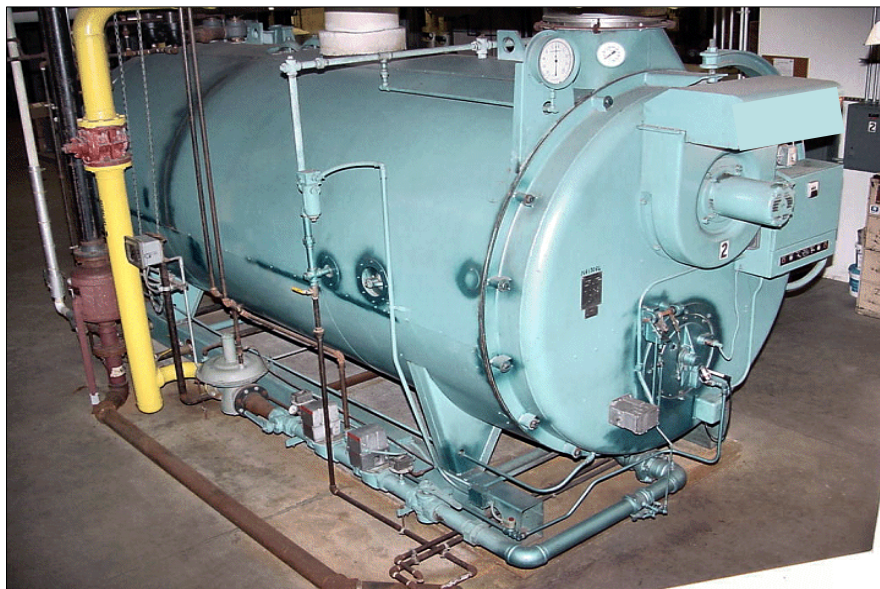
Bank Of Small Motors And Pumps



BOILERS AND FIRED PRESSURE VESSELS

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Fire Tube Boiler



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Inside Of A Fire Tube Boiler



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Small Water Tube Boilers



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Water Tube Boilers



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Cast Iron Boiler

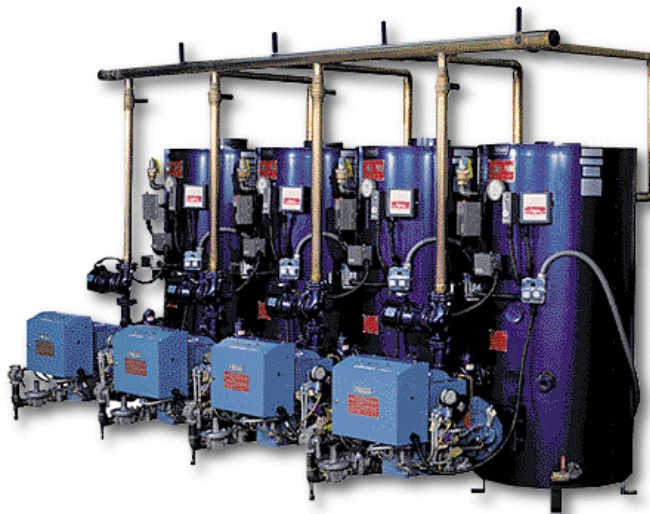


© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Cast Iron Radiators

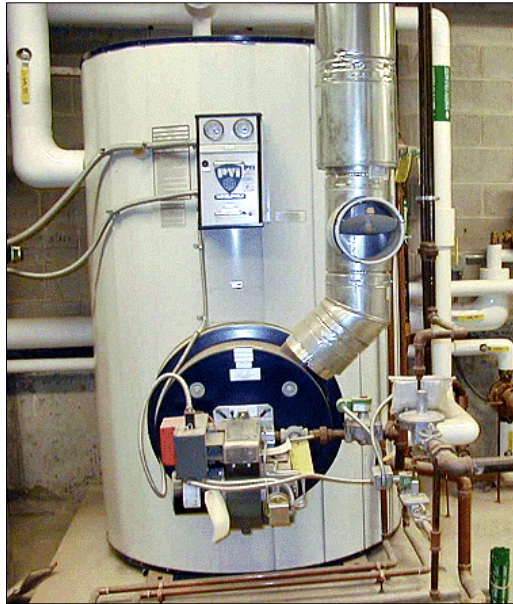


Modular Hot Water Sectional Boilers



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Fired Storage Water Heater



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Sterilizer



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

UNFIRED PRESSURE VESSELS

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Deaerator Tank



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Ammonia Storage Tank



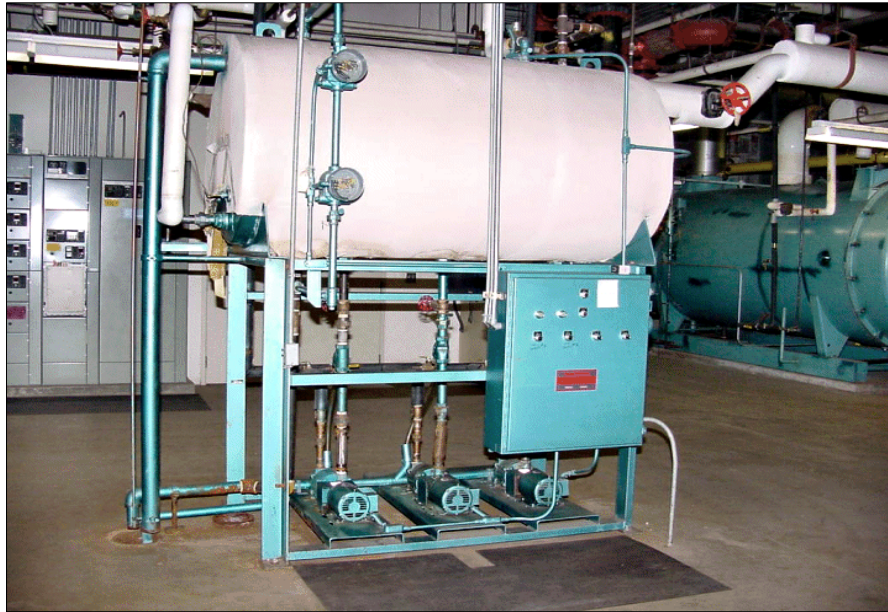
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Storage Tanks



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Storage Tank



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Pressure Cookers



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Dry Cleaning Equipment



Commercial Dryers



Distillation Tower

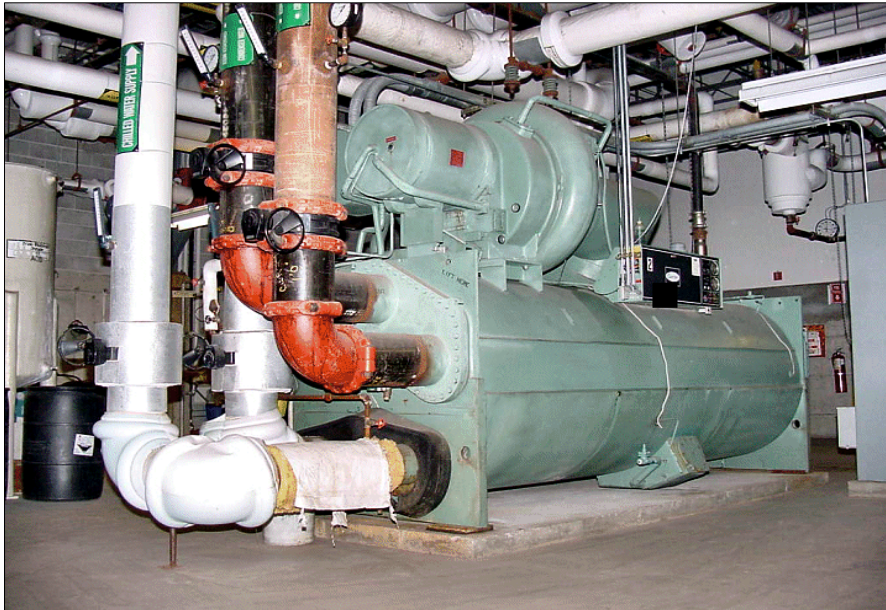


© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

AIR CONDITIONING & REFRIGERATION EQUIPMENT

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Centrifugal Chiller



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

2500 Ton Freon Chiller



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Roof Mounted Air Conditioning Unit



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Small Air Conditioning Units



Refrigeration System Mechanical Room



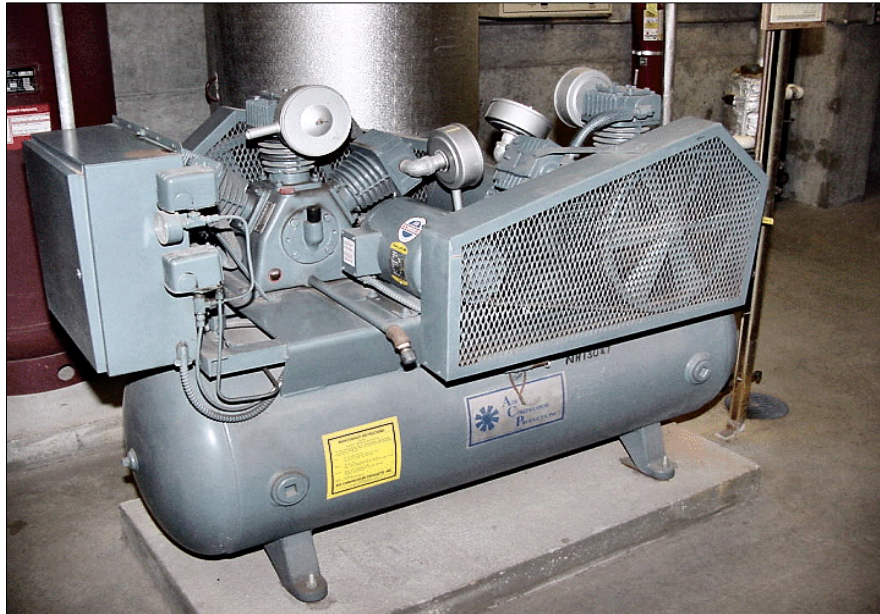
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Ammonia Compressors



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Small Air Compressor



60 Ton Refrigeration System



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

**Coolers At A
"STOP AND ROB STORE"**



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

**MECHANICAL
EQUIPMENT**

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Mechanical Press



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Hydraulic Press



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Power Press



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Plywood Press



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Printing Press



Computer Numeric Control Machine (CNC)



Internal Combustion Engine (ICE)

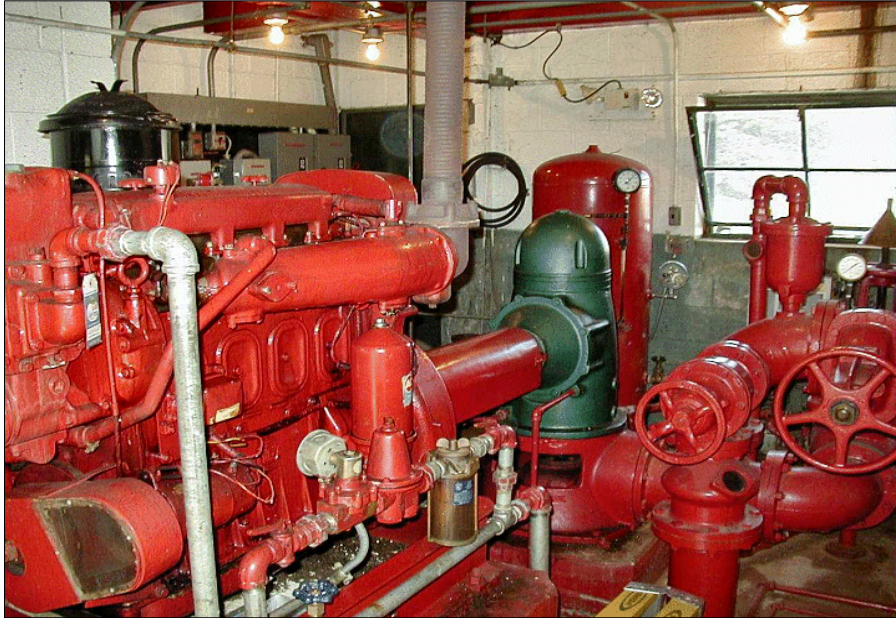


© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Emergency Power For A Large Office



Diesel Vertical Turbine Fire Pump

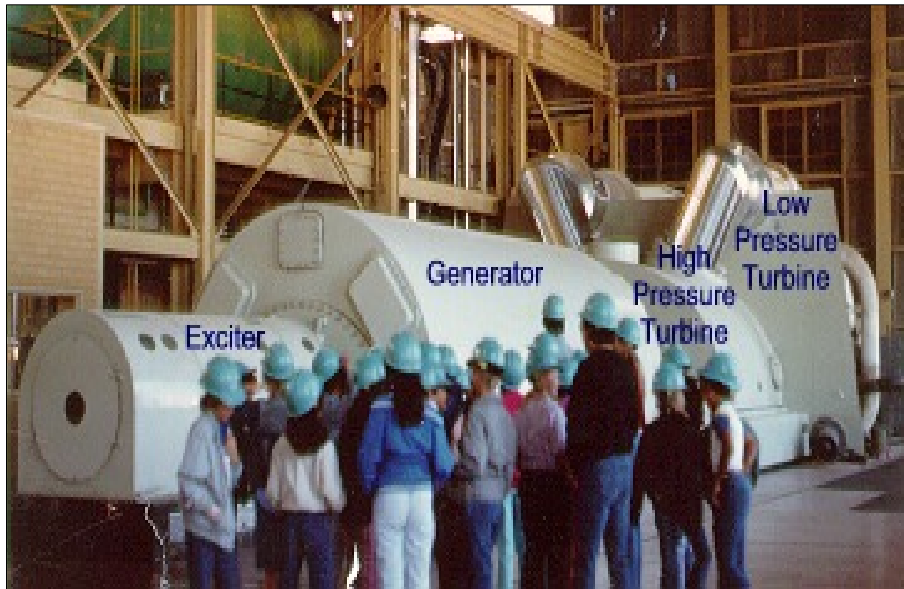


© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Autogenous Mill



Steam Turbine



Steam Turbine



Steam Turbine – Opened Up



Gas Turbine



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

A Sewage Treatment Plant

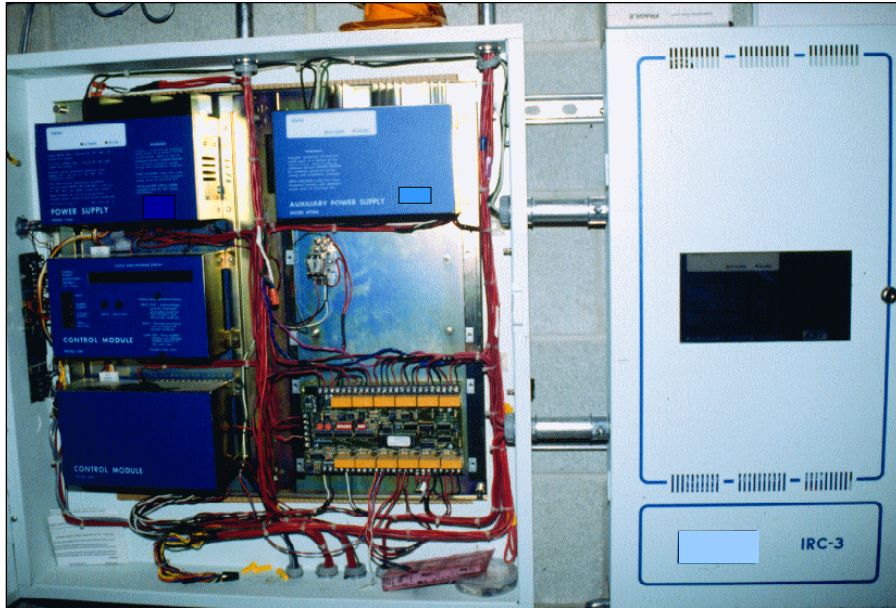


© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

**BUSINESS
EQUIPMENT**

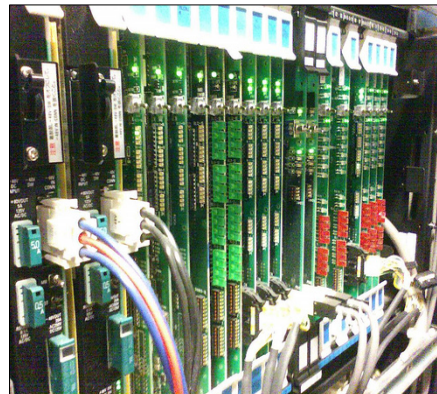
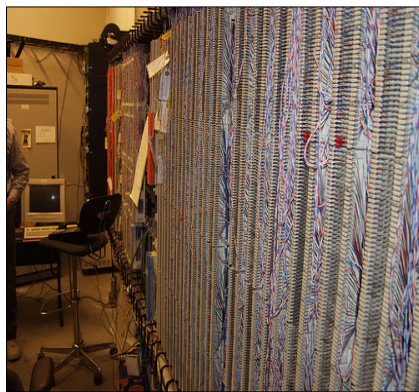
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Alarm Systems



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

PBX System



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Computers



Office Equipment

Fax Machines / Copiers / Scanners / Desktop Computers



Copier



Fax Machine



Photo Scanner



Desktop Computers

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Surveillance Console



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

15 MINUTE BREAK

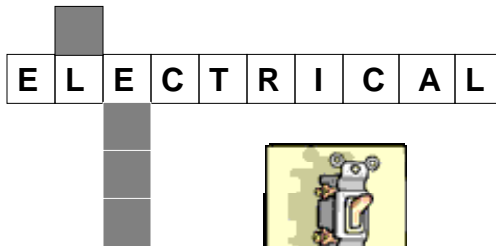


© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

SECTION II

What Is Covered; Frequent Kinds Of Losses; Common Causes

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED



WHAT IT COVERS:

Accidental breakdown of:

- Power transformers
- Electric motors
- Switchboards
- Distribution Panels
- Circuit Breakers
- Cables
- Bus Ducts
- Related Equipment

FREQUENT KINDS OF LOSSES:

- Burnout of windings
- Insulator, control or connector failure
- Bearing burnout
- Mechanical breakage of parts

COMMON CAUSES:

- Supply line surge
- Excessive moisture
- Insulation deterioration
- Poor workmanship
- Operator error or abuse
- Poor contacts

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Electrical Switchgear
operating normally***



***Electrical Switchgear
after an arcing loss***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Take this loss for example:

A Large Apartment Building

- ***A simple loose connection caused electrical arcing at a main distribution panel***
- ***The current transmitted through the building's cabling system***
- ***Destroyed were the mechanisms that distributed electricity to 13 floors***

\$500,000 in equipment damage alone



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

This is not **UNCOMMON** and these types of losses are not usually caused by a major event like lightning but by:



- ***Loose connections***
- ***Moisture***
- ***Dirt***
- ***Overloads***
- ***Lack of maintenance***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

What An Electrical Room SHOULD Look Like



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***What An Electrical Room
SHOULD NOT Look Like***



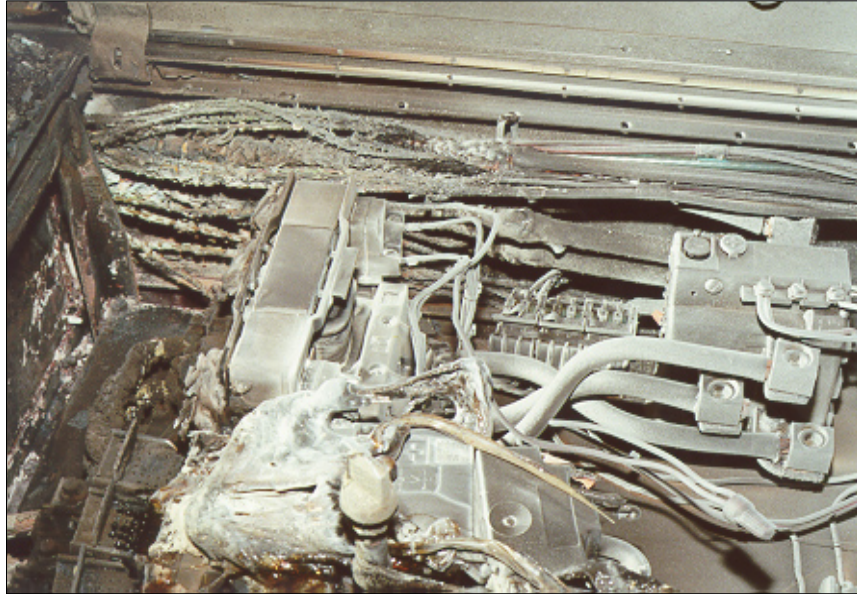
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Remember, Dust and Dirt Usually
Will Cause Electrical Problems !!***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Electrical Switchgear Failure



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

30 HP DC Motor Electrical Arcing Damage



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Transformer With
Damaged Windings***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

MRI Machine



MRI Machine Being Disassembled



“THIS GUY IS A TROUBLEMAKER”



Animals like to nest in electrical equipment because the equipment gives off heat. **EQUIPMENT BREAKDOWN INSURANCE** covers when a mouse chews through a wire which results in an electrical breakdown.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Squirrel Shorted Out A Transformer



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Squirrel Shorted Out A Transformer



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Bear Bit Into A Feeder Cable



Bear Bit Into A Feeder Cable



B O I L E R S

&

P R E S S U R E V E S S E L S

WHAT IT COVERS:

Accidental breakdown of:

- Heating or process boilers
- Pressure vessels
- Cookers
- Sterilizers
- Vulcanizers



FREQUENT KINDS OF LOSSES:

- Explosion
- Collapse
- Bulging
- Cracking
- Overheating
- Warping

COMMON CAUSES:

- Control failure
- Scale buildup
- Freezing
- Low Water Condition
- Vibration
- Operator error
- Cold water slugging

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

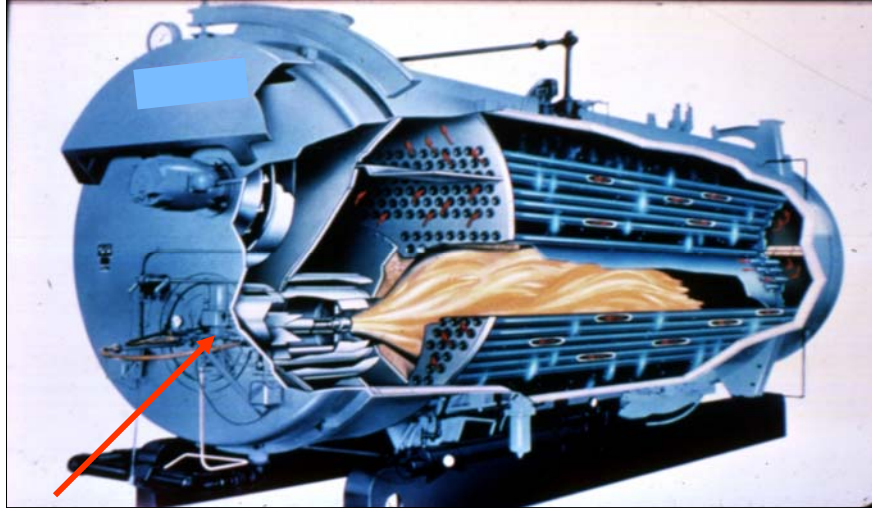
Cast Iron Boilers



***Cast Iron
Boiler Sections***



FireTube Boiler Schematic Drawing



Firebox

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

What Can Happen To A Fire Tube Boiler

Before Firing



***Fire Box Collapse –
Caused By A
Low Water Condition***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Exterior Of A Utility Boiler
After 2 Tubes Ruptured***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***A Tube Rupture On A Utility Boiler
Tubes Failed - \$1,700,000 To Repair***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Two Ruptured Tube Ends Of A Utility Boiler



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Boiler Explosion In Which
The Boiler Went Through A Wall***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Fire Tube Boiler Exploded And
Came Through The Wall Of A Hospital***



Substantial Damage To The Fire Tube Boiler



Tube Damage After Dry Fired Explosion



Hole In The Wall Created By Boiler Explosion



After Boiler Explosion – Place Where Boiler Landed



Pressure Vessel Occurrence



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Pressure Vessel Occurrence



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Pressure Vessel Occurrence



Pressure Vessel Occurrence



***Steam Explosion In New York City
July 2007***



***Steam Explosion In New York City
July 2007***



Industrial Washing Machine



A I R & C O N D I T I O N I N G R E F R I G E R A T I O N

WHAT IT COVERS:

Accidental breakdown of Air Conditioning and Refrigeration system:

- Motors
- Compressors
- Fans
- Switchboards
- Coils
- Pipes
- Vessels

FREQUENT KINDS OF LOSSES:

- Refrigerant piping or coil cracking
- Freezing or bursting of Chiller
- Compressor failure
- Motor winding burnout



COMMON CAUSES:

- Control failure
- Vibration
- Refrigerant slugging
- Scale buildup
- Rapid weather change
- Wear of internal parts
- External blows

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Air Conditioning Unit Malfunction



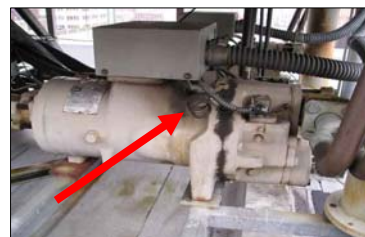
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Roof Top Air Conditioning Unit Damaged by Electrical Breakdown



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

HVAC / Chiller Malfunction Which Caused System To “Fry”



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Cracked Air Tank



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Air Tank Explosion



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

M E C H A N I C A L



WHAT IT COVERS:

Accidental breakdown of:

- Pumps
- Fans
- Blowers
- Engines
- Turbines
- Compressors
- Gear Sets

FREQUENT KINDS OF LOSSES:

- Valve Failure
- Breaking or shaft failure
- Scoring of cylinder walls
- Casing or impeller distortion
- Seizing of moving parts

COMMON CAUSES:

- Oil Contamination
- Misalignment
- Overload
- Surging
- Vibration
- Overspeed
- Bearing Wear
- Operator Error

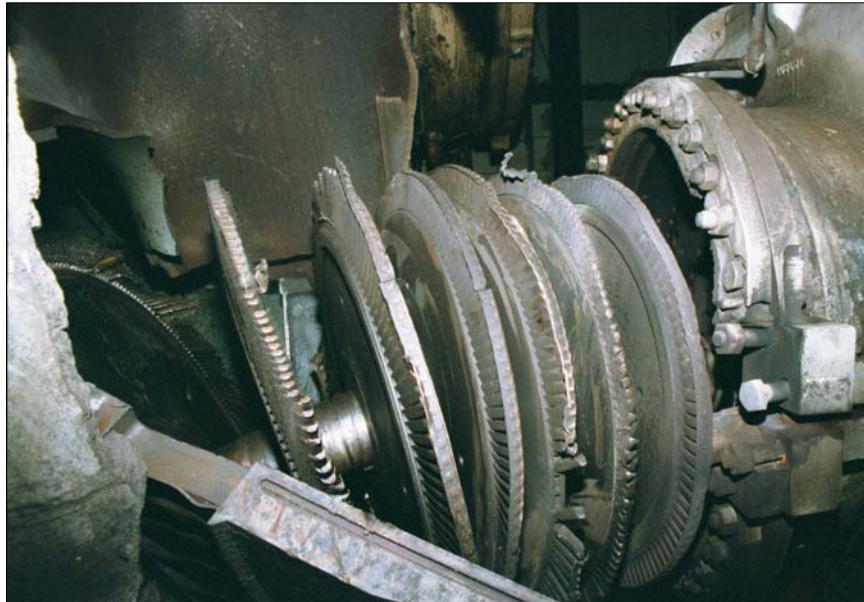
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

600 MW Steam Turbine Generator Loss LP Blade Broke Off And Went Through The Casing



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Damaged Steam Turbine



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Office Building
August 2001***

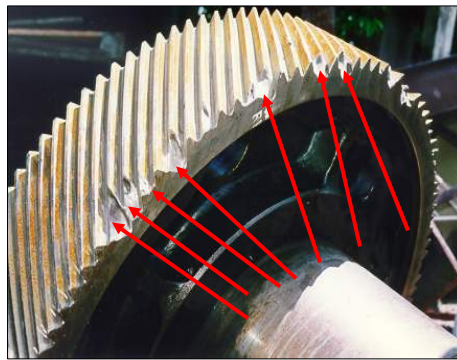


***Gas Turbine After A Roll Of Paper Towels
Was Left In After Maintenance Was Performed***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Notice How Large The Gear Is
And How Seemingly Little The Damage Is
- Rendering It Inoperable***

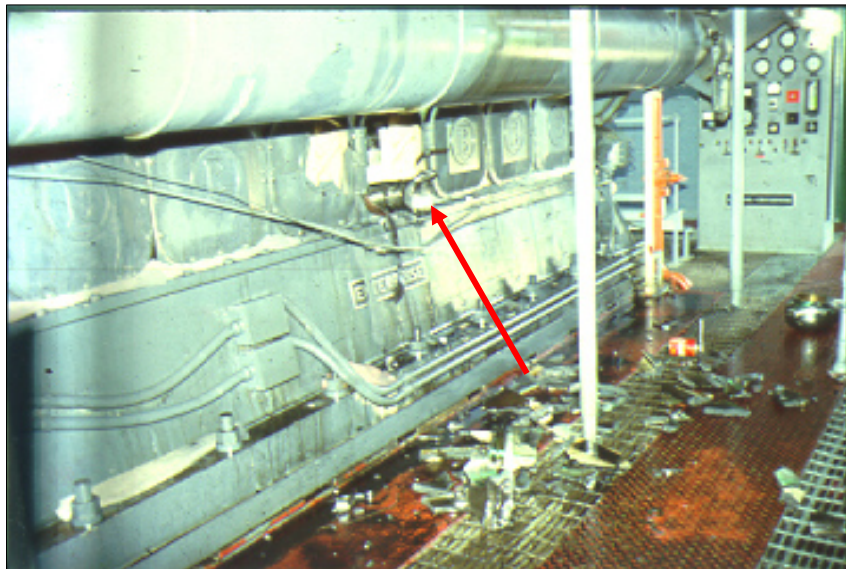


© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Hot Mill Gear Set



***Large Internal Combustion Engine (ICE)
- Piston Rod Failure***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

B U S I N E S S E Q U I P M E N T

WHAT IT COVERS:

Accidental breakdown of:

- Environmental control equipment
- Communications
- Computing equipment

FREQUENT KINDS OF LOSSES:

- Circuit board failure
- Electrical arcing
- Distortion or mechanical breakage of parts
- Insulator, connector or control failure
- Bearing failure
- Gear or coupling breakage
- Seizing of moving parts

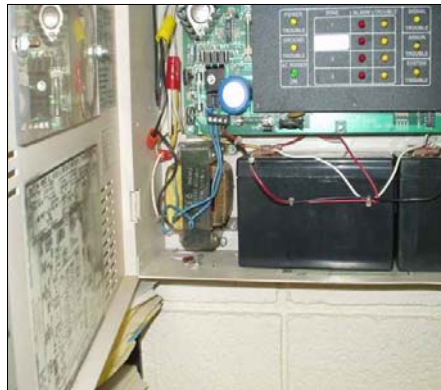
COMMON CAUSES:

- Electrical line surges
- Insulation deterioration
- Overload conditions
- Excessive moisture
- Poor contacts or connections
- Operator error or abuse
- Assembled parts separate
- Misalignment
- Wrong adjustment or clearance



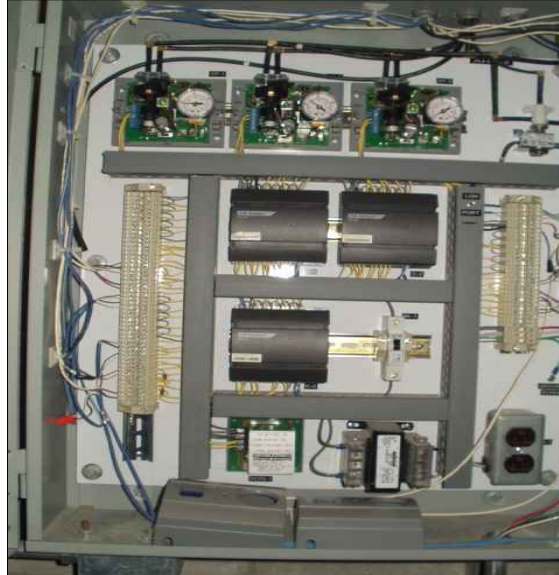
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Damaged Security System Due To Electrical Fault



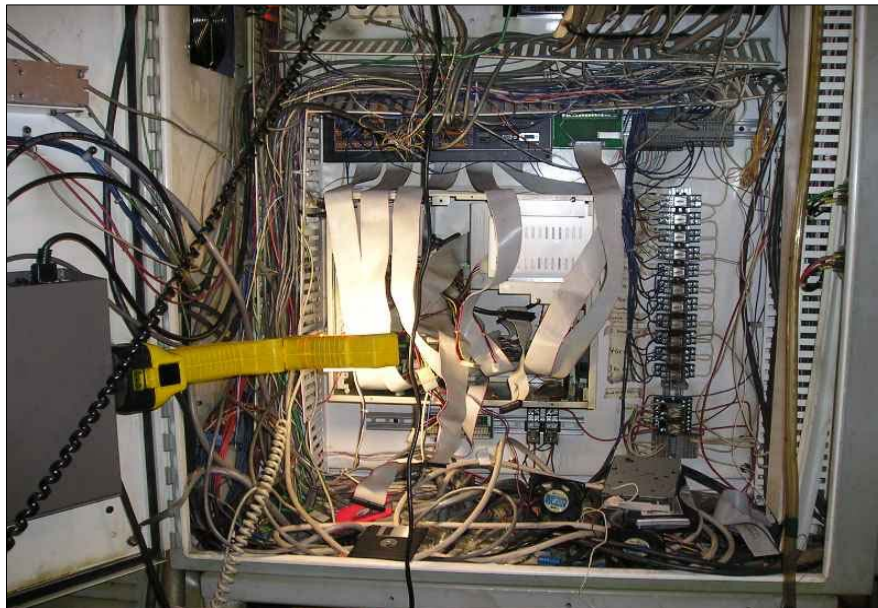
© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

***Damaged Building Management
System Circuit Board***



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Failed Circuitry For Centralized Alarm System





**Other Reasons Why
Equipment Breakdown
Insurance
Is Important**

- ✓ **Insurance Company inspections (which are not obligatory) may help reduce the likelihood of breakdowns of insured equipment.**
- ✓ **Insurance Company inspections of Boilers and Pressure Vessels satisfy *Jurisdictional Inspection Requirements* of various Jurisdictions throughout the United States and Canada.**

15 MINUTE BREAK



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

SECTION III

Equipment Breakdown Coverages

A. Direct Damage

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

- 1. Covered Cause Of Loss
To Covered Property***
- 2. Expediting Expense***
- 3. Ammonia Contamination***
- 4. Hazardous Materials***
- 5. Water Damage***
- 6. Spoilage Damage***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Let's first look at the **Direct Damage Coverage**.



We will pay for direct damage caused by a **"Covered Cause of Loss"** to **"Covered Property"** located at the **Covered Premises** described in the **Declarations**.

The three key things to remember here are that we must have:

- **Covered Cause Of Loss** that damages
- **Covered Property** at the
- **Covered Premises** described in the **Declarations**

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Definitions:

COVERED CAUSE OF LOSS -

is a **"Breakdown"** to **"Covered Equipment"**

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Definitions:

COVERED PROPERTY -

means any property that:

- a. You own; or*
- b. Is in your care, custody or control and for which you are legally liable;*

while located at the Covered Premises described in the Declarations.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Definitions:

BREAKDOWN -

means the following direct physical loss that causes physical damage to "Covered Equipment" and necessitates its repair or replacement:

- (1) Failure of pressure or vacuum equipment; or*
- (2) Mechanical failure including rupture or bursting caused by centrifugal force; or*
- (3) Electrical failure including arcing;*

unless such loss or damage is otherwise excluded within this Policy or any Endorsement forming a part of this Policy.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Definitions:

COVERED EQUIPMENT -

means and includes any:

- (1) Equipment designed and built to operate under internal pressure or vacuum other than weight of contents; for any boiler or fired vessel, the furnace of the "Covered Equipment" and the gas passages from there to the atmosphere will be considered as outside the "Covered Equipment"; or*

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Definitions:

COVERED EQUIPMENT (cont'd) -

- (2) Electrical or mechanical equipment that is used in the generation, transmission or utilization of energy; or*
- (3) Communication equipment and "Computer Equipment"; or*
- (4) Fiber optic cable.*

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

EXPEDITING EXPENSE

*With respect to your damaged **Covered Property**, we will pay the reasonable extra cost to:*

- ✓ *Make temporary repairs; and*
- ✓ *Expedite permanent repairs or permanent replacement.*

Some of the expenses we will pay to “speed up” repairs to damaged property can be:



- ✓ *Overtime labor*
- ✓ *Express or Air Freight Charges*



The base limit is usually \$25,000, which may be increased for an additional premium.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

AMMONIA CONTAMINATION

*Ammonia, in it's natural state, is a gas and is widely used as the refrigerant in commercial refrigerating systems. It has a **HIGH AFFINITY FOR COMBINING WITH WATER**. If it is released, it will be immediately absorbed by anything that contains moisture, **contaminating it and rendering it unusable!***

*If **Covered Property** is contaminated by Ammonia as a direct result of a **Breakdown** to **Covered Equipment**, we will pay for this kind of damage.*

The base limit is usually \$25,000, which may be increased for an additional premium.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Firefighters being decontaminated after inspecting an ammonia leak in a meat wholesaler operation

Chicago Tribune – August 12, 2005



***Once property is contaminated, it is not feasible to
NEUTRALIZE, DILUTE OR WASH Ammonia off unless
the surface where it lands is highly impermeable.
Virtually all FOOD PRODUCTS and much of its
packaging is subject to Ammonia Contamination.***



***Because of the exposure's VOLATILITY and POTENTIAL
SEVERITY this exposure is underwritten very carefully.***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

THE HUTCHINSON NEWS

SOUTH HUTCHINSON - On Wednesday, a XYZ Company official and South Hutchinson police identified the men involved in a fatal industrial accident at the plant a day earlier. Michael W., 51, was killed in the accident, which occurred at 1:07 p.m. at the plant, 9 North Washington. Mr. W., a XYZ Co. refrigeration worker, **died after coming in contact with ammonia gas after a break in a refrigeration line**, according to company spokesman Gary M. First responders at the XYZ Co. plant attended to Mr. W., but he was pronounced dead at Hutchinson Hospital. The accident injured Bill M., 55, said Chief Scott J. with the South Hutchinson Police Department. Both men were working on the pipe when it broke. Chief Scott J. said "the other worker was taken to a Wichita hospital where he was treated and released."

In Wednesday's statement, the company was deeply saddened by Mr. W.'s death and XYZ Co.'s investigation into the accident continues. Jones said in his 19 years working for the city, the plant has had minor incidents involving ammonia when it became over pressurized or when valves popped off, but none has resulted in death. XYZ Co. said it spends \$90 million each year on safety and health processes and personnel.

When ammonia gas or solution comes into contact with skin, chemical burns can result, according to the Agency for Toxic Substances and Disease Registry, within the federal Centers for Disease Control and Prevention. **It can cause rapid eye and nose irritation if inhaled, and contact with liquefied ammonia can cause frostbite injuries, as well as severe burns with deep ulcerations. Exposure to concentrated vapor or solution can cause pain, blisters and deep penetrating burns, according to the agency.** In the past, different companies have run the South Hutchinson plant - D and F Co., before XYZ Co. took over about four years ago. The plant is one of five XYZ Co. plants in the state, and it employs 400. A sign outside the local plant late Wednesday morning remained unchanged from the day before, stating the plant had gone 273 consecutive days without a lost-time accident.
11/02/2006; 02:36:52 AM

HAZARDOUS SUBSTANCES

If **Covered Property** is damaged, contaminated or polluted by a Hazardous Substance as a direct result of a **Breakdown to Covered Equipment**, we will pay the **ADDITIONAL EXPENSES** incurred for clean-up, repair, replacement or disposal of that property.



The base limit is usually \$25,000, which may be increased for an additional premium.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

HAZARDOUS SUBSTANCES

*As used here, **ADDITIONAL EXPENSES** means the additional cost incurred over the amount that we would have paid had no “Hazardous Substance” been involved with the loss.*



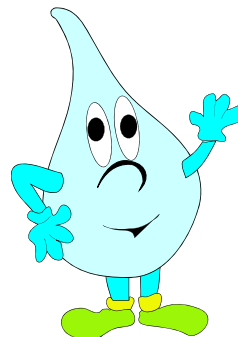
*If BI and/or EE are covered, the Hazardous Substance sublimit will include the additional time to clean up, repair, replace and/or dispose of the contaminated **Covered Property**.*

NOTE: *Ammonia is a “Hazardous Substance” but it is **EXCLUDED** from this sublimit. Ammonia is addressed separately, with a separate sublimit as we discussed earlier.*

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

WATER DAMAGE

*If **Covered Property** is damaged by Water as a direct result of a **Breakdown** to **Covered Equipment**, we will pay for this kind of damage.*



The base limit is usually \$25,000, which may be increased for an additional premium.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

SPOILAGE DAMAGE

We will pay for the Spoilage Damage to the Business Personal Property due to **lack or excess of power, light, heat, steam or refrigeration** caused solely by a **Breakdown to Covered Equipment**.

The base limit is usually \$25,000, which may be increased for an additional premium.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Some Typical Spoilage Exposures

Cold Storage Warehouse



Meat Packing



Fresh Seafood



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Some Typical Spoilage Exposures

Commercial Florist



Frozen Food Storage



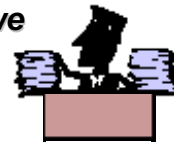
Frozen Food Storage



© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

The previous slide illustrates examples of Spoilage exposures. All of these examples could suffer **SUBSTANTIAL LOSSES** if there was a lack of power, light, heat, steam or refrigeration.

To **PROPERLY UNDERWRITE** these exposures we need to obtain a good assessment of:



- ✓ ***Inventory Values (including seasonal fluctuations)***
- ✓ ***Condition of Refrigeration Equipment***
- ✓ ***Systems and Procedures for earliest possible detection of a loss of cooling***
- ✓ ***Effective mitigation response procedures following a loss of cooling***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

SECTION III

Equipment Breakdown Coverages

B. Indirect Damage

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

- 1. Business Interruption***
- 2. Extra Expense***
- 3. Utility Interruption***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

BUSINESS INTERRUPTION COVERAGE

We will pay:

- (1) Your actual **loss of “Business Income”** from a total or partial interruption of business during the “Period of Restoration”; and

Business Income means:

- **Net Income (Net Profit or Loss before Income Taxes) that would have been earned or incurred**
- **Continuing normal operating expenses incurred, including “Ordinary Payroll”**

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

BUSINESS INTERRUPTION (Cont'd)

We will pay also:

- (2) The **“Extra Expense”** you necessarily incur to **reduce or avert** the amount of loss under this Coverage extension. We will pay for such expenses to the extent that they **do not exceed** the amount of loss that otherwise would have been payable under this coverage extension.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

BUSINESS INTERRUPTION UNDERWRITING COMMENTS

- ***You must have a Property Damage Coverage “Breakdown” before any Business Interruption Coverage would be triggered***
- ***The Business Interruption Limit should not be more than the largest BI Value plus any interplant dependency value reported***
- ***If Business Interruption Coverage is selected there usually is a minimum of 30 Days of Extended Business Income Coverage provided (sometime referred to as “Period Of Restoration”)***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

EXTRA EXPENSE COVERAGE

We will pay:

- (1) We will pay the reasonable “Extra Expense” you necessarily incur to operate your business during the “Period of Restoration” (i.e. rental facilities, rental equipment, premium for electricity)***
- (2) We will consider the experience of your business before the “Breakdown” and the probable experience you would have had without the “Breakdown” in determining the amount of your payment.***

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

EXTRA EXPENSE UNDERWRITING COMMENTS

- *Extra Expense also **usually** provides for a minimum of 30 Days of Extended Extra Expense / Period Of Restoration (same as BI)*

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

UTILITY INTERRUPTION COVERAGE

If you purchase Utility Interruption and have selected coverage for Business Interruption, Extra Expense and/or Spoilage, the selected coverage(s) are extended to include loss resulting from the interruption of utility services provided all of the following conditions are met:

- (1) The interruption is the direct result of a **“Breakdown”** to **“Covered Equipment”** owned, operated or controlled by the local private utility or distributor that directly generates, transmits, distributes or provides utility services which you receive; and*

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

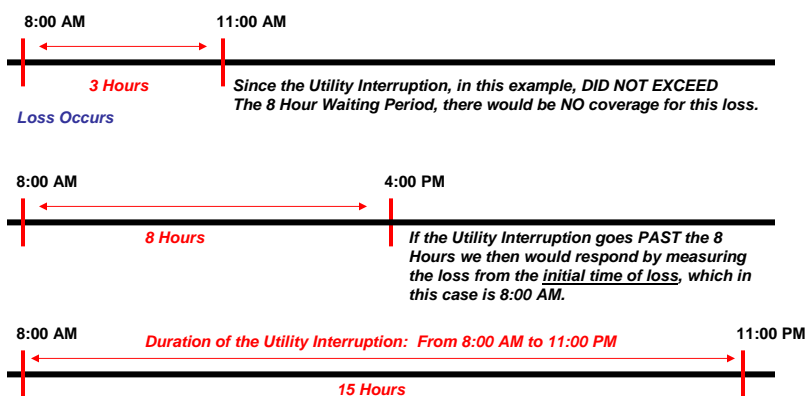
UTILITY INTERRUPTION COVERAGE

- (2) The **“Covered Equipment”** is used to supply air conditioning, communication services, electric power, gas, heating, refrigeration, steam, water or waste treatment to your premises; and
- (3) The interruption of utility service to your **“Covered Premises”** lasts at least the consecutive period of time shown in the Declarations. Once this waiting period is met, coverage will commence at the initial time of the interruption and will then be subject to all applicable deductibles.

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

UTILITY INTERRUPTION – WAITING PERIOD EXAMPLES

8 Hour Waiting Period For Utility Interruption - \$25,000 Deductible
(Waiting Period is **NOT A DEDUCTIBLE** but a Condition Of Coverage)



Once the Waiting Period has been met we would then apply the Utility Interruption Deductible (i.e., \$25,000) to the Gross Dollar Loss

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

ANY QUESTIONS ??

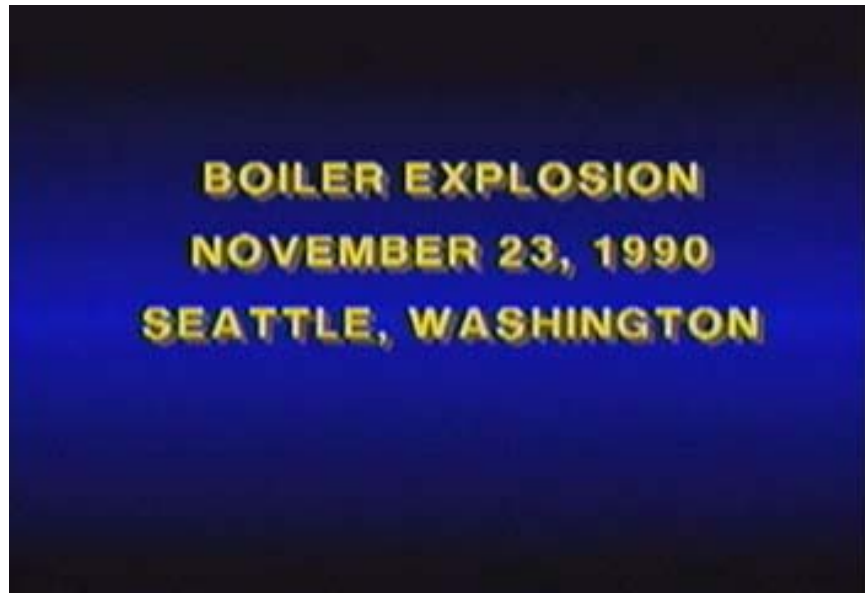


© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED

Transformer Arcing Video



Boiler Explosion Video



SECTION IV

Quiz

© 2007 The Travelers Companies, Inc. REPRODUCTION OR DISTRIBUTION OF THIS MATERIAL IS STRICTLY PROHIBITED