

Legend

Type of Incident

Crack
 Dry Fire
 Fire
 Fire Side Explosion
 Pressure Side Explosion

Leak
 Rupture
 Other
 Unknown

Abbreviations

ASME - American Society of Mechanical Engineers
 Mfg. - Manufacturing
 Mfr. - Manufacturer
 NB - National Board
 PRD - Pressure relief device
 PRI - Pressure retaining item
 "R" Form - NB repair or alteration form

Type/Use of PRI

Pressure Vessel

Acetylene or Welding Gas
 Anhydrous Ammonia
 Air Receiver/Tank Mounted Compressor
 Air Receiver/Remote Compressor
 Butane
 Chemical Storage/Processing
 Cryogenic Vessel
 Diesel Storage/Processing
 Ethylene Storage/Processing
 Gasoline Storage/Processing
 Liquid Hydrogen Storage/Processing
 Natural Gas Storage/Processing

Oil Storage/Processing
 Oxygen Storage/Processing
 Pressure Vessel – Fired
 Pressure Vessel – Unfired
 Propane Storage/Processing
 Reactor Vessel
 Rotating Dryer Roll
 Scuba or Diving Cylinder
 Water Storage/Processing
 Other
 Unknown

Boiler

Firetube – Hot Water Supply
 Firetube – Heating
 Firetube – Power
 Firetube – Process
 Watertube – Hot Water Supply
 Watertube – Heating
 Watertube – Power
 Watertube – Process
 Water Heater
 Cast Iron
 Other
 Unknown

Piping

Air
 Chemical
 Natural Gas/Propane
 Petroleum Products

Steam
 Water
 Other
 Unknown

Primary Cause

Burner Malfunction
 Chemical Reaction
 Corrosion
 Dry Firing
 Electrical Malfunction
 Erosion
 External Fire or Explosion
 Exterior Gas or Fumes
 Failure in Hydrostatic Test
 Failure in Pneumatic Test
 Leak in Connection

Leak-Origin Unknown
 Leak in Vessel Wall
 Leak at Weld
 Leak-Other
 Low Water Cutoff Failure
 Opened Under Pressure
 Overpressure
 Stress-Thermal/Cyclic/Water Hammer
 Other
 Unknown

Contributing Cause

Arson
 Design Error/Engineering
 Improper Connections
 Improper Filling
 Improper Firing
 Improper Gas Ignition
 Improper Installation

Improper or No Maintenance
 Improper Repair/Modification
 Manufacturing Error
 Murder Attempt
 Object Striking Vessel or Pipe
 Opened Under Pressure
 Operator Error

PRD Faulty
 PRD Missing
 PRD Stuck Shut
 PRD Undersized
 Sabotage
 Suicide Attempt
 Use contrary to design parameters

Vandalism
 Weld Defect
 Other
 Unknown