Steam System
- Troubleshooting
- Training
- Design Assistance

Wet Steam Glossary

**Carryover** is the flow of small water droplets out of the boiler. According to GE Betz: "Carryover can never be eliminated completely. Even the best boiler designs operating with well-controlled water chemistry produce trace amounts of carryover."

**Entrainment** is the minerals dissolved in the carryover.

**Foaming** is the frothy bubble development at the water surface. Foaming is caused by accumulations of feedwater minerals, chemical additives, or oil. Check for blowdown, leaking fuel oil or water heaters, and treatment upsets.

**Priming** is really severe carryover where lots of water surges out of the boiler with the steam. Foaming or sudden load/pressure wings can cause priming.

**Accumulators** are tanks to hold steam as a reserve for priming prevention during intermittent heavy loads.

**Steam quality** is a dryness measurement. Steam that is 85% quality would have 15 pounds of liquid water in 100 pounds of flow. Steam quality can be indirectly measured by measuring entrainment (dissolved minerals) or directly measured with a calorimeter.

**Drip Legs** drain liquid water from the system at low points and at intervals along the system.

**Separators** improve steam quality by disengaging liquid water and draining it from the system.

**Steam Filters** usually act like a separator, plus have a sintered metal or charcoal element to remove impurities.

**NCG’s – Non-condensible gases** are found in the steam piping. They might be air, oxygen, or carbon dioxide. They are pushed by condensing steam into the far reaches of the system. They can cause corrosion and poor heat transfer.