

i-SEE Gas Handling

Improving Safety & Efficiency thru Equipment



Put the Air Liquide Equipment Group to work to help you significantly improve safety and efficiency of your operation

As a world leader in gases for industry, health and the environment, our 100+ years of experience includes continued commitment to safe use of pure and mixed specialty gases. Our concern for safety extends beyond production and transport of gases to include the on-site use of gases by our customers, as well as the impact they have on our environment. While a necessary component of today's industrial, medical and scientific processes, specialty gases (especially under high pressure) can pose significant safety hazards if not handled properly.

To help minimize risk to our customers, the Air Liquide Equipment Group offers an on-site survey of how the gases you use are stored, transported within your facility, and distributed to your point-of-use. Our goal is to objectively identify potential health and safety hazards, as well as procedures that may be impeding your efficiency. After completing our inspection, we provide you with a report that details our findings and includes recommended measures for reducing potential hazards and improving gas handling efficiency. There is no charge for this service.

How an Air Liquide safety and efficiency survey can benefit YOU

- Increase best-practice safety awareness among your employees quickly and economically
- Protect the health and welfare of employees and community neighbors
- Help eliminate downtime caused by equipment failure
- Increase process efficiency and product time-to-market speed
- Increase effective service life of valuable instruments, equipment and other assets
- Comply with OSHA standards and avoid possible local, state or Federal violations and subsequent fines*
- Help protect and preserve the environment

* Recent OSHA fines including compressed gas violations include:

Refinery: \$240,750

Fabrication Facilities:
 \$145,350; \$116,250; \$109,500;
 \$107,000 and \$78,100

University: \$56,700

Listed below are actual situations recent on-site surveys have identified.

Findings	Recommendations	Equipment Solutions
<ul style="list-style-type: none"> Flammable and oxidizing gases stored together. 	CGA recommends separating gases by 20 feet or by using an approved fire barrier. Relocate one gas type or install a gas cabinet to isolate gas.	SCOTT™ one, two, three and four-cylinder gas cabinets safely isolate and contain dangerous gases.
<ul style="list-style-type: none"> Teflon® tape used on threads between regulator and cylinder valve. 	Tape can become powdered, enter the gas stream and get caught on the regulator poppet causing full pressure downstream.	Most cylinder valve outlet connections are intended to be metal-to-metal seals; use of tape or pipe dope should be avoided.
<ul style="list-style-type: none"> Cylinders stored together without a secure retaining device, allowing them to topple over causing injury. 	Install a cylinder storage rack to secure all cylinders.	SCOTT cylinder storage racks and separators keep cylinders safely organized.
<ul style="list-style-type: none"> Pressure regulator is mounted directly on gas cylinder, requiring handling of the regulator each time the cylinder is changed out. 	Mounting the regulator on a manifold with a flexible hose will eliminate repeated handling and danger of dropping the regulator.	SCOTT Model 8100 and RM Series regulator manifolds for single or dual-cylinder usage save labor and help increase service life of regulator.
<ul style="list-style-type: none"> Flammable gas delivery has no spark suppression device to prevent a spark from reaching the gas cylinder. 	Install approved flash arresters on all lines that transport flammable gas.	SCOTT Model 85 flash arrester provides 3-way protection against flashback.
<ul style="list-style-type: none"> Pressure regulator is greater than five years old. 	CGA recommends replacing a regulator every five years or sooner, depending upon the ambient environment, application and type of gas being used.	We stock a diverse range of SCOTT brass and stainless steel single and two-stage regulators for any type of application imaginable.
<ul style="list-style-type: none"> Single gas cylinder in use with frequent changeouts. 	Connecting two cylinders (or banks of cylinders) to a changeover manifold reduces labor and eliminates potential gas outages.	SCOTT automatic changeover manifolds, such as the Model 8404, provide continuous flow to your application.
<ul style="list-style-type: none"> No heater on nitrous oxide (N₂O) regulator to prevent condensation from forming, leading to possible malfunction. 	Install a heater to keep it warm and thus prevent condensation that can lead to regulator freeze-up.	SCOTT Model 86 electric CO ₂ and N ₂ O regulator heaters prevent freeze-up and malfunction for years of trouble-free service.
<ul style="list-style-type: none"> Confined gas storage area contains several gas types including flammables, oxidizers and asphyxiants. 	Install a sensor to detect each type of gas or oxygen-depleted atmosphere and sound an alarm if area is unsafe to enter due to the presence of gas in the atmosphere.	SCOTT Model 5000 stationary monitoring system provides continuous protection from hazardous gases.

- Fineable safety violation presenting an extremely high degree of health and safety hazard.
- Hazard that can easily lead to personal injury.
- While not an immediate safety hazard, may lead to equipment failure that could result in unnecessary downtime and/or personal injury.
- Not so much safety-oriented, however corrective measures will improve efficiency.



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Founded in 1902, Air Liquide is a world leader in industrial and medical specialty gases and related services, providing innovative solutions for the manufacture of everyday products and for the protection of life.

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