



## COMPRESSED GAS SET UP

Date:

TOOLBOX / TAILGATE TALK

Presenter:



Canadian Centre for  
Occupational Health and Safety

Centre canadien d'hygiène  
et de sécurité au travail



## SAFETY INFOGRAM 108

### LABORATORIES

# COMPRESSED GAS SET-UP

### Regulator Use

Make sure the regulator inlet threads match the cylinder valve outlet threads. Clean cylinder valve before coupling with regulator. Connect the regulator to the cylinder's outlet valve.

Fit flashback arrestors or check valves between cylinders and equipment when using a flammable gas or when doing a procedure at cylinder pressure.

Use regulators designed for the contents of the cylinders. Regulators are not to be used to stop the flow of gas from the cylinder. Close the main cylinder valve when the gas is not being used. Regulators can leak and allow excessive pressures to develop in equipment.

### Set-up Consideration

Work in well-ventilated areas to reduce the hazards of toxic, flammable and corrosive gases.

Use a gas detector to warn of leaks when handling toxic gas cylinders.

When using corrosive gases, work the cylinder valve frequently to prevent freezing. Flush regulators and valves with dry air or nitrogen after each use in corrosive service. Do not leave control devices on these cylinders, except when cylinders are in frequent use. Before discharging corrosive gases into a liquid trap, always use a check valve or a vacuum break device to prevent a dangerous suck-back.

Never connect a gas cylinder directly to a reaction vessel. Always properly connect a surge vessel and a system of traps.

Remove regulators from empty cylinders. Replace the protective caps. Mark the cylinder "MT." Never empty a cylinder completely. Leave a slight pressure to keep contaminants out.

### Checklist

#### DOs

WEAR safety glasses to prevent eye injury from equipment failure.

STAND to one side and away from regulator gauge faces when opening cylinder valves.

LEAVE key wrenches on cylinders in use so the cylinders can be closed quickly.

ENSURE that connections between the regulators and cylinder valves are tight.

CHECK the accuracy of regulator pressure gauges at least yearly.

BOND and ground all cylinder lines and equipment used with flammable gases.

#### DO NOTs

DO NOT USE pipe wrench or pliers for attaching regulator to cylinder. Use wrench of proper size.

DO NOT USE a regulator intended for use with another gas.

DO NOT USE oil or grease to lubricate tight threads. Oil or grease on regulators or fittings can cause an explosion.

DO NOT USE cylinders without a regulator. Cylinders are at pressures greater than most laboratory equipment can withstand.

DO NOT USE compressed gas to blow away dust or dirt.

DO NOT EXTINGUISH a combustible gas flame until the source of gas has been shut off. The gas can re-ignite and explode.

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