Regulator fire

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This incident was originally included in safety flash 11/03, but the flash is being reissued in the light of additional feedback on the recommendations previously given. The earlier version has been removed from safety flash 11/03.

What happened?

A member has recently experienced two oxygen regulator fires. In both cases the regulators were completely dialled in when pressure was applied from the oxygen rack.

The member company provided its workforce with these recommendations to prevent recurrence:

- Ensure the oxygen cylinders or banks are firmly secured.
- Inspect the cylinder valve for oil, grease and damage to the valve handle. Do not use the cylinder if oil or grease or a damaged valve is found.
- Momentarily open and close the cylinder valve prior to attaching the regulator. This dislodges any contaminants that are present and would otherwise enter the regulator.
- Carefully inspect the regulator for oil, grease or damaged parts. Do not use a regulator with oil, grease contamination or broken parts.
- Check that the regulator has the correct pressure rating and gas service for the cylinders being used.
- Attach the regulator to the cylinder and secure tightly.
- Stand so that the cylinder valve is between you and the regulator. Slowly and carefully, open the cylinder valve until the maximum pressure registers on the high pressure side. Then open the cylinder valve completely to seal the valve packing.
- Adjust the low pressure side adjustment screw to the desired pressure and check the system for leaks.
- When temporarily shutting down the system:
  - Secure the valve on the cylinder.
  - Open the valve on the downstream equipment – this will drain the system.
  - Close the valve on the downstream equipment and then turn the adjuster screw counter clockwise to release the pressure on the adjusting spring.
  - Check the gauges after a few minutes for verification that the cylinder

valve is completely closed.

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