



SAFETYGRAM NO. 28/03

REGULATOR FIRE

Summary

Recently we have experienced two oxygen regulator fires due to over pressurization of the regulators. In both cases the regulators were completely dialed in when pressure was applied from the oxygen rack. The over pressurization caused a hammer effect that produced a spark at the nozzle area which resulted in a fire within the regulator body.

Recommendations to prevent recurrence

Ensure the oxygen cylinders or banks are firmly secured. Inspect the cylinder valve for oil, grease and damaged valve handle. Do not use the cylinder if a damaged valve, oil or grease 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 regulator has the correct pressure rating and gas service for cylinders being used. Attach the regulator to the cylinder and secure tightly. Before opening the cylinder turn the regulator adjuster screw counter clockwise to release the pressure on the adjusting spring. Stand so 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. Attach the desired downstream equipment. Then adjust the low pressure side adjustment screw to the desired pressure and snoop 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 the cylinder valve is completely closed.

SOURCE: Cal Dive International, Inc.

ISSUE DATE: August 18, 2003