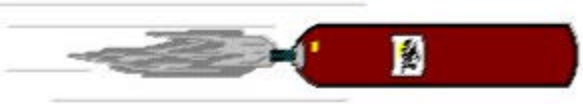
The One That Got Away



The anchoring of compressed gas cylinders, to keep them from being knocked over with the accompanying possibility of breaking off the valve, is an accepted safe practice. However there has been some skepticism as to what would happen if a cylinder valve was knocked off.

While it wasn't asked for, we now have first-hand knowledge as to what happened in one case, thanks to a compressed gas cylinder (CO_2) that caused a few moments of frenzied activity in a building under construction.

Six 220-cubic foot cylinders, part of a fire extinguishment system, had been moved away from their wall supports to allow painters to complete the painting of the area. While moving them back into position, it was noticed that one cylinder was leaking. The painter had the cylinder leaning against his shoulder, and was attempting to scoot it across the floor. At this time, the valve separated from the cylinder and was projected backward hitting the side of a stainless steel cabinet.

The man suddenly found himself with a jet-propelled 215 pound piece of steel. He wrestled it to the floor, but was unable to hold it. The cylinder scooted across the floor hitting another cylinder, knocking it over and bending its valve. The cylinder then turned 90 degrees to the right and traveled 20 feet where it struck a painters scaffold causing a painter to fall 7 feet to the floor. After spinning around several times, it traveled back to its approximate starting point, where it struck a wall.

At this point, the cylinder turned 90 degrees to the left and took off lengthwise of the room chasing an electrician in front of it. It crashed into the end wall 40 feet away breaking four concrete blocks. It turned again 90 degrees to the right, scooted through a door opening, still chasing the electrician. The electrician ducked into the next door opening, but the cylinder continued its travel in a straight line for another 60 feet, where it fell into a truck well striking the truck well door. The balance of the cylinder pressure was released as the cylinder spun harmlessly around in the truck well area.

The painter who fell from the scaffold received multiple fractures of his leg.

It is surmized that the cylinder valve had obtained previous damage, and it was a matter of chance that it separated from the cylinder at this particular time.

This incident illustrates what can happen when a valve is separated from a compressed gas cylinder. The one contained pressure of about 900 pounds per square inch, but many cylinders are pressurized to 2200 pounds per square inch. If you have any doubts about the need for anchoring compressed gas cylinders, you might think about the 2200 pounds per square inch and ask yourself, "what if....?"

In preventing the accidental release of compressed gases, all precautions must be taken to avoid dropping, knocking over, rolling or dragging cylinders as well as striking cylinders against each other. This means that it is imperative that all cylinders be stabilized in storage, transportation, and in use.