Date: Tue, 27 May 1997 15:00:37 -0500
From: "C. W. Gibson" <gibson7@primenet.com>
Subject: Re: Gas Cylinder Explosion

>I just heard of a recent rupture of an HF gas cylinder somewhere
>in Russia. Apparantly the HF attacked the cylinder, producing more
>gas, and increasing the pressure to the point where a rupture occured.
>Does anyone have any more information on this incident? Thanks in advance
>for the help.
>
>Wes Kolar
>Luthier
>Wesley J. Kolar

This was not in Russia, but reported in this newslist about a month ago.

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Subject: **Anhydrous Hydrogen Fluoride**

Sent: 5/1/97 10:11 AM
Received: 5/2/97 9:29 AM

From: Neal Langerman, chemsaf@ix.netcom.com Reply-To: Safety, SAFETY@UVMVM.UVM.EDU To: SAFETY@UVMVM.UVM.EDU

A Safety Alert was published in the April 28, 1997 issue of Chemical & Engineering News (page 6). The alert was written by Elizabeth Festa Watson, the Manager of the Chemical Manufacturers Association Hydrogen Fluoride Panel. The Alert warns that anhydrous Hydrogen Fluoride (AHF), stored in carbon steel cylinders, slowly builds up pressure by the reaction of the AHF with the iron to form iron fluoride and hydrogen gas. The hydrogen collects in the cylinder and the pressure slowly increases.

In the incident reports, the pressure in a lecture bottle that had been in storage for at least 14 years was found to be in excess f 2,400 psig, rather than 5 - 15 psig, as expected for AHF. After venting, the cylinder gas was found to be primarily hydrogen.

The lesson from this is very applicable to academic environments, where old lecture bottles are frequently found. The corrective action is to locate all old cylinders and remove them. The prevention is to have a good cylinder inventory, and do not allow corrosive gas cylinders to remain in the inventory for more than a designated period. (We could discuss the storage periods, but that should be a separate thread.)

So, go through the physical plant, once again, and get your cylinders under control!

Neal