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CHEMICAL PROCESS SAFETY
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Messages for Manufacturing Personnel

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Start your Hot Work Safely…

May 2004

Before

After

…and you won't End it with a BANG!

What Happened?

A welder was grinding near this flow transmitter enclosure. There was a small leak in the transmitter assembly and the enclosure filled with flammable vapors. Vapors escaping the box were ignited by the grinding sparks causing a small explosion which injured the welder and destroyed the transmitter. Operations had performed a gas test in the area before issuing the hot work permit but the leak in the enclosure went undetected.

PSID Sponsors see:
Free Search—Hot Work

What You Can Do to Prevent it from Happening to You

Operations

✓ Look around the area where the hot work will be performed and do a thorough gas check of all potential sources---not just the obvious ones. Use extra care when checking in or near small enclosures (like the one in this incident).

✓ If your job duties include using gas detection equipment, you should have been trained in its use. Remember, equipment must be calibrated per manufacturer's recommendations or it may not give the correct reading!

✓ Know where leak sources ***could*** occur, and be sure to sample there. If conditions are likely to change, consider continuous monitoring.

Maintenance

✓ Look around the work area for sources of flammable material and be aware of any strange odor. Remember, you will be supplying the ignition source so all that is needed is fuel.

✓ Ask the operator exactly where a gas test was performed. If one was not done, insist that it be done. If it did not cover all potential source areas, insist that a retest be done.

Hot Work + Undetected Gas Leak = Damage and Injury

This edition is also available in Spanish, French, Portuguese and German. Contact CCPS at ccps_beacon@aiche.org for information.