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Ashcroft® Gauges, General Information

PIP #: ASH-PI-58A

Applicable to:

All Gauges

SAFETY CONCERNS REGARDING USED PRESSURE GAUGES (REPAIRED / RECONDITIONED)

At times, users may attempt to repair or recondition used pressure gauges. The following highlights the potential dangers to personnel and facilities if a repaired/ reconditioned gauge is put into service.
The specific dangers include the following:

1. Bourdon Tube Failures: The process of repairing and reconditioning used gauges can extend the operating life of a gauge past the intended life of a Bourbon tube. An over-fatigued Bourbon tube will eventually rupture, possibly resulting in environmental contamination and harm to nearby facilities personnel.

2. Process Media Compatibility: A gauge removed from operation with one process media can be placed into service with a second media that is incompatible with the first media. This can cause unwanted chemical reactions, resulting in contamination of the process media, or a catastrophic explosion.

Similarly, media incompatibility can also corrode the Bourdon tube, thereby shortening its life. This can rupture the Bourdon tube putting at risk personnel, the environment and facilities.

Bourdon tube based pressure gauges need to be engineered for their specific applications to ensure long life and safety for your people, facilities and the environment.

Accordingly, the following is an excerpt from The American Society of Mechanical Engineers National Standards Manual, ASME B40.100-2005:

4.4 Reuse of Pressure Gauges: It is not recommended that pressure gauges be moved from one application to another for the following reasons:

a. Chemical Compatibility: The consequences of incompatibility can range from contamination to explosive failure. For example, moving an oil service gauge to oxygen services can result in explosive failure.

b. Partial Fatigue: The first installation may involve pressure pulsation that has expended most of the gauge life, resulting in early fatigue in the second installation.

c. Corrosion: Corrosion of the pressure element assembly in the first installation may be sufficient to cause early failure in the second installation.

In summary, the perceived economic benefits of gauge repair and reconditioning are minor in comparison to the potential risk of misapplications and tube fatigue, and the resulting potential harm to people, facilities and the environment. Ashcroft strongly advises against this practice and recommends that purchasers of Ashcroft products review Ashcroft's Standard Terms of Sale.

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