

**Information Bulletin No. IB05-003**

**May 6, 2005**

## **ALERT**

### **Accumulator (Cylinder) Failure**

ABSA has been advised of a recent incident in which a pressure vessel, known as an accumulator, fell off a pallet that was being moved by a forklift. The accumulator was of the bladder type and was being transported with a charge of a non-flammable, non-toxic, non-corrosive gas (reportedly N<sub>2</sub>) at an unconfirmed pressure, but likely on the order of 7000 kPag (1000 psig).

One common use of these accumulators is in drilling blow out prevention whereby Alberta Energy & Utilities Board (EUB) Directive 36: *Drilling Blowout Prevention Requirements and Procedures (June 2004)* requires that there be an accumulator system to hydraulically operate all blowout preventers.

The accumulator in the incident is reported to have ruptured when it struck the ground. It fractured into many pieces, some of which were thrown tens of metres from the point where the unit fell. Most regrettably, one of the pieces is reported to have struck and killed an individual who was in the immediate vicinity.

Those responsible for pressurized vessels such as accumulators must be extremely careful in how these vessels are handled and operated. The vessels must be under positive control at all times and must never be dropped or allowed to fall over. Steps must also be taken to prevent solid objects from striking pressurized vessels at any time.

All accumulators must be manufactured by a company holding either an ASME Certificate of Authorization to manufacture pressure vessels or by a company holding a Certificate of Authorization from a Canadian jurisdiction for the manufacture of pressure vessels.

Marking on the vessel must comply with the requirements of CSA B51 as of the date the accumulator was manufactured. Marking on the vessel by stamping must be on the thickened head end of forged accumulators, unless a nameplate is used. The stamping must, as a minimum, include: "Certified by (name of Manufacturer)"; the maximum allowable working pressure (MAWP) at the maximum temperature; the minimum design metal temperature at the MAWP (for units manufactured after 1987); the Manufacturer's serial number; and, the year built. Accumulators manufactured outside Canada must also bear the ASME "U" stamp. All accumulators must be traceable to their manufacturers and to the standard to which they were built.

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**A PRESSURIZED VESSEL THAT FAILS CAN BECOME SHRAPNEL  
THAT CAN SERIOUSLY INJURE OR KILL ANY PERSON NEARBY!!**

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