



Safety Alert

From the International Association of Drilling Contractors

ALERT 05 – 05

BATTERY CHARGING, VENTILATION, AND STORAGE

WHAT HAPPENED:

Recently we had an explosion of a battery deck box that contained the batteries for the Baylor brake emergency backup system. Significant damage was done to the surrounding area as a result of this explosion. This locker was being used as a seat for personnel to remove their boots prior to entering the quarters; luckily no one was in the area at the time of the explosion.

WHAT CAUSED IT:

The explosion was caused by the build up of hydrogen gas, due to inadequate ventilation, while the batteries were being charged. This particular box had louvers on the side, but none in the top cover. This type configuration allowed room for the gas to build up between the side louvers and the cover (lid).

CORRECTIVE ACTIONS: To address this incident, this company issued the following action items:

Battery deck boxes or deck lockers will have at least two vents located on each side and a goose neck type vent located on the cover (lid).

All battery rooms are to be properly ventilated as per ABS / DNV rules.

Ensure batteries are not being overcharged by checking the output voltage of the charger.

Float charging - not to exceed 2.25 volts per cell

Equalize charging - not exceed 2.30 volts per cell

All grouped batteries are to be of the same type and age.

Ensure the correct type charger is being used for the type batteries being charged.

Batteries are to be in good condition (e.g., no shorted cells, excessive corrosion on terminals, leaking cases, bad clamps, etc.)

Batteries are to be located:

Out of direct sunlight

Away from high traffic areas or where people might congregate such as muster stations or rest areas.

Batteries are not to be located in sleeping areas.

Voltage readings for each battery will be recorded, quarterly, in the PM system. The PM system will be modified for these readings and it will be the responsibility of each rig to identify these batteries in the PM system.

The Corrective Actions stated in this alert are one company's attempts to address the incident, and do not necessarily reflect the position of IADC or the IADC HSE Committee.

This material is presented for information purposes only. Managers & Supervisors should evaluate this information to determine if it can be applied to their own situations and practices

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