



19CH201 - ENGINEERING CHEMISTRY FOR CIRCUIT BRANCHES

UNIT-2 - ENERGY STORAGE DEVICES

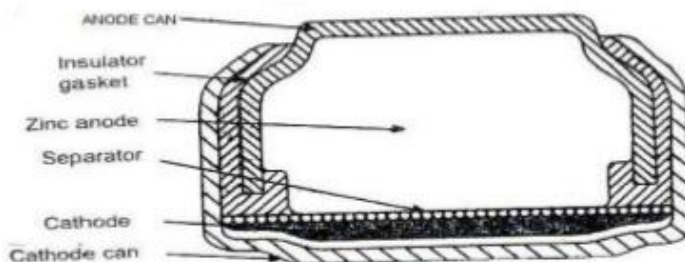
2.7. Zinc-Air Battery

Description

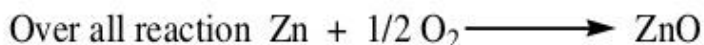
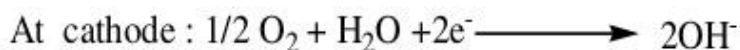
Anode : Zn
Cathode : Oxygen(atm)
Electrolyte: KOH

Zn-air cell (Primary battery, non rechargeable)

Zinc -air battery is a modern and metal air battery. It uses oxygen from the atmosphere and it does not contribute to the weight of the battery so these batteries offer high energy density.



Cell reactions:



Advantages

- High energy density but low power
- Inexpensive materials



- The zinc-air system, when sealed, has excellent shelf life, with a self-discharge rate of only 2 percent per year.
- In relation to their physical size, Zinc/Air batteries store more energy per unit of weight (in terms of 220 Wh/kg) than almost any other primary type.
- Primary cells available in a range of button and coin cell sizes.
- Rechargeable high power cells available for traction applications.



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