

**KISH P & I LOSS PREVENTION CIRCULAR KPI-LP-103-2013**  
***(Battery Damage due to Charger Failure & Lessons to be Learnt)***

A ship's engineer was carrying out planned maintenance of the emergency generator. When he started the generator, he heard a loud bang from the battery container. On investigating, he discovered that one of the starter batteries had exploded, with the top of the battery detaching from the body. The battery was safely removed and the engine was temporarily left in the manual starting mode.

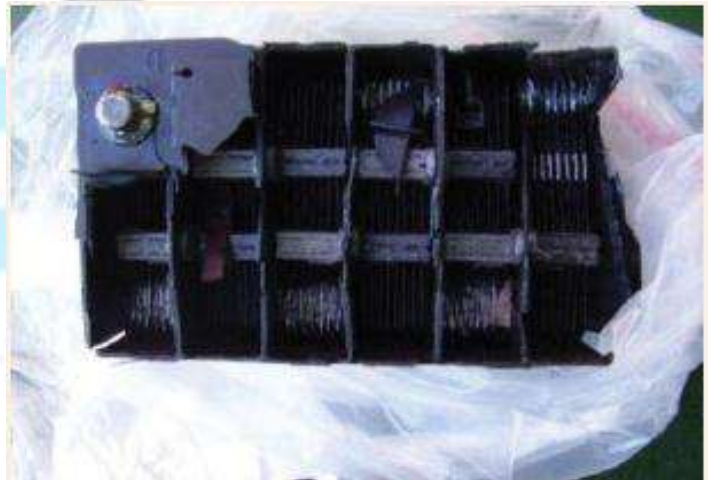
On investigation, it was discovered that for an unknown period of time, the vessel's emergency generator battery charging system was wrongly set up in such a way that two chargers could be charging the battery simultaneously. This resulted in excess evaporation of the water content in the electrolyte, substantially lowering the liquid level and exposing the plates. It is thought that internal arcing occurred across an air gap, triggering an explosion.

► **Lessons learnt:**

1. All charging systems should be checked to ensure that the charging current cannot

exceed the specified safe range;

2. All battery containers / receptacles should be checked for tightness of fixtures and overall integrity as part of the planned maintenance.



View of battery with shattered top