

AIRCRAFT FIRES & LITHIUM BATTERIES

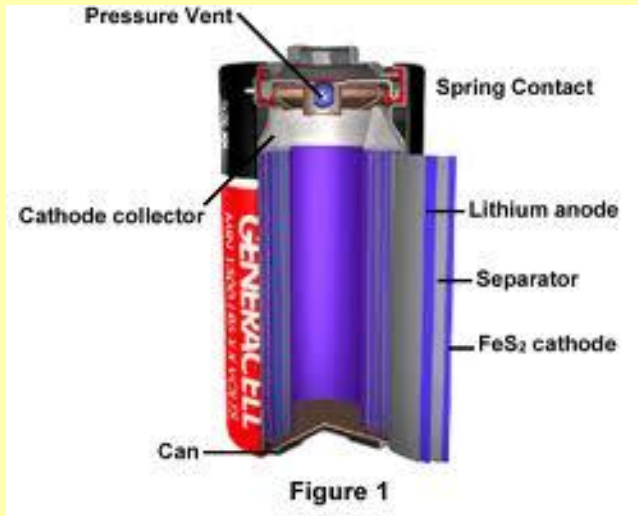


**PRESENTATION BY
CHRIS REED
DANGEROUS GOODS INSTRUCTOR**



AIRCRAFT FIRES & LITHIUM BATTERIES

EVERY ONE USES THEM BUT
WHAT ARE LITHIUM BATTERIES ?



CHARGEABLE



NON-CHARGEABLE

AIRCRAFT FIRES & LITHIUM BATTERIES

ACCORDING TO THE FEDERAL AVIATION AUTHORITY

AS OF MARCH 13, 2012, **121** AIR INCIDENTS INVOLVING BATTERIES OF ALL TYPES HAVE BEEN RECORDED SINCE MARCH 20, 1991



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UNTIL 2009 THE TESTING OF LITHIUM BATTERIES WAS NOT MANDATORY.

AS OF JAN 2010 ALL LITHIUM BATERIES IN ALL FORMS MUST PASS THE UN MANUAL OF TESTS 38.3 (8 VERY STRINGENT TESTS) AND BY PASSING THESE TESTS THE WATT-HOUR RATING MUST BE MARKED ON EACH BATTERY

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The *watt-hour* (symbolized Wh) is a unit of energy equivalent to one watt (1 W) of power expended for one hour (1 h) of time.

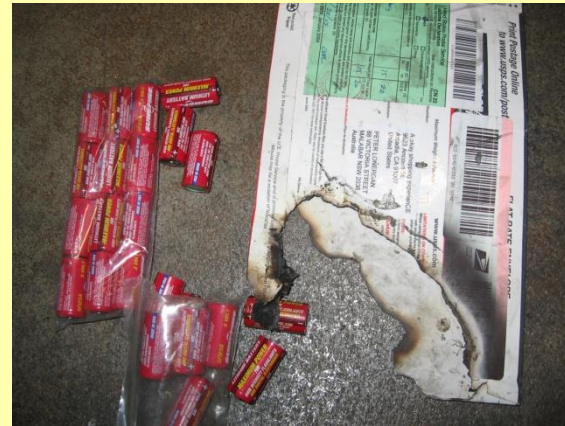
E.G. SMART PHONE = 87 Wh



THE BALLOON
PRINCIPLE



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LITHIUM BATTERIES CAN FAIL AT ANY TIME

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THE FAILURE TO COMPLY WITH THE PACKAGING REQUIREMENTS WHEN TRANSPORTING LITHIUM BATTERIES IS THE CAUSE OF MOST INCIDENTS.



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HOW DO WE MAKE THEM SAFE FOR TRANSPORT ?

SHIPPERS CAN PACK THE ITEMS BY FOLLOWING THE ICAO TECHNICAL INSTRUCTIONS OR THE IATA DANGEROUS GOODS REGULATIONS WHICH PROVIDE CLEAR INSTRUCTIONS ON HOW TO PREPARE THE CARGO FOR CARRIAGE BY AIR.



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WHAT OF THE FUTURE?

NEW REGULATIONS IN 2013

WILL ALLOW THREE LEVELS FOR THE TRANSPORTING OF LITHIUM BATTERIES BY AIR. EXCEPTED, BULK, & FULLY REGULATED, AND THIS WILL INCLUDE AIRMAIL FOR THE FIRST TIME.



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AS A RESULT OF THE IMPENDING CHANGES
MANY OPERATORS ARE NOTIFYING THE
COMPETANT AUTHORITIES OF EACH
COUNTRY THAT THEY WILL **NOT** CARRY
LITHIUM BATTERIES IN CARGO OR AIRMAIL.