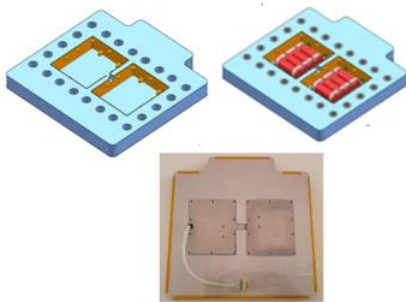


Embedded Battery for Nanosatellite bus

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed Embedded battery (Multifunctional Structure) in Sandwich Panels for Nanosatellite bus configuration.



Sandwich structure panel with embedded battery

Salient Features

- ❖ Replaceable batteries within load bearing structure.
- ❖ Parasitic volume of battery modules & associated harness is completely avoided.
- ❖ Co-curing sandwich technology adaptation.
- ❖ Lesser weight against conventional battery modules and better thermal control.

Major Description

- ✦ The technology is a multifunctional structure which combines the functional capabilities of one or more subsystems with load bearing structure thereby reducing mass and volume of the total system.
- ✦ The Lithium ion battery modules are embedded in the load bearing sandwich panel thereby parasitic volume of battery subsystem is completely eliminated.
- ✦ Ease of battery replaceability or serviceability at any stages of spacecraft testing can be ensured.
- ✦ Reduction in overall weight of the system can be achieved with respect to conventional design. More uniformity in battery module temperature and temperature gradient is minimized.
- ✦ Co-curing sandwich technology is adopted.
- ✦ Technology has been patented.

URSC-ISRO offers to transfer this technology Embedded battery for Nanosatellite bus configuration developed by URSC to industries in India with adequate experience and facilities. To manufacture, industries must have the knowledge of Lithium ion batteries, assembly & testing, sandwich panel structure, cleanroom etc., Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

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