CRATUS — ASSET-Rx™

Monitoring Solutions for Pre-Impregnated Carbon Fiber Composites

Time and temperature sensitive (TATS) materials such as pre-impregnated carbon fiber (prepreg), composites, solvents etc, can easily deteriorate or be completely damaged as a result of extended temperature excursions, which take away from their self life, during internal operations, transit and storage. The duration of time the prepreg experiences conditions outside the cold room is called out-time. If out-time is not monitored accurately, not only the shelf life of these materials will shorten, but also the tack and drape characteristics will severely suffer. The ASSET-Rx™ platform is the prescription for out-time related damage. It automatically monitors out-time for each prepreg roll and calculates the remaining shelf life. The time, temperature and trace records are stored in the cloud platform and are made available accessible from ASSET-Rx™ or any existing ERP platform. The remaining out-time estimation is performed real-time in the sensors and made available on the cloud by algorithms which can be set to trigger alerts based on various parameters.

Prepreg rolls can be monitored through a gateway in long term storage areas such as cold stores, through mobile devices, telematics gateways during transit. This means, the health of each prepreg roll or fractions of rolls in transit or storage are periodically synced to one database.
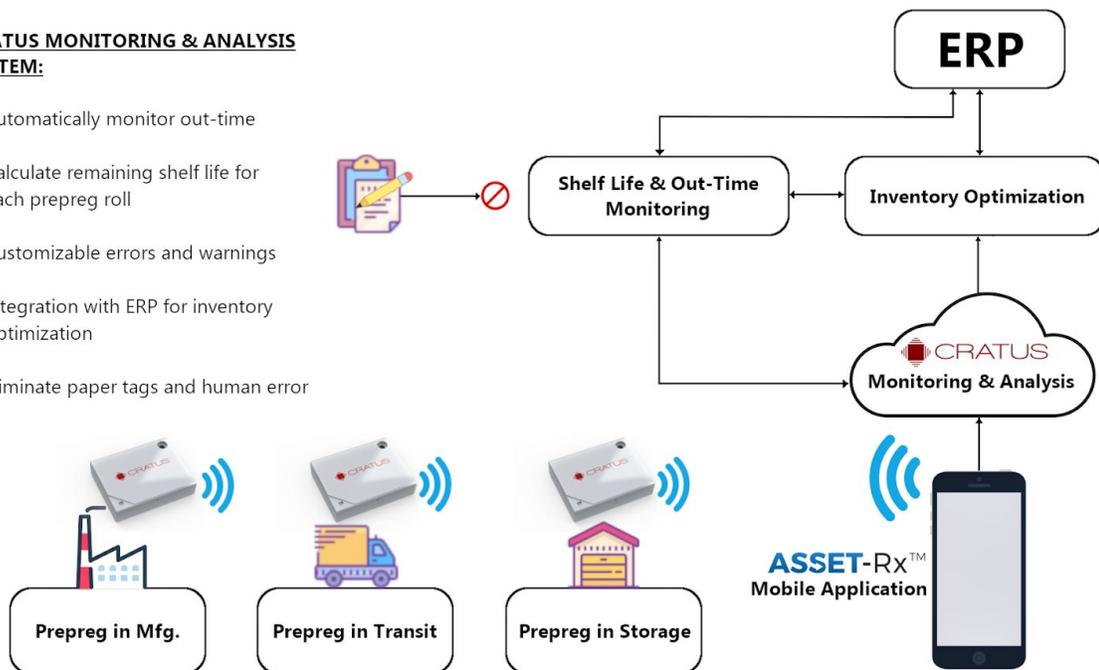
PLATFORM SUMMARY

ASSET-Rx™ by CRATUS is an end-to-end monitoring software platform for companies with supply chain operations in biopharma, prepreg materials, valuable and sensitive items, and logistics companies which cover portable and stationary use cases:

- In-storage and in-transit monitoring using wireless sensors.
- Algorithms to automatically calculate out-time and remaining shelf-life of TATS.
- Stationary gateway installations in warehouses for in-storage monitoring applications.
- Mobile application and telematics gateways for in-transit monitoring.
- Remaining shelf-life display of all prepreg rolls in the warehouse on one dashboard for ease of tracing and sorting.
- Completely eliminates the use of paper tags and manual recording which results in huge savings in time and cost.
- Integration into existing ERP or logistics software packages.

CRATUS MONITORING & ANALYSIS SYSTEM:

1. Automatically monitor out-time

2. Calculate remaining shelf life for each prepreg roll

3. Customizable errors and warnings

4. Integration with ERP for inventory optimization

5. Eliminate paper tags and human error

Benefits:

CRATUS - ASSET-Rx™ platform replaces paper tags and eliminates human errors by incorporating smart sensors to calculate and out-time and remaining-shelf life of prepreg rolls with minimal infrastructure cost. The sensors have advanced record splitting capabilities which is ideal for use with prepreg rolls which need to be split in a manufacturing environment. The sensors have enough memory and battery life to last upto 2 years and therefore does not need human intervention. Data from the sensors are automatically uploaded to the ERP system and accessed from though one central ERP interface which results in huge cost savings.