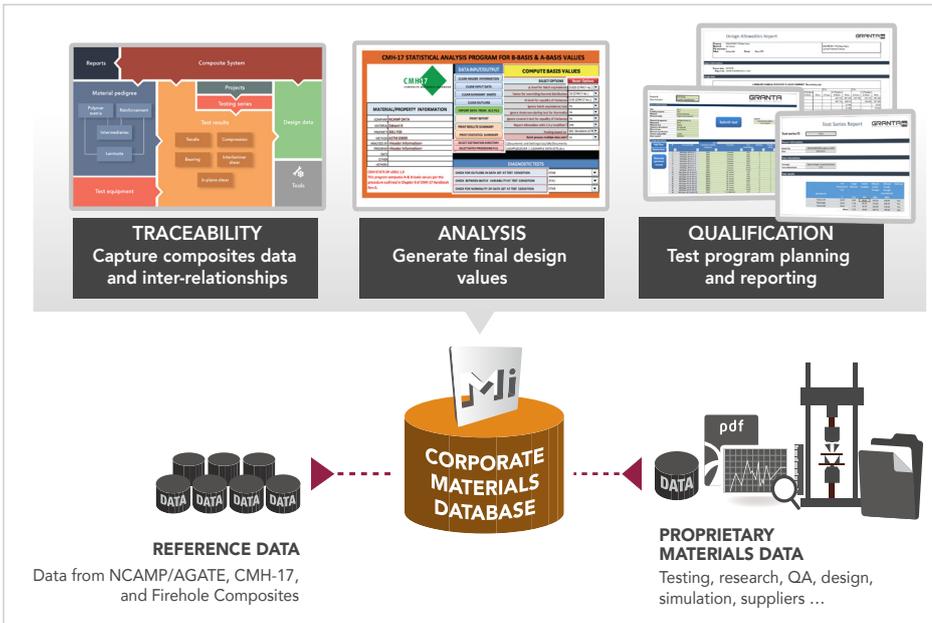


GRANTA MI:Composites Package

GRANTA MI:Composites™ is the industry standard for managing complex composite information from testing, research, QA, simulation, design, and qualification.

Leading companies in sectors such as aerospace use it to efficiently qualify new materials, ensure vital traceability, and future-proof knowledge.



The problem

Aerospace, automotive, wind power, and advanced material production companies want to apply new composite technologies and to push existing materials to their limits. They handle large amounts of complex data from testing, research, QA, suppliers, or external reference sources. As their materials work harder, in harsher environments, they want to use this information to gain greater confidence in composite performance. What constrains them?

- Composite information is challenging to manage and use. For each material we must capture data on all constituents and their inter-relationships, and detail on part geometry and process history.
- Difficulties in data entry, finding information, and following audit trails cause delays and reduce product quality.
- Test planning and qualification reporting are error-prone and take time.
- Generating simulation models is complex; errors lead to wrong simulations.
- Its hard to find good reference data for validation or equivalency studies.

GRANTA MI:Composites can help...

Key benefits

- Proven for managing complex composite data and process history
- Avoid error, enable qualification with a single, traceable source for company composite knowledge
- Save time with efficient, systematic test planning, execution, and analysis
- Support simulation: generate models, fast and error-free
- Apply authoritative reference data in equivalency studies and comparisons

MDMC.net

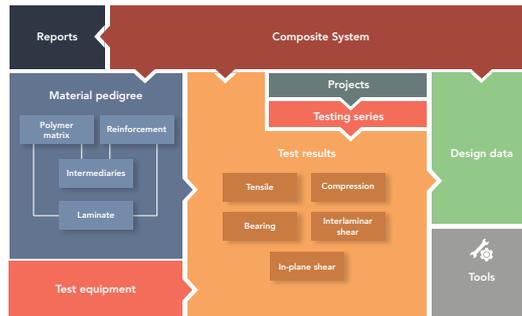
The Material Data Management Consortium (MDMC) is a unique collaboration that has guided the development of the GRANTA MI materials information management system. Members include Airbus Helicopters, Boeing, NASA, and Rolls-Royce. The project's Composites Sub-committee has advised on the data structures and tools in the MI:Composites solution.

More at www.mdmc.net

The MI:Composites Solution

Capture and manage vital information on composites

GRANTA MI captures all corporate materials data in one place and makes it easy to find and apply. The MI:Composites Template provides best practice data structures (illustrated, right) and tools, so user organizations get up-and-running fast. Implement a proven database optimized for composites: e.g., for data on layup, cure cycle, directional properties, and the properties and process history of constituent parts. Consistent, accurate data capture avoids lost data, ensures quality, and guarantees traceability. Manage the full lifecycle for data from testing, QA, research, and design and make it available for engineers to browse, search, plot, and compare.



Support composite qualification

Composite qualification workflows become complex very quickly. For each material system, you must manage the correct number of test samples to support the testing and statistical analysis that generates design allowables. Many people are involved: requesting and conducting tests, analyzing results, approving materials, managing the process. GRANTA MI supports this workflow, providing the tools and services that you need to define a test program, track progress, import test data, perform analysis (e.g., STAT-17), and generate qualification reports. The result is reduced time for material qualification, and thus faster time-to-market. Smooth data analysis with full traceability also gives you confidence in accurate results.

Access material properties for simulation

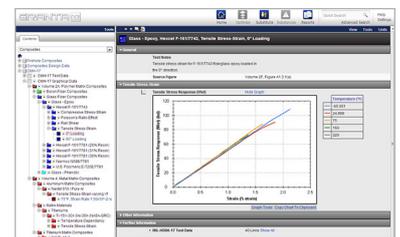
Simulation can be invaluable in understanding and optimizing composite properties—but only if based on accurate materials input data. GRANTA MI bridges the gap between materials engineering and simulation. Implement error-free, repeatable analysis tools to generate simulation input models from test data. Store these models so that they are traceable to their source data and analyses. Make these models easy-to-access for authorized simulation analysts: integration options range from simple text export of simulation cards to access from apps embedded within CAE.

Materials equivalency and comparison

In the same system as your proprietary data, you can access authoritative reference data from respected projects. These include: the Composite Materials Handbook (CMH-17) the leading source of test data for advanced composites; and traceable test and design data from NCAMP and AGATE (available in the Composites QED data module). Firehole Composites covers over 300 continuous fiber reinforced polymer composite grades. Augment in-house data to eliminate invalid results, generate design allowables, or prove equivalency.

Composite Qualification Software Service

Granta experts will quickly set up data import tools so that they automatically process data from your specific test machines. And the team will configure analysis and reporting tools to your requirements. You ensure a systematic, documented process, from test request to design allowable.



Viewing composite data in the web browser interface

What do you buy?

Core database system

Data structures and tools:

MI:Composites Template

Browse, search, analyze:

MI:Viewer, MI:Explore, MI:Mat Analyzer

Reference data:

CMH-17, Composites QED, Firehole Composites

Integration with simulation:

MI:Materials Gateway for CAE

Services:

Getting Started Services, Composites Qualification Services



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