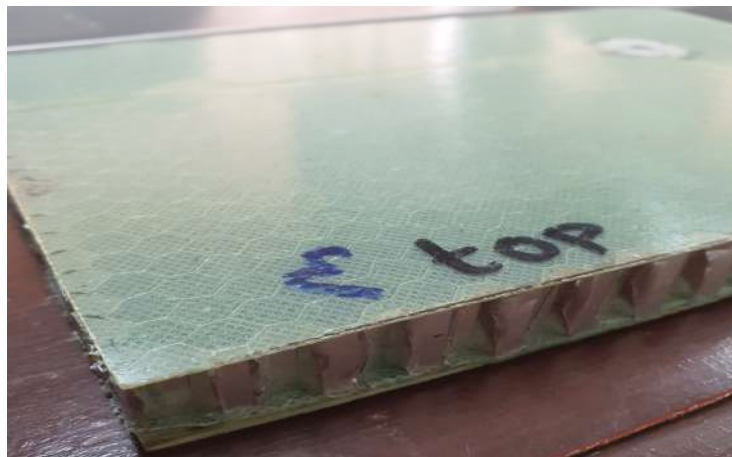
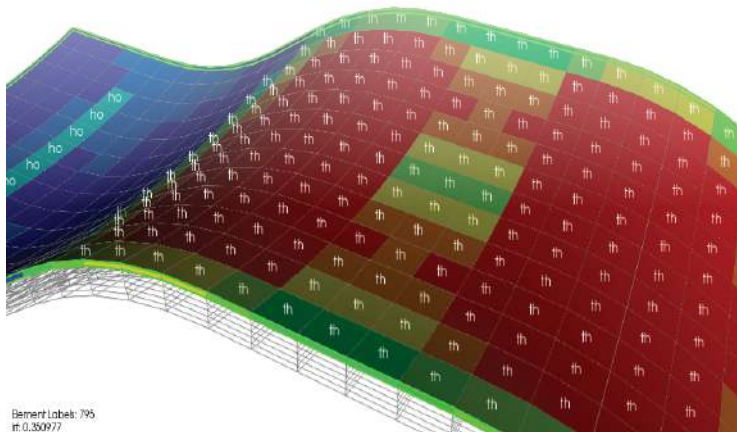


Specialized Simulation & Fabrication Facilities

Composite Honey Comb Sandwich Panel - Simulation and Fabrication



These panels are designed specifically for enhancing flexural rigidity and compressive strength at a remarkably low weight. Such panels are used extensively in the aerospace and automotive sectors. The image on the left depicts a panel after excessive axial loading.

Biomedical Simulations - Project Zohra



Project Zohra was used by a specialist cranial plastic surgeon on planning for a cranioplasty of a baby with the Apert Syndrome. In words of the plastic surgeon himself, "I have to figure out how to rearrange the pieces of the skull during the actual surgery, it's like a jig-saw puzzle". After close consultation with the surgeon our team recreated the actual baby's skull through advanced scanning and processing. The 3D skull was so accurate that it even had the intricate minor details of each canal, passage, recess, and pathway. The surgeon was able to plan his surgical game plan on the provided 3D mock-up in the comfort of his office without even touching a scalpel or the patient. We are so happy and proud that the surgery was a major success and the baby has started to grow and function in a normal capacity since then.

Turbomachinery (Centrifugal Compressor) - Rotor-dynamics and Fatigue Analysis

A rotor-dynamic analysis investigating a possible scenario that led to the chipped main vane of a centrifugal compressor shown. A subsequent fatigue analysis is routinely conducted to predict LCF and HCF. The simulation on the left explores the possibility of increases the main vanes, while eliminating the split vanes.

