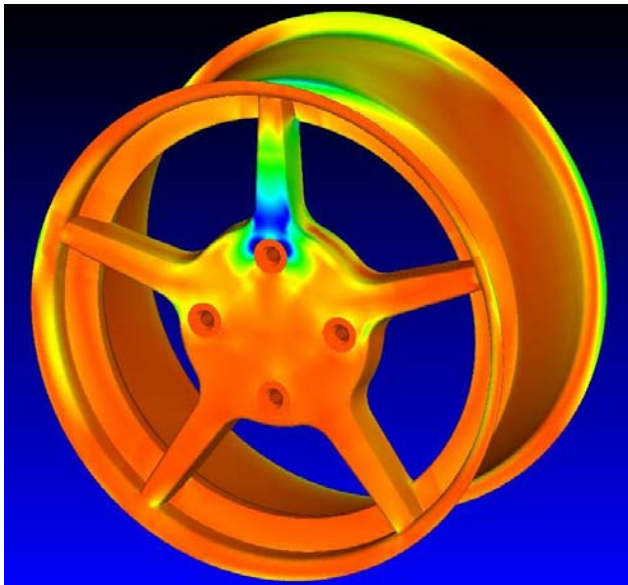


Automotive Case Study (Jayhawk Motorsports of the University of Kansas – Composites Wheel Design)



Jayhawk Motorsports of the University of Kansas, an established Formula SAE team, has designed composite wheels for their car using NEi Software analysis software. The fully composite wheel weighs 2.5lbs, a savings of 5lbs per wheel over the previous aluminum design. Along with the reduction of overall vehicle weight, unsprung weight of the vehicle has dropped by 20% as well as a yaw moment decrease of 6%.

The main features of the composite wheels include a completely hollow center and spoke along with secondarily bonded metallic inserts. Toughened epoxy resin prepreg carbon fiber was used for manufacturing allowing the team to produce the wheels completely in house.

Jayhawk Motorsports has benefited from the use of NEi Software finite element analysis packages throughout the wheel design. Software support of composites allowed the team to optimize ply sequences and orientations. Automatic contact recognition and creation significantly decreased finite element modeling time. Less time was necessary to learn the software packages due to great help archives, technical support and the intuitive user interfaces.

NEi Software, Inc. is aggressively focused on commitment to the customer. Detailed documentation, customized on-site training, and comprehensive technical support ensures that you will see immediate return on your investment.

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