2010 Cadillac Aera

Cadillac Aera und Smart 454 WWT heissen die Sieger der LA Design Challenge 2010. Die Jury konnte sich nicht auf einen Gewinner einigen, deshalb gibt es 2010 einen Doppelsieg.

Wenn zehn sich streiten ... freuen sich am Ende zwei. Zumindest bei der Design Challenge im Rahmen der Los Angeles Auto Show 2010. Denn die Jury konnte sich nicht auf einen Entwurf einigen und vergab deshalb zwei erste Plätze. Sie gehen an den Cadillac Aera und den Smart 454 WT. Weil beide die Vorgaben, einen Viersitzer mit weniger als 500 Kilo Gewicht zu bauen, am besten umgesetzt haben. "Die Entscheidung fiel uns in diesem Jahr besonders schwer, weil die Qualität der Bewerbungen über die letzten Jahre hinweg immer besser wurde“, so die Jury. "Der Cadillac Aera und der Smart 454 WWT repräsentieren sehr gegensätzliche Entwürfe für ein 500-Kilo-Fahrzeug, beide sind jedoch gleichermassen verblüffend. Sie verkörpern eindrucksvoll den Auftritt ihrer Marken auf dem US-Markt: Der Cadillac steht für Kunst und Wissenschaft, der Smart ist spielerisch und macht Spass", heisst es in der Begründung der Experten.

Die Sieger sind in der Tat sehr gegensätzlich: Das Cadillac Aera 2+2 Reise-Coupé nutzt ein dreidimensionales Gitter mit einer flexiblen druckdichten Polymerhaut für die Karosserieteile und Fenster. Dies senkt das Gewicht und verbessert die Aerodynamik. Smart setzt bei seinem Entwurf auf einen von Robotern zusammengefügten Tridion-Rahmen. Hier wird Kohlefaser verbaut, um das Gewicht möglichst gering zu halten.

Quelle: Stephan Bähnisch, 25.11.2010

http://www.autobild.de/artikel/la-design-challenge-2010-die-sieger-1297885.html

---

2010 Cadillac Aera

The Cadillac Aera Concept won the 2010 Los Angeles Auto Show Design Challenge, tying with Smart and besting entries from seven other automakers including Mercedes-Benz, Honda, Nissan, Toyota and Maybach. GM Advanced Design has now won the honor more times than any other design team; this is its third victory since 2005.

This is the seventh year for the contest, and this year designers were asked to envision the "1,000 lb. car" and tasked to imagine an efficient four-passenger vehicle that maintained comfort, safety, driving performance and style while not exceeding the weight requirement.

"The Cadillac Aera concept was designed to continue the forward-thinking imagination of Cadillac's 'art and science' philosophy," explains Jussi Timonen, lead designer for the project. "It's designed as a small city urban vehicle, but we approached this 2+2 touring coupe very much from the brand's luxury perspective. Every detail of the Aera was conceived to minimize the vehicle's environmental impact without sacrificing the style, comfort and attention to detail that are hallmarks of the Cadillac brand."

The Cadillac Aera Concept is powered by compressed air via a highly efficient Pneumatic Drive System that has a 10,000-psi composite air storage tank with capacity for a 1,000-mile range. Flexible, pressurized air cells in the exterior skin, similar to material developed for the NASA Mars Rover airbags, enhance passive safety and interior comfort. The flexible polymer skin optimizes aerodynamics and functions as an ultra-lightweight alternative to conventional body panels and glass.

Cadillac Aera's body utilizes a 3D lattice, mono-formed frame that was designed to be similar to configurations found consistently in nature. The structure is formed from unique, alloy-utilizing, semi-solid freeform manufacturing, creating a naturally strong, extremely lightweight frame. All major body parts, including interior components, are essentially "grown" into a single part lattice structure.

The interior is crafted with an ultra-light recyclable polymer that allows for HVAC channels, fully adjustable seating, storage and comfort features all in one mono-form structure. Generous storage space accommodates luggage for two people.

Additional technologies include an all-in-one wheel system that combines rotary actuator propulsion, steering and suspension functions. A drive-by-wire system decreases the mass of electrical components, while vehicle-to-vehicle communication promotes active safety.

The concept was conceived in GM's North Hollywood Advanced Design Studio by Frank Saucedo, director;

Phil Tanioka, vehicle designer; Brent Wickham, concept strategist; Shawn Moghadam, layout designer and Timonen, the project manager. Earlier this week, GM commemorated 10 years of advanced design at the L.A. area studio.

"This year's design challenge was extremely difficult to judge because of the quality of all of the entries, but I believe that the executions that won exemplified everything that we were trying to achieve with this competition," said Stewart Reed, chair, Transportation Design, Art Center College of Design. "The concepts that won were really spot on for their brands, which was one of many reasons for the victory."

The Design Challenge is part of the Design Los Angeles automobile designers' conference and has evolved into an integral element of the Los Angeles Auto Show. Design Los Angeles connects those working in the design industry with well-known automotive design industry leaders. Los Angeles is home to the world's largest concentration of manufacturer design studios, representing automakers from North America, Europe and Asia. It is also the home of Art Center College of Design, one of the world's foremost transportation design institutions where many of today's leading automotive designers began their careers.