

Hyundai's Intrado concept car wins Jury Prize

The Jury Prize for the innovative carbon-fibre frame design used in the Intrado concept car has been awarded to Hyundai at the JEC Innovation Awards 2015.



Hyundai Intrado

The prize was presented during the JEC Europe 2015 conference in Paris earlier this month.

The JEC Innovation Awards recognise technical excellence, market potential and originality, rewarding the most innovative composite solutions worldwide. The organisation selected the lightweight and futuristic frame of Intrado, which complements the concept's advanced fuel-cell powertrain and design.

At the core of Intrado's pioneering frame are carbon-fibre reinforced plastic (CFRP) sections, which are based on carbon-fibre tubes. This approach allows for more effective and flexible use of the carbon material, avoiding offcuts and long energy-consuming preparation processes. The unique process is a major forward step when compared to conventional steel and other CFRP chassis architectures.

Highly stable

The minimalistic, self-supporting skeleton-like frame structure is highly stable and extremely light weight, saving 70% weight compared to a conventional chassis and around 30% on the overall vehicle weight, without compromising safety attributes.

One essential element of the frame's overall rigidity is the floating centre console beam. This beam provides Intrado with its unique strength as well as connecting the seating and powertrain to the carbon frame. It serves as a mounting point for essential controls and adds to the vehicle's protective structure. Additionally, it supports the frame's integration with the fuel

cell powertrain components.

The Intrado frame is a result of global collaboration and knowledge-exchange not only within Hyundai Motor but also with two of the world's pre-eminent carbon fibre producers - Lotte Chemical and Hyosung Corporation. The frame was manufactured by Axon Automotive.

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