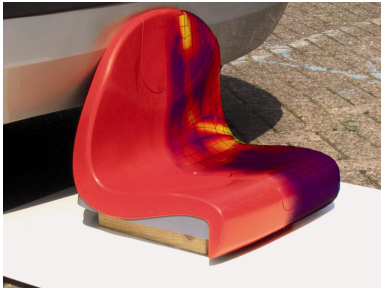


Stadium seat stronger than supporters



In cooperation with Enthoven Associates from Belgium, the Dutch engineering company BPO has developed a new generation of stadium seats for the Mexican company *Industrias Ideal*. The stadium seat can resist loads up to 1500[N] and can therefore be called supporter-proof.

The development of a stadium seat is a great challenge due to extensive safety requirements and standards as well as a saturated market. Only

by differentiation, innovation and offering quality at low costs the product can distinguish itself from its competitors. Close cooperation between marketers, designers, engineers and the producer has made this possible.

The design is characterised by the shield on top of the backrest. This shield, as well as a second one on the seat, is replaceable with the help of dedicated tools only. Therefore it is possible to adapt the looks of a stadium, for example in the club's colours or with the main sponsor's logo, without renewing the full interior of the stadium.

The connection between the plastic seat and the concrete stand is not visible. This has both aesthetic and functional advantages and led to splitting the design in two parts. The connection between the base and seat must meet high requirements concerning strength and ease of assembly. BPO played an important role in the optimisation of this connection.

The most important benefit of the cooperation between BPO and Enthoven is the achieved balance between technical demands and design. Because of supporters' behaviour, a stadium seat has to deal with high loads. To develop a seat that can resist these loads without affecting the design too much, a lot of effort is put in the design of the main construction. Smart engineering has made the seat supporter-proof, without the necessity for visible rib patterns or the use of expensive materials. The seat is made of standard polypropene and has passed all the required tests.

Continuous monitoring of construction, design and unit cost resulted in the most efficient development possible. This cooperation produced a stadium seat that combines an attractive design and functionality with improved performance at a competitive price.

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