

Arup Structural Engineering Recognised At 2016 South African Steel Awards

The new distribution centre for Mr Price in Hammersdale, Kwa-Zulu Natal, was awarded first prize in the Warehouse category as well as the People's Choice Award at the South African Steel Awards on 15 September 2016. Arup were the structural engineers on this project, which is one of the most sophisticated distribution centres in South Africa.

Steel was chosen as the building material both because of the size of the warehouse and to meet the fast-track construction programme deadlines. Tina Smith, senior structural engineer at Arup buildings division based in Durban said "One of the first challenges we faced was the early procurement of materials in order to keep the project on schedule. With only 10 weeks steel fabrication lead time prior to commencement, a 90 day erection programme and 75,000 assemblies required, careful consideration was given to the pre-fabrication and fast erection time for the steel structure of the 55, 860 m² warehouse."

The girders and trusses were redesigned from tender stage by the designers and steel contractors to suit the availability of materials, the erection programme and requirements for normal transport conditions. Smith said "The design resulted in fairly stiff trusses which did not require spreader beams for their erection."

Some of the aspects of this project which stood out were:

- 1,000 tonnes of fabricated materials on site prior to erection
- 14No. cranes erecting steel with 4No. slave cranes
- 2No. horse and trailers dedicated to moving steel around site

- Average erection rate of 33.5 tonnes per day
- 76 tons was the most tonnage erected in one day

“We are delighted to have been chosen as the structural engineers on this award winning project. It is always a feather in one’s cap to receive industry recognition. I do believe Arup offers a great deal of expertise not only from a design perspective, but also in terms of offering innovative solutions for the client.” said Smith.

Louis Breckenridge, one of the judges’s commented “Mr Price was very impressive. Here you had not only the steel fabricator, but the designers, the developers and the project managers – all knowing how to work together to make this a great project.”