



**IRISH STEEL**  
AWARDS **2025**

*in association with*

**RFL**  
STEELS LIMITED

**Shortlisted Finalist | Voting ID: #6526**

Finished Projects

Industrial Engineering - Equipment Manufacturing

**McMenamin Engineering**

Manufacture of Tower Crane Tower Sections, Co.  
Donegal





Voting ID: #6526 | Industrial Engineering - Equipment Manufacturing

## Manufacture of Tower Crane Tower Sections

Co. Donegal



### Project Story:

This submission highlights the ultra-precision fabrication and assembly of Saez Tower Crane sections, locally manufactured by McMenamin Engineering for distribution by Mantis Cranes across the Irish and UK markets.

Currently, all Saez tower sections are manufactured at their facility in Spain, however, with additional manufacturing at McMenamin Engineering premises, this has led to a strategic move that has significantly improved delivery times, reduced logistics costs, and lowered environmental impact through minimised transportation.

McMenamin Engineering draws on over 25 years of crane manufacturing expertise from its sister company, Mantis Cranes, particularly in the production of self-erecting cranes.

Through this collaboration, each company continues to innovate in the design and fabrication of tower crane components while maintaining stringent quality and performance standards.

Each tower section is fabricated entirely in-house using hot-rolled steel sourced from Irish suppliers, precision-cast bolt lugs, and submerged arc welded (SAW) corner posts.

All welding processes are carried out in accordance with UNE-EN ISO 15609-1 standards and are supported by certified Welding Procedure Qualification Records (WPQRs) and validated welding procedures.



To facilitate the precision fabrication of these sections, a custom-engineered jig—measuring approximately 15 meters in length—was designed and manufactured.

This jig enables the continuous production of five different tower section variants, ranging from 3 to 12 meters in length and weighing between 4.5 and 10 tonnes.

It maintains dimensional accuracy within  $\pm 0.5$  mm over the full 12-meter span, meeting the stringent geometric tolerances specified by Saez Tower Cranes.

### Project Team:

McMenamin Engineering Research and Development Department.



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### The Nominee thinks this deserves to win an award because:

This project deserves an Irish Steel Award for its exceptional use of precision engineering and innovation in steel fabrication. At the heart of the process is a custom-designed 15-meter jig that enables the high-accuracy production of five tower crane section variants, maintaining dimensional tolerances within  $\pm 0.5$  mm across up to 12 meters in length.

Using Irish-sourced hot-rolled steel and advanced welding methods, McMEnamin Engineering delivers consistently high-quality components that meet stringent international standards, demonstrating technical excellence and leadership in the steel fabrication sector.

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