

SCI ENGINEERING CONSULTANCY PRODUCT DEVELOPMENT




Client:

Duggan Profiles & Steel Service Centre Ltd. is the steel sheet profiling division of the Duggan Steel Group and are manufacturers of Industrial and Agricultural Roof and Wall Profiles and Accessories.

Since its inception Duggan Profiles has provided an increasing range of profiled steel products, drawing on the experience available within the Group.

Duggan Profiles provides a complete range of roof, wall and decking profiles, a comprehensive range of cold rolled purlins, Cee sections and channels, crimped and louvered profiled sheets and a complete range of accessories and fixings for these products.

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SCI develops new range of purlin and rail sections

SCI has been involved in the development of ProSigma+, a new range of light gauge steel purlin and rail sections for Duggan Profiles, and produced design data in the form of safe load span tables.

Technical guidance provided to Duggan

Profiles enabled optimal performance of the sections and appurtenances to be achieved, thereby providing a more competitive proposition for specifiers. SCI's work focused predominantly on testing of the sections to determine their actual performance. This subsequently resulted in obtaining optimal values for product strength, stiffness and load bearing properties.

Adding value through testing

Cathal Ware, Duggan Profiles & Steel Service Centre Ltd commented: 'SCI fine tuned our existing products, developing them further and adding value through testing and analysing activities such as establishing the maximum load capacity for the sections. This has enabled us to promote this enhanced benefit to the marketplace. SCI Assessed status also helps us to differentiate ourselves.'

Although primarily focused on the purlin sections, the work programme also included the provision of guidance on sleeves, cleats and other ancillary components and their optimisation, where possible.

The project involved six main areas of work;

- Guidance to Duggan Profiles on the optimum section shape
- Guidance to Duggan Profiles and the testing organisation on test method, setup and programme
- Analysis of test results to obtain data required for the design model
- Development of design model to predict the behaviour of the purlins under gravity and uplift loading
- Production of design data in the form of load/span tables
- Guidance on sleeves, cleats and other ancillary components



ProSigma+ Purlin from Duggan Profiles being test ed. SCI used the results to produce SCI Assessed load span tables for the range of purlins.

Duggan Profiles were also granted SCI Assessed accreditation for their products as SCI was able to verify how the data had been extracted and that all procedures met current regulations and standards.