SCI PRODUCT CERTIFICATION

MODULAR BUILDING UNITS

Three dimensional modular building units constructed from light gauge, cold rolled steel profiles and/or hot-rolled steel sections and associated components. The modular units will be self-supporting and may be combined to provide the complete structural solution. Modular units plus any associated components will be sufficient to achieve additional building performance requirements.

ABOUT STEEL CONSTRUCTION INSTITUTE

SCI (Steel Construction Institute) has been a trusted, independent source of information and engineering expertise globally for over 30 years, and remains a leading, independent provider of technical expertise and disseminator of best practice to the steel construction sector. SCI are committed to offering and promoting sustainable and environmentally responsible solutions.

The industry look to SCI for reliable and robust technical information on the effective use of steel in design, including the latest codes and building regulations and Eurocode advice.

Following SCI's success of the SCI Assessed scheme, SCI Product Certification will provide assurance that your product meets all relevant, current requirements, and has been developed to follow the requirements of EN ISO/IEC 17065, Conformity assessment - Requirements for bodies certifying products, processes and services.

Our certificates offer clear, unambiguous statements about compliance and are structured to follow the Basic Work Requirements for construction works as set out in the Construction Products Regulation.

This SCI Product Certification Scheme evaluates construction products or systems. It is recognised by the construction industry as a rigorous, impartial and independent assessment of a product's performance, and is going through the UKAS (United Kingdom Accreditation Service) accreditation process.

The aim of the scheme is to help manufacturers differentiate their products in the market, and provide confidence to specifiers, end users and other interested parties that the products fulfil specified requirements.

To be awarded an SCI Product Certificate a product or system has to pass a comprehensive assessment consisting of, but not limited to:

- Laboratory test and calculation data
- Technical and design data
- Design protocol
- Full set of design calculations
- Inspections of production
- Checks on compliance with Building Regulations
- Consideration of other statutory or non-statutory requirements
- Regular monitoring of product manufacture

Compliance will be assessed by means of a submitted technical manual and supporting information.

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The following is a guideline to the scheme requirements for each of the basic work requirements (BWR) under the CPR. For the full set of requirements please refer to the relevant technical scheme document (TSD), available from SCI.

MECHANICAL RESISTANCE AND STABILITY – BWR 1

The building comprising modular units shall be capable of supporting the specified loadings with adequate safety against structural collapse, inadmissible deformations and disproportionate collapse.

The product shall be designed and constructed in accordance with an SCI recognised design code.

SAFETY IN CASE OF FIRE – BWR 2

The modular system shall be designed and built in such a way that in the event of outbreak of fire:

- The load bearing capacity of the construction can be provided for a specific period of time.
- The generation and spread of fire and smoke within the works (the completed building) are limited.
- The spread of fire to neighbouring construction works is limited
- Occupants can leave the works or be rescued by other means
- The safety of rescue teams is taken into consideration

Pertinent regulatory requirements for resistance to fire properties of the element(s) shall be classified according to BS EN13501-2 as appropriate for the intended end use.

Completed buildings are required to comply with compartmentation requirements as set out in the regulatory requirements.

Where evidence of fire resistance is required fire testing from an accredited laboratory is the primary source of evidence accepted.

HYGIENE, HEALTH AND ENVIRONMENT – BWR 3

Areas to consider are:

- Vapour permeability and moisture resistance
- Water-tightness for external envelope and internal surfaces
- Release of dangerous substances

SAFET Y IN USE – BWR 4

Mechanical resistance against dynamic loads may be assessed on the basis of standard design details, where internal lining materials are well known, and for guard rails, balustrades and parapets shall be considered for falling due to changes in level or sudden drops.

PROTECTION AGAINST NOISE – BWR 5

For the intended use and location of the building walls and floors shall provide the necessary airborne sound insulation and floors shall provide the necessary impact sound insulation.

ENERGY ECONOMY AND HEAT RETENTION – BWR 6

The external envelope shall provide the necessary thermal insulation and airtightness that is applicable to the intended use of the building. Thermal bridges, which may cause uncomfortably low temperatures or water vapour condensation affecting durability, hygiene, health and environment, shall be avoided.

Thermal resistance (R-value) and corresponding thermal transmittance (U-value) of the main building parts of the modular system shall be calculated according to BS EN ISO 6946.

SUSTAINABLE USE OF NATURAL RESOURCES – BWR 7

The durability of the element shall be declared in respect of the constituent components.

The construction works must be designed, built and demolished in such a way that the use of natural resources is sustainable and in particular ensure the following:

- Reuse or recyclability of the construction works, their materials and parts after demolition;
- Durability of the construction works;
- Use of environmentally compatible raw and secondary materials in the construction works.

FACTORY PRODUCTION CONTROL (FPC) REQUIREMENTS

The client shall establish, document and maintain an FPC system sufficient to maintain the manufactured quality of the product.

A system developed in accordance with BS EN ISO 9001, that includes the specific requirements of this scheme, would also meet the requirements for FPC.

For further enquiries please contact SCI Product Certification on:
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SCI Steel Knowledge