Technical Information Sheet ED029

Best Practice for Light Steel Framing: Installation

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This Technical Information Sheet forms part of a series providing best practice guidance for light steel framing, and covers key aspects related to the installation of light steel framing and other parts of the package.

Key points – Logistics

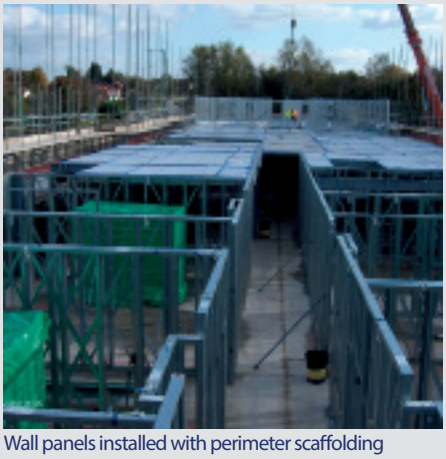
- Panels are delivered to site in bundles appropriate for the build sequence and placed on floors near to where they are to be installed.
- The maximum weight of bundles should be agreed at the pre-start meeting. The weight of individual bundles should be identified.
- Arrangements for site access, unloading and site egress should be agreed in advance with the main contractor.
- Scaffolding should normally be constructed one floor ahead of the panels being installed and should be braced for stability.
- Scaffolding should only be tied-back to the light steel frame at locations, and using details, agreed between the main contractor and the light steel frame supplier.
- Scaffolding anchorage points will normally be appropriate for open scaffolding. Sheeted scaffolding applies higher loads, and alternative anchorage points may need to be agreed and designed.

Key points – Installation

- Wall panels are temporarily supported during installation by inclined struts. There should be a minimum of one strut per panel and typically at a maximum spacing of 3 m.
- Walls panels must be fixed to the adjacent panels. The fixings used are system specific and should be stated on construction drawings and comply with the structural calculations.
- Light steel wall panels should be erected in rectangular 'blocks' rather than long linear runs to help provide stability and to prevent collapse in high wind.
- Normally, panels are placed in position by a crane. However, lighter wall panels may be lifted in position manually. Four operatives are required for a panel of up to 80 kg.
- Floor cassettes must be lifted using the pre-defined lifting points, which will be system specific.
- Floor cassettes should remain attached to the crane until adequately fixed to their supports to prevent risk of collapse during installation.
- For ground floor slabs that are not perfectly flat, galvanised steel shims should be used beneath the wall panels. For gaps less than 10 mm, shims should be placed at every stud position.
- For gaps beneath wall panels of between 10 and 20 mm, galvanised steel shims should be placed under each stud position and cementitous grout should be injected under the base track of the wall.
- For gaps beneath wall panels of greater than 20 mm, advice should be obtained from the structural engineer responsible for the design.

Wall panel supported by temporary struts

Installation of a light steel floor cassette



Wall panels installed with perimeter scaffolding

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Key points – Handover

- The main contractor and the light steel framing supplier must agree a hand-over procedure. This should include confirmation of the accurate position of the brickwork below DPC level before the steel frame is erected.
- The external brickwork splash course (225 mm below DPC) should be left down until the steel frame is sufficiently progressed to enable a setting-out point to be established. This is to ensure the minimum clear cavity width of 50 mm is achieved.
- 'No work' areas should be demarcated in the vicinity of where work is being carried out above.
- A damp proof course (DPC) should be laid beneath each ground floor panel prior to placement onto the slab. The DPC is typically 600 mm wide for external walls and 150 mm wide for internal walls.
- In most cases cutting of light steel sections on site is not required. Modifications should only be carried out with the prior agreement from the light steel frame manufacturer.
- Props for composite slabs should only be removed after the concrete has achieved adequate strength, demonstrated by cube test. If props are removed too early in the construction cycle, composite slabs can experience deflections induced by concrete creep.

Floor joists installed from a moveable working platform

Best practice information sheets

The following technical information sheets are available as part of the series on Best Practice for Light Steel Framing:

- Design and Detailing (ED027)
- Pre-Start Requirements (ED028)
- Installation (ED029)
- Follow-On Trades (ED030)

Other technical information sheets

Other technical information sheets on light steel framing and modular construction are also available from SCI and the *Light Steel Forum*. This include topics such as: Applications, Residential Buildings, Housing, Infill Walls, Modular construction, Acoustic Performance, Fire Safety, Thermal Performance, Sustainability, Robustness and Durability.

Manufacturers

These companies are members of the *Light Steel Forum* and are active in the light steel and modular construction sector.

Ayrshire Metal Products Ltd. www.ayrshire.co.uk
British Gypsum Ltd. www.british-gypsum.com
BW Industries Ltd. www.bw-industries.co.uk
Fusion Building Systems www.fusionbuild.com
Kingspan Steel Building Solutions www.kingspanpanels.com/sbs
Metek UK Ltd. www.metek.co.uk
Sigmat Ltd. www.sigmat.co.uk

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