Technical Information Sheet ED030

Best Practice for Light Steel Framing: Follow-On Trades

A.G.J. Way MEng CEng MICE

This Technical Information Sheet forms part of a series providing best practice guidance for light steel framing, and it covers essential points related to potential interactions with follow-on trades, such as plasterboarding and services.

Key points – General

- Holes should not be cut in light steel sections without prior agreement from the light steel frame manufacturer. Authorisation can only be granted by following the agreed approval process with the associated documentation.
- Flanges of light steel members should not be cut.
- As for any framed construction, bracing is vital for the stability of a light steel frame building. Diagonal bracing must never be cut or removed.
- The structural design of a light steel frame building, and any associated warrantee, is invalidated by the unauthorised modification to any part of the frame.
- Temporary loading on light steel floors must be carefully managed to ensure the floor load capacity is not exceeded during construction.
- The floors two or three storeys below composite slab floors that require propping should be kept clear of materials to allow props to be located correctly. Prop spreader beams should be at least 100 mm wide.

Key points – Services

- An individual opening for service pipes of up to 150 mm diameter may be formed in composite floor slabs without the slab requiring any additional design measures. Larger holes or multiple holes must be considered at the design stage.
- Service pipes and electrical cables incorporated into light steel walls should be installed through the holes that are provided at regular spacings in the webs of vertical C sections.
- Rubber or polyethylene grommets should be installed in holes in light steel sections that have services through them. The holes can have sharp edges so the grommets prevent damage to cables and pipes.
- Services located in the floor zones should be installed from below after the floor boarding has been installed, which provides a safe working platform.

Key points – Cladding

- In external walls, cavity trays should be provided above horizontal cavity barriers and above window and door openings to ensure that water is effectively shed to the outer skin of the wall. Cavity trays should extend at least 150 mm past either side of a door or window opening.
- Generally, brick ties should be placed at a maximum horizontal spacing of 600 mm and a maximum vertical spacing of 450 mm.
- Insulation applied to the light steel frame must not be modified by follow-on trades. This is necessary to ensure that the design thermal performance of the building is achieved.

Cross-bracing in light steel frame walls forms a vital part of the frame stability

Construction materials stored on the floor of a light steel frame building

Individual opening for service pipe formed in a composite slab (maximum 150 mm diameter)

Best Practice for Light Steel Framing: Follow-On Trades

Key points – Linings and partitions

- Pallets of plasterboard sheets cause particularly high construction loads. Full packs of plasterboard must not be placed on floors. Pallets of plasterboard must be split to reduce loading.
- Construction loads should be placed so that the load is spread over the maximum number of floor joists.
- Additional loading in the form of material (e.g. partial pallets of plasterboard) should not be added to floors until the light steel frame has been completed and fully braced. Temporary construction loads should be agreed by the frame designer.
- Non-load bearing internal walls must include a deflection head detail to allow the floors to deflect during use without inducing axial load in the wall. Non-load bearing walls without deflection head details will suffer damage to finishes.
- Wall lining materials provide an important part of the acoustic performance of the building and its resistance to fire. The specified boards must be installed in accordance with the design and manufacturer's instructions.
- Fire stopping performance must be reinstated where holes are formed in lining boards of separating and external walls.

Large holes in light steel floor joists for integration of services

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.sigmatframing.com

Acknowledgements

This information sheet has been produced by SCI with the support of the members of the *Light Steel Forum* and with co-investment from the UK Commission for Employment and Skills through the UK Futures Programme.

The Steel Construction Institute
Silwood Park, Ascot.
SL5 7QN

T: +44 (0)1344 636 525
F: +44 (0)1344 636 370

E: publications@steel-sci.com
W: www.steel-sci.com

www.steelbiz.org – 24×7 online technical information

www.lightsteelforum.co.uk – Light Steel Forum

Best Practice for Light Steel Framing: Follow-On Trades (ED030)