SAFE SYSTEM OF WORK FOR ROOFWORK

Q. We are looking to create a safe system of work for employees having to work on roofs composed of insulated panels i.e. coldstore/ food factory ceilings. In particular we are interested in standard solutions for:

- designing out the need for access over sandwich panel ceilings
- providing permanent safe access, where it is needed to the ceilings
- providing temporary access, in the case of unplanned access, such as repairing leaks above these ceilings

Do you have any advice?

A. For a start the HSE has some simple guidelines to follow:

- Ceilings and roofs should be presumed to be fragile until it is proved that they are not
- Environmental conditions may cause deterioration of ceilings, roof claddings or their supports, making them incapable of taking a person's weight
- Panels should not be used as a working platform unless it has been confirmed by a competent person that both the panels and their supports have been specifically designated for that purpose and are suitable
- Guidance on loading capacities should always be sought from the manufacturer/supplier if possible
- Where frequent access is required then independently supported walkways should be installed, or boards used to spread loading for other prolonged work activities. Again, guidance from manufacturers, suppliers and designers should be followed. There have been accidents with these panels where the fixings to the steel beams had failed due to corrosion or fatigue - specifically where the thread entered the metal nut.

It should be remembered that each case needs to be independently risk assessed to determine what is suitable from a permanent and/ or temporary basis and taking into account all other factors.

DESIGNING OUT THE NEED FOR ACCESS OVER SANDWICH PANELS

This is always the preferred option as eliminates any risk from this aspect. The main requirement for access onto panels is for maintenance of plant, pipework, electrical equipment etc so it purely requires a design that puts this equipment somewhere else. This is not always possible though where space is a premium.

It also means you can be shifting the risk somewhere else where a working platform over the panels may actually provide a safer working area. The working at height hierarchy starts with avoiding it wherever possible.

PROVIDING PERMANENT ACCESS TO THE CEILINGS

An access staircase is always the preferred and safest option and for a new build, where access is required frequently and/or small materials or tools need to be moved frequently, then one should be installed. If one has not been installed as a bespoke part of the building then one can be built retrospectively however this can be costly if it is an afterthought. The staircase can be constructed from scaffolding but means it would need to be inspected on a regular basis by a competent person.

The long term cost of hire and inspection could outweigh the cost of a permanent structure.

Where only occasional access is required and materials do not have to be carried (three points of contact at all times) then a fixed access ladder could be installed however the risk assessment

needs to be robust if this is to be the case as they come with their own inherent risks.

Safety hoops, landing/rest platforms or fall arrest systems may need to be installed.

PROVIDING TEMPORARY ACCESS, IN THE CASE OF UNPLANNED ACCESS, SUCH AS REPAIRING LEAKS ABOVE THESE CEILINGS

Temporary access is where the majority of working at height accidents can occur as they are generally reactionary and are insufficiently planned or controlled. There are many different ways to temporary access and again, this needs to be specifically risk assessed. Stair access/tower platforms are the preferred option. Mobile elevated work platforms (MEWPS) such as scissor lifts are a good option but must be operated by a trained operative and allow for safe access from the platform onto the ceiling.

Cherry pickers are also an excellent option but again need to be operated by a trained operative and access can be restrictive. Consideration must always be made as to what edge protection is in place on the ceiling also.

Ladders are not a good option and consideration needs to be made for their height, footing and tying off, suitability, inspection, carrying equipment to name a few. Access over the panels can be done through either a temporary or permanent walkway.

A temporary walkway can be installed through aluminium walkways spreading the weight and can have handrails installed.

Permanent walkways can be built off the existing steelwork of the building thus avoiding any contact with the panels. This is specialist contractor work and one would need to be appointed accordingly.