CTB - 17
Technical Bulletin

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Following trades

Introduction

There are many instances where a competently installed roof, with all installation practices correctly observed, has been affected by the action of others after installation.

Typical instances of this are related to the use of inappropriate materials or practices associated with installation of retrofitted equipment or the later inclusion of brickwork parapets around otherwise completed metal roofs.

Careless placement of feet, the spillage of mortar, generation of swarf and excessive point loads on roof sections or use of incompatible materials are commonly observed and should be avoided.

The installation of air-conditioning units, roof walkway systems or other roof-mounted plant equipment should be carefully considered in the context of above, to avoid imparting damage to the roof sheets that may be impractical to replace or repair after the equipment installation is completed.

Consideration should be given to both materials used and installation practices undertaken.

Figure 1: Treated Timber Walkway

Materials

Equipment mounts or footings manufactured from incompatible or unsuitable materials must be avoided. Corrosion of the underlying roof sheeting in contact with unsuitable materials may be initiated and/or accelerated in such circumstances.

Some metallic materials used in such applications may be unsuitable due to potential dissimilar metal corrosion mechanisms. Please refer to:

Corrosion Technical Bulletin CTB-12 Dissimilar metals, which addresses such scenarios.

Similarly, some incompatible metals such as copper, often used in pipework and lightning protection systems, can also be detrimental to roof sheets via water running over the surface and onto downstream portions of the roof sheet. In these circumstances, consideration should be given to effective isolation of the surface, or management of the runoff from that surface. In this context, consideration should also be given to runoff from copper overflow pipes where discharge should be directed through non-metallic pipes to ground.

Other potentially unsuitable materials may include timbers or similarly cellulose materials (open-cell foam for example) that can be prone to absorbing moisture that may in turn be retained against the surface of roof sheets for prolonged periods. Extended time of wetness can be a major influence of corrosion mechanisms. Like incompatible metals, water runoff from some treated timbers can also be detrimental to corrosion performance of roof sheets. Where timbers are likely to result in water runoff over roof sheets, mitigation actions through isolation (painting of timber) or water runoff management should be taken. Please refer to:

Corrosion Technical Bulletin CTB-13 Contact with timber

Installation Practices

Swarf management

Where possible, any cutting or drilling operations for roof accessories should be conducted at ground level to avoid swarf generation on roof sheets. Where this is not possible, effective protection in association with clean up procedures should be implemented daily to minimise potential swarf issues. Please refer to:

Technical Bulletin TB-5 Swarf staining, which addresses issues relating to prevention and mitigation of swarf staining.

Loading and movement

Often when working on a completed roof, trades will have little to no awareness of the structural capacity of the roof sheet with regard to the spacing of underlying structural supports and the base metal thickness specified for the roof sheets themselves. Where possible, this information should be obtained prior to planning any works.

Generating excessive point loads should be avoided to prevent physical damage to the roof sheets which can impact corrosion performance, weatherproofing and structural integrity.

Advice from a suitably qualified engineer should be sought regarding placement of heavy loads. Loads should be placed carefully on the roof with the footprint spread across as many structural supports as possible. For small, heavy loads, temporary dunnage may be required to assist with distributing the weight.

Care should also be taken when traversing a roof. In addition to personal safety awareness, it should also be noted that foot traffic can also present hazard to roofing materials. Soft-soled shoes should be worn if possible and care should be taken to distribute weight as much as possible. Walking in pans or on fasteners is preferable, but if not possible or practical, spread the weight over as many ribs as possible. Temporary walkways are also effective in preventing damage to roof sheets from foot traffic and dropped equipment. Please refer to:

Standards Australia Handbook SA HB 39:2015 *Installation code for metal roof and wall cladding*, which has useful information regarding effective roof access and protection.

Related BlueScope Technical Bulletins

Corrosion Technical Bulletin CTB-12 Dissimilar metals

Corrosion Technical Bulletin CTB-13 Contact with timber

Technical Bulletin TB-5 Swarf staining

Related Documents

Standards Australia Handbook SA HB 39:2015 *Installation code for metal roof and wall cladding*