

STEEL STORIES

Amazing Coated Steel by BlueScope

STEEL STORIES FEATURE

Tips & Tricks on Managing On-site Installation & Quality Control of A External Cladding

A well-constructed building, ultimately, relies heavily on the on-site installation and quality control measures. In our recent case study, the NS BlueScope team covers the tips and tricks to achieve long-term roof durability.

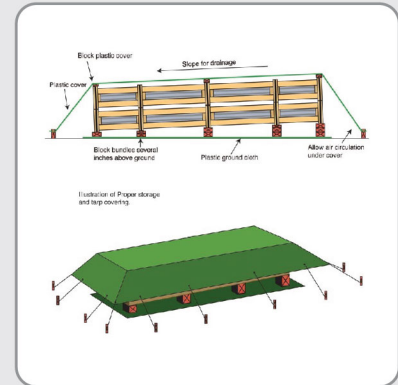
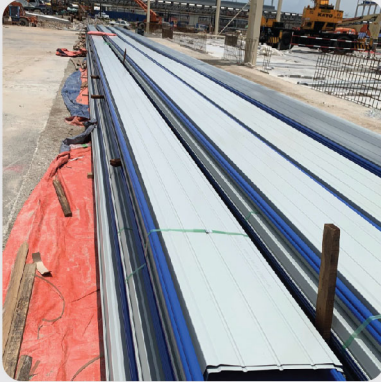


Storage On-site & Handling

Similar to how we inspect online shopping products upon their arrival, it is essential to inspect metal sheets to ensure it is dent-free, with no scratches and defect in paint upon receiving them. Failing to adhere to proper inspection could be detrimental in the long run as this may require additional time and effort for replacement, either during or upon completion of a project.

In these unprecedented times, proper storage has emerged as a top priority in maintaining the quality of metal sheets. These sheets should be stored by stacking them up on an elevated platform at a slant angle to avoid moisture build-up, especially in flood-prone areas. By using canvas coverings on the metal sheets, accumulation of rain water in between sheets can be avoided.

Moisture build-up over a prolonged period results in the softening of the painted layers and could cause light stains on the paint finishing. When using compromised metal sheets, it is advisable to completely dry it prior to utilising it.



Cutting Sheets On-site

Achieving a clean-cut is seen as desirable by any individual working with sheet cutting. However, many aren't aware that having the right tool determines the extent of a clean-cut. The presence of burr edges, also known as rough edges, are typically caused by abrasive cutting tools such as grinders, which can jeopardize the cutting-edge protection.

Generally, there are two different cutting motions: the circular motion, and the shear motion. Angle Grinder is an example of the circular motion cutting tool. Although commonly used, this abrasive cutting method causes burr edges and may cause long term effects due to its rust particles.

A better option would be the Cold Cut Saw – despite having a circular cutting motion, abrasion is minimal which results in a much cleaner cut. That said, this highly depends on the skilfulness of the individual mending the tool.

The ideal tools for cutting metal sheets with precision are shear motion cutting tools. This includes:

• SINGLE CUT SHEAR

A “scissors” method of cutting, without generating any type of by-products (abrasion, etc.)

• DOUBLE CUT SHEAR

Similar to the “scissors” method. However, this tool does generate a by-product in the form of thin strips, often called offcuts.

• NIBBLER

Using the concept of a paper puncher, the Nibbler results in serrated cut edges, which can be considered as a cleaner and safer cutting edge.

Hence, the shear motion cutting method is the preferred option of metal shear cutting as opposed to the circular motioned tools.



Cold Cut Saw



Single Cut Shears



Double Cut Shears



Nibbler Cut



Swarf Removal

Swarfs, or rust spots on metal surfaces, are typically the result of an abrasive cutting method. The Angle Grinder is known to emit most swarfs which then bonds with the metal surface instantly due to its state of matter. Swarfs should be removed at an early stage to avoid long term effects such as corrosion. This could be done by simply using a scrub sponge and mild household detergent (dishwashing liquid).

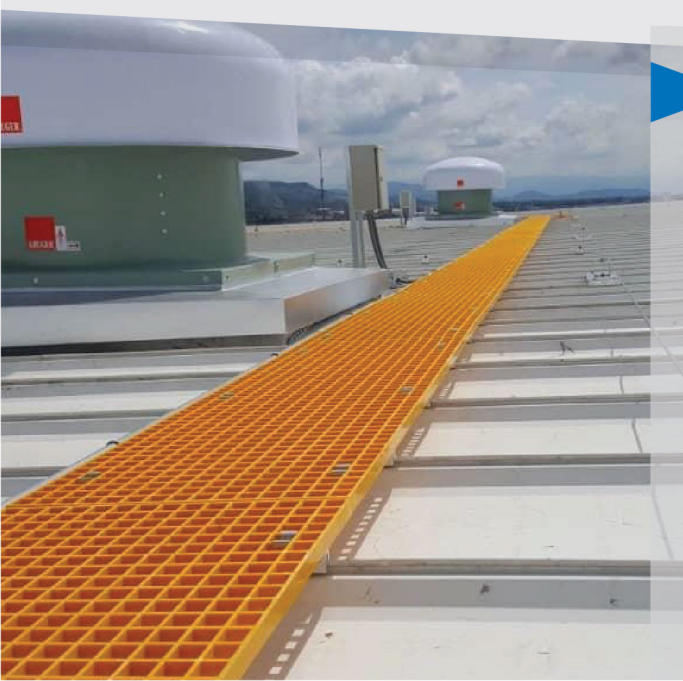
It is crucial to note that the usage of abrasive cleaning methods such as thinner, petroleum, or steel scrub should be avoided at all cost to ensure no further damage is caused.



Scratch Prevention

Scratches are a result of an array of actions, usually during the course of maintenance. Although safety boots are a requirement at factories and sites, they should be avoided when dealing with metal roofs. The debris from the soles of these safety boots may potentially damage the metal roofs. The usage of flat rubber shoes should instead be considered as the flatter sole results in less debris damaging the metal surfaces.

Generally, people often resort to a panic state upon noticing scratches on these metal surfaces. The severity of these scratches can be classified using a rule of thumb – scratches more than 2mm width or scratches which shows base steel rusts are considered severe scratches; while hairline scratches which doesn't show rusts are considered a minor scratch. Only for severe scratches, a replacement or overpainting could be considered. However, the latter is not recommended as this could affect aesthetics and pose threat to long-term durability.



Following Trades

There are often subsequent events that take place following the installation of the external cladding which could contribute to damage. It is vital to consider these events upon installation:

- Cleaners may unknowingly cause damage in the midst of cleaning upon installation.*
- Mortar stains, as a result of spilt cement, are highly difficult to be removed without causing damage to the paint finishes*
- Potential ponding water caused by metal sheets dented from foot traffics of following trades.*

It is highly recommended to take photographs of the completed metal roofs for record-keeping to ensure any form of negligence could be properly addressed.



Accelerated testing vs outdoor weathering testing Which is more accurate?

DATE:
16th April 2021 (Friday)

TIME:
10AM – 11AM

PLATFORM:
Live On WEBEX 

REGISTER NOW

**0.5 LAM CPD Point Has Been Applied
1 BEM CPD Hour Has Been Applied**



To determine a material's durability against natural weathering, we have traditionally relied on simulated tests in labs to predict performance in actual weather. However, there have been discrepancies of specific accelerated tests towards the actual outdoor weathering tests.

Join us for this session as we delve into the differences between accelerated tests and compare it against actual outdoor weathering tests.

Check out Steel Connect webinar series [here](#).