THERMOSHIELD®

thermal insulation coating

DEAKIN UNIVERSITY AUSTRALIA

Worldly

Roof Restoration

Future Proofing Building B

Rust Conversion | Thermal Insulation | Asset Protection

CORROSION control

Waterproof

THERMOSHIELD PROUDLY MADE IN AUSTRALIA

10 YEAR warranty IF APPLIED BY THERMOSHIELD APPROVED APPLICATORS

ISO 9001 & 14001 Certified

FUTURE PROOFING RESTORATION

Rust Conversion | Insulation Coating | Asset Protection

Building B was in the midst of a major HVAC installation.

Part of the works involved installing a platform for a large air conditioning system to be installed on. The concern was that the ageing roof was beginning to show signs of deterioration such as rust bloom.

By applying [3 coats] of the Thermoshield ceramic coating, the underlying steel is starved of environmental exposure, which will significantly prolong the life of the roof.

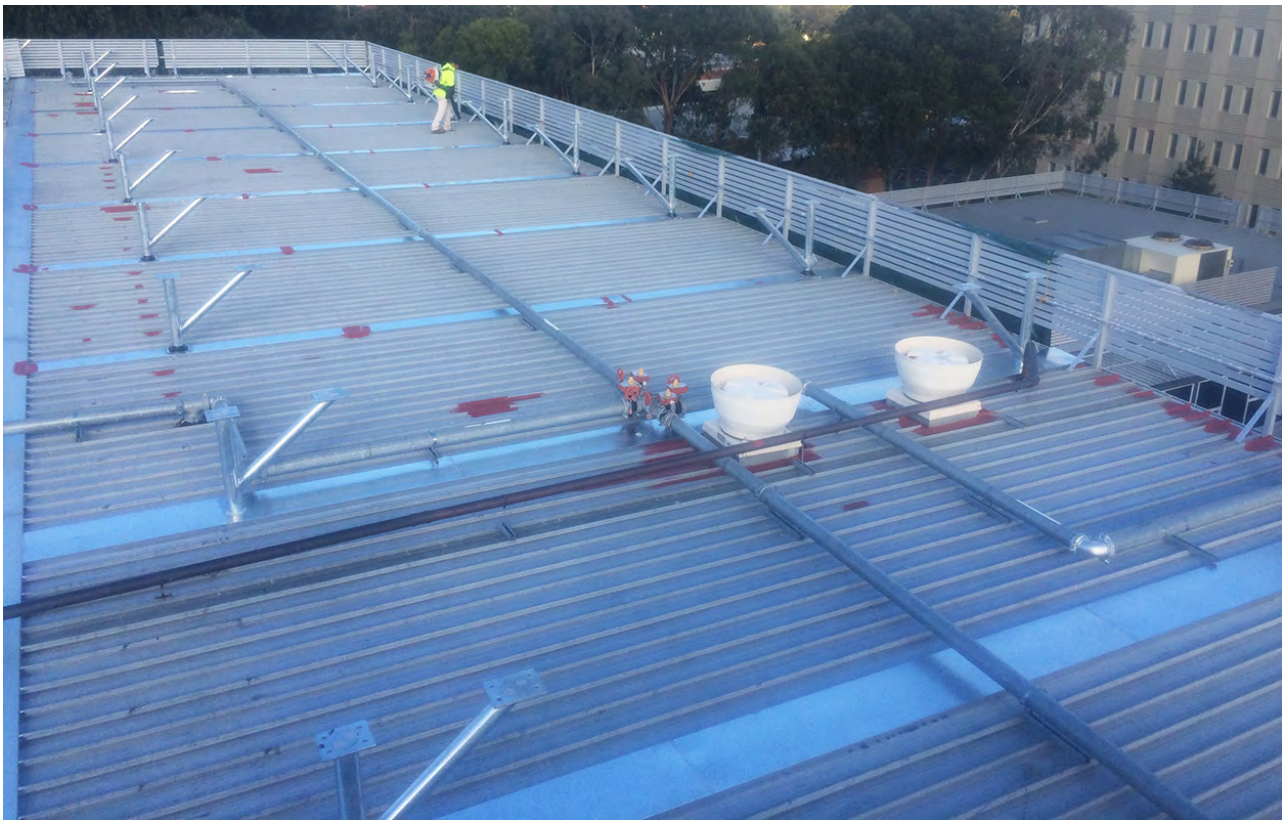
With scheduled maintenance, the expensive task of roof replacement will be avoided well into the future.

The below aerial photo shows building B:

Coating Process:

Following high pressure washing, tarps were applied to the perimeter fencing so that the coating could be covered overnight.

Final preparations prior to coating:



Securing tarps:

Tarps in place for easy application:

With coating works being completed in May, weather conditions were/are highly unpredictable during this time in Melbourne. Once 'touch dry' it was essential for the coating to be covered to ensure the product had every chance to cure through.

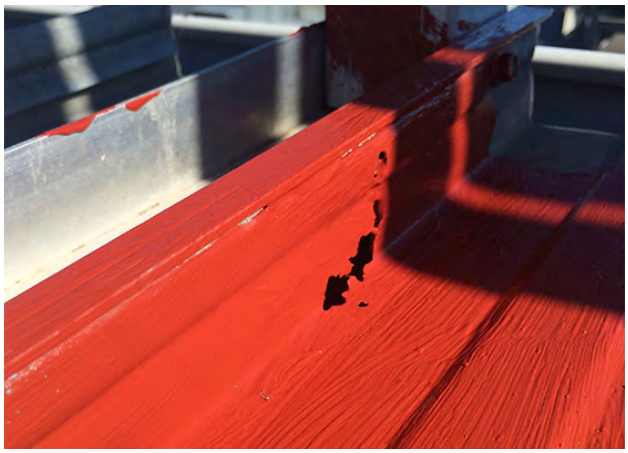
With overnights less than 10 degrees C, the covers so slightly aided heat retention for curing.

SPOT REPAIRS:

Near gutters, on sheet ends – there were areas of isolated corrosion that were resolved prior to the coating system. The below series of photos demonstrates the steps taken to repair the rust, waterproof the area while promoting free water flow:

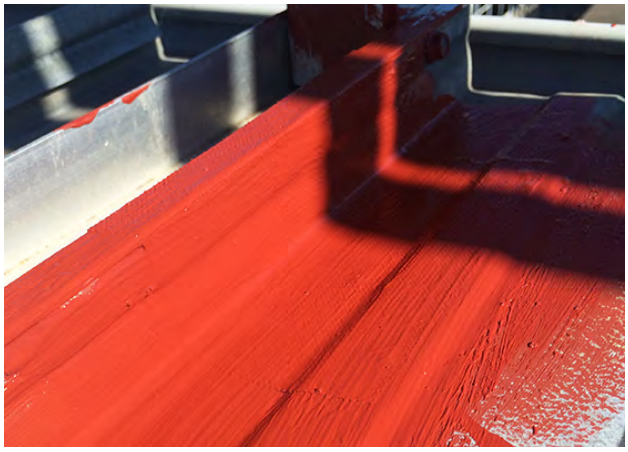
Original condition:

Step 1: Heavy coat of rust converter



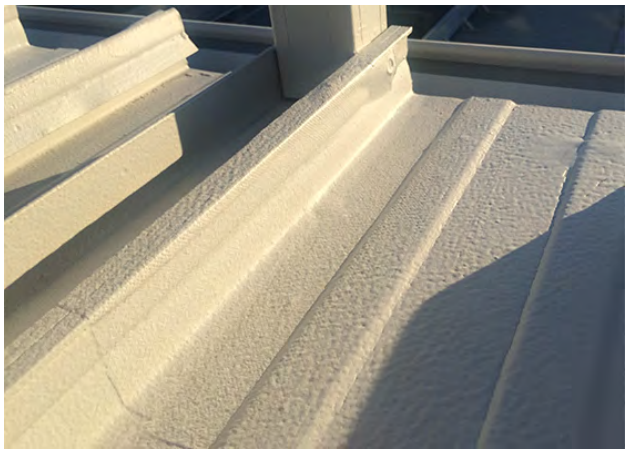
Step 2: Waterproofing bandage

Step 3: Sunk into rust inhibitor etch primer



Step 4: Sealed beneath TS coating [white]

Step 5: Sealed beneath TS coating [shale grey]



Coating Process:

Below photo shows 1st coating commencing in [white] Thermoshield.

You can notice sheets appearing significantly darker than normal – this is due to the misting on of the etch primer. In addition, you will notice many red spots. We applied this over non-paintable silicone in the hope we could get maximum adhesion for the product. We had requested a specific silicone be applied, but unfortunately the message didn't trickle down.

Below photo demonstrates the technique employed for coating the sheet profile.

Below left photo, the tip is angled back at an approximate 45 degree angle in order to coat the reverse sheet profile. Below right photo, shows the tip in the forward position for front side.

Backhand pass:

Forehand pass:

This method ensures complete coverage and the sheet troughs receive [almost] double coating.

Coating Process:

Below photos shows the 2nd coating being applied in [white] Thermoshield.

Just over half way, completing a backhand pass. White on white:

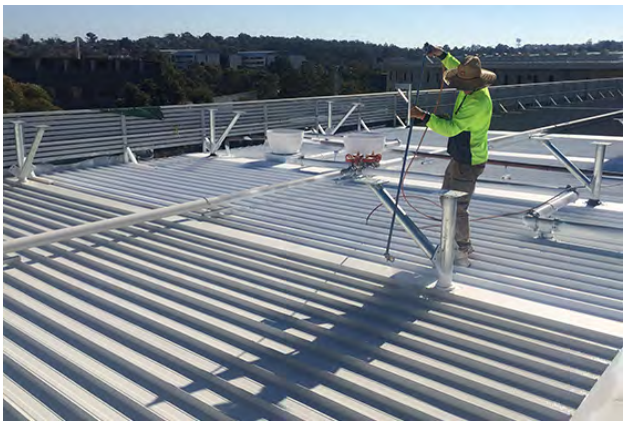
Backhand pass:

Forehand pass:

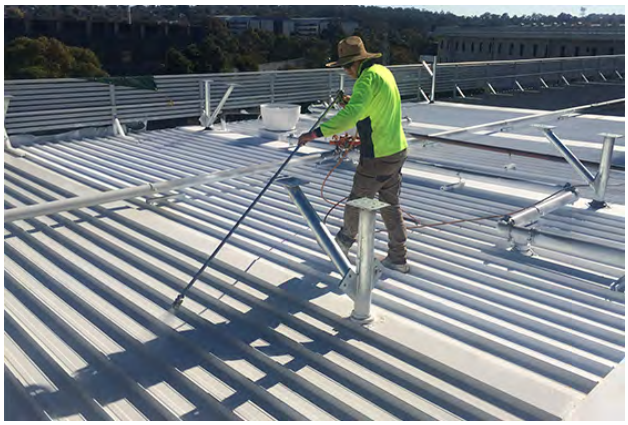
Coating Process:

With heavy rain forecast, final two coats in 'shale grey' were applied then covers were applied and left for 3 days to ensure the last coats had the ability to cure through. Below progress photo shows a clear differentiation between the white coats & 'shale grey':

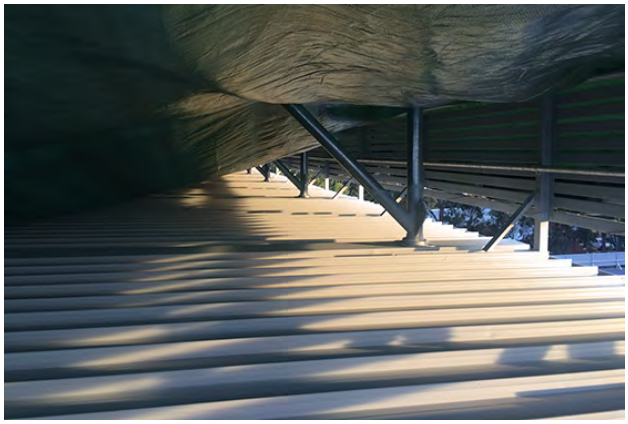
Backhand pass 'shale grey':



Forehand pass 'shale grey':



Returned in the evening to apply covers, to protect from the 2+ days of rain to follow




BEFORE
First coat commencing

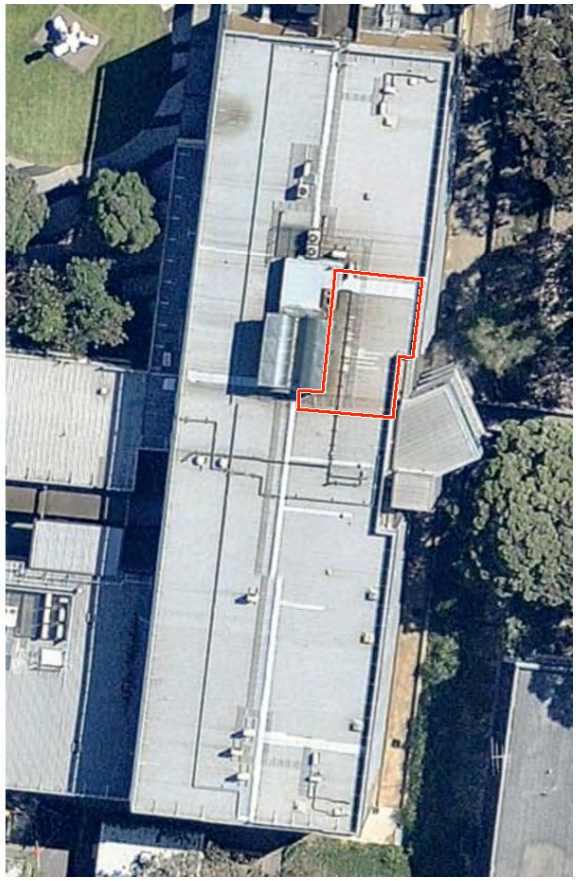

DURING
Thermoshield WHITE


DURING
Thermoshield SHALE GREY

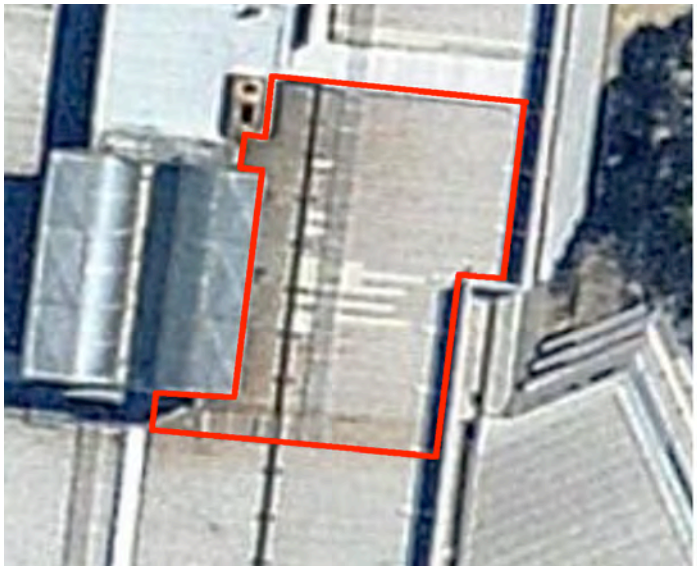

AFTER
Platform being installed

BUILDING B – Additional area

The below area despite small, widespread surface rusting had become highly visible & with the installation of a platform for HVAC equipment due to be located atop, the need to restore the area was crucial.



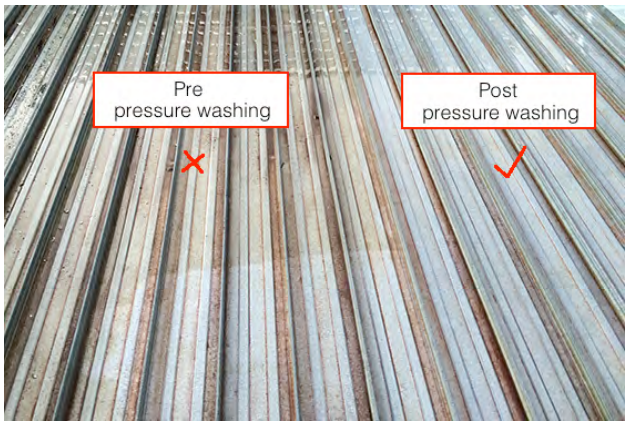
Closer up view of the area in question:



Before:

You can see rust bloom had become visually widespread.

The roof actually looked worse than it was due to staining, rather than full blown corrosion. Following power washing, the sheets revealed very mild surface rusting & in good condition.



If left untreated, I'd estimate the remaining lifespan could be as short as 5 years.

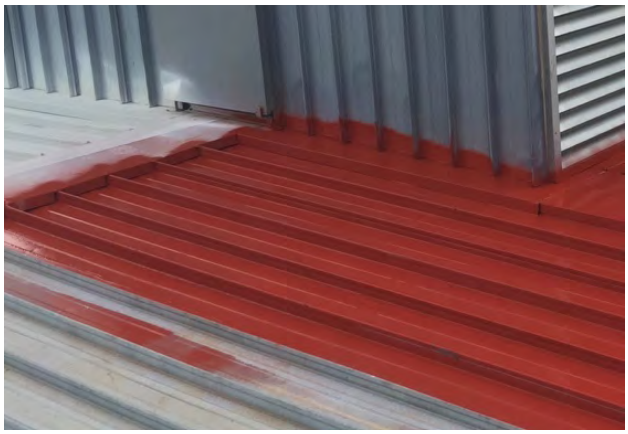
Replacing the roof underneath a platform filled with HVAC equipment would be a very difficult and costly exercise.

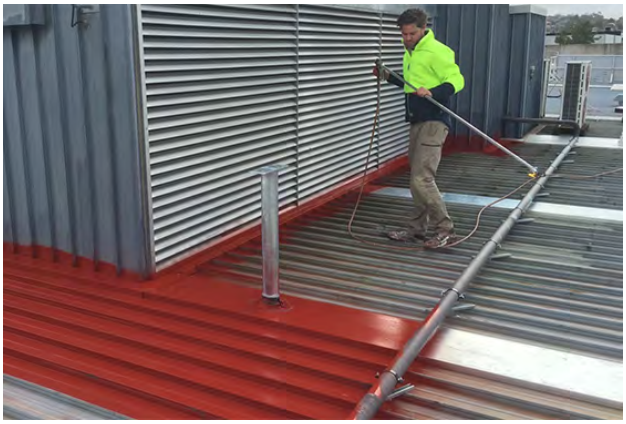
Rust conversion:

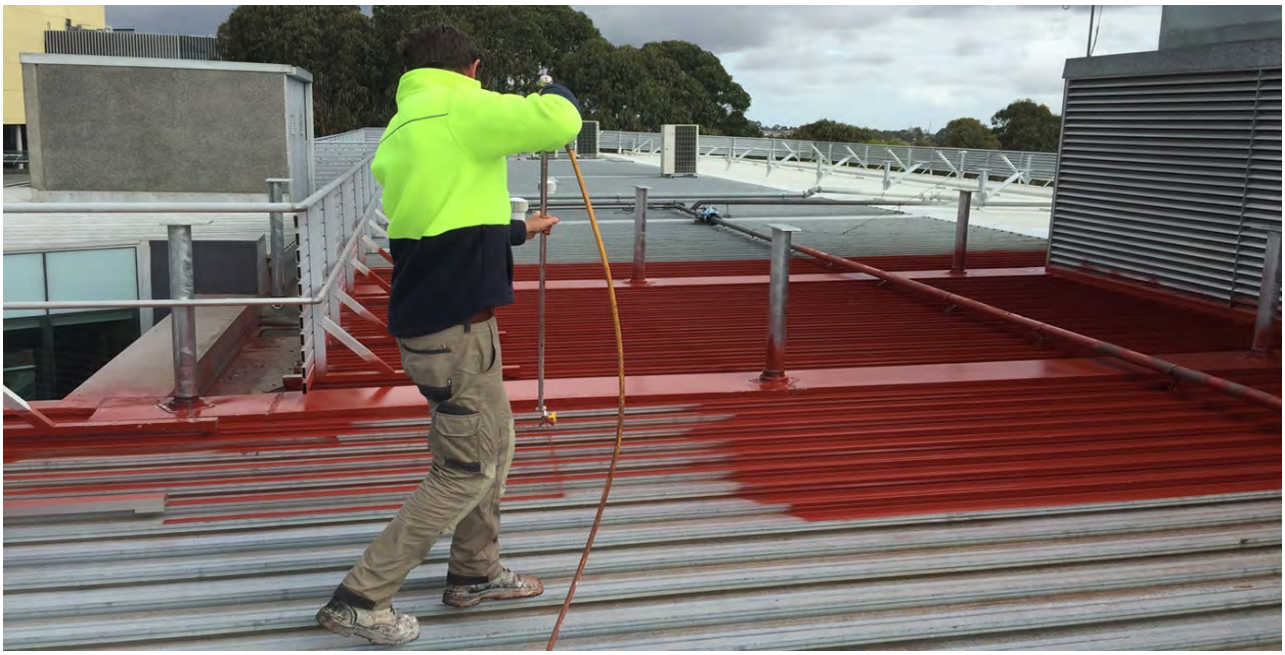
The vivid red of the rust conversion coating is quite self explanatory.
Below photos show rust conversion to the whole area followed by the commencement of the Thermoshield coats:

Original condition:

Rust converted:







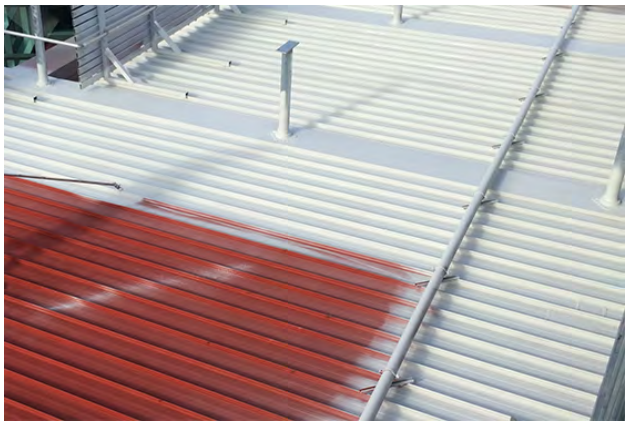
Thermoshield coating:

Following rust conversion, the Thermoshield ceramic coating provides a protective blanket eliminating external exposure to water, oxygen & chemical elements that cause corrosion.

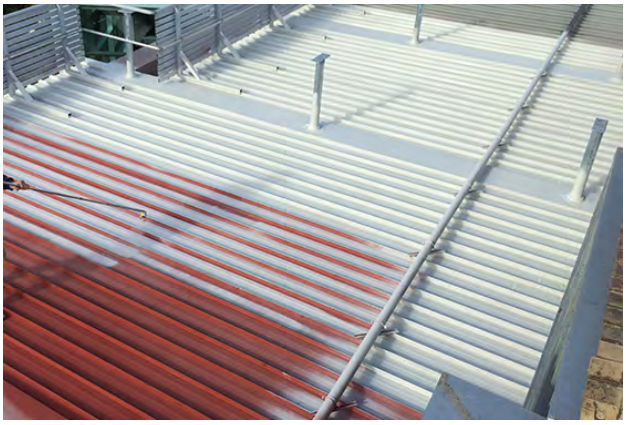
The vivid red acts as a great tool to ensure full coverage.

1st coat commencing:

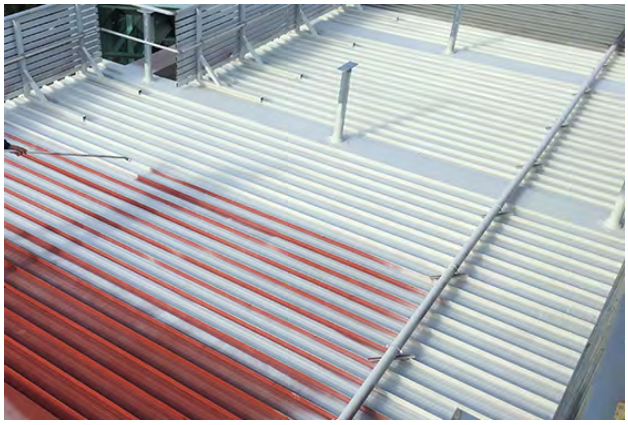
1st coat progress shot:



Backhand pass (reverse rib focus):

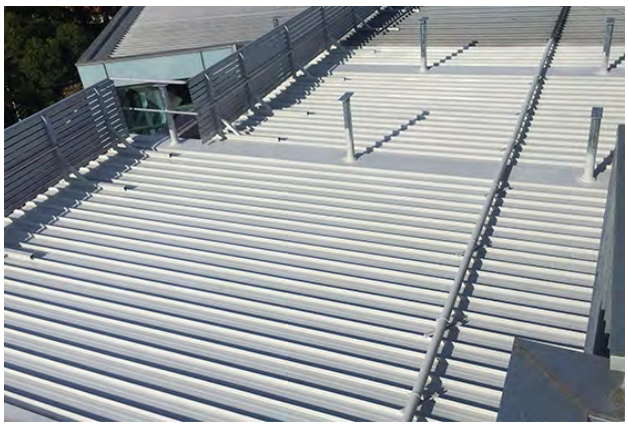


Forehand pass (front rib focus):



Nearing completion:

Completed coat (no signs of the vivid red):



Thermoshield coating completion:

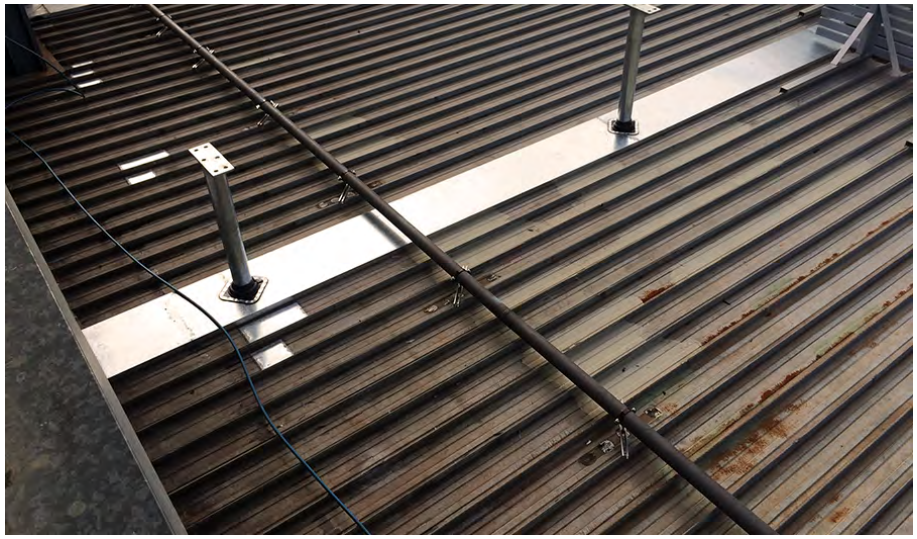
In total, following the rust conversion coating, 3 coats of Thermoshield were applied.

Below are photos of the final coat being applied:

Sheets appear ‘like new’:

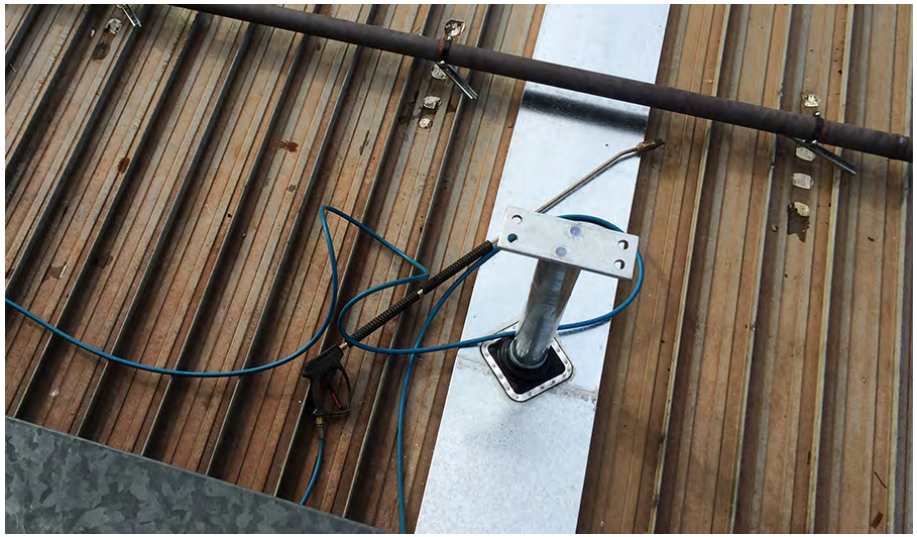
Even, thick coating applied:

* ‘Before’



* ‘After’ – completed coating system:

* ‘Before’



* ‘After’ – completed coating system:

* ‘Before’

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