CORROSION VS STRENGTH LOSS: AN UNDERRATED RISK
The Silent Dangers Of Corrosion

Did you know that even when structures are shielded from the rain, it is still vulnerable to corrosion? Areas that are not washed naturally by rain tend to accumulate more corrosive substances (i.e., salt) over time, leading to more localised corrosion especially under humid and salt-laden environments such as coastal regions.

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As surface red rust reaches 50%, a tensile strength loss of 5 – 10% is expected. Red rust beyond 50% would lead to an alarmingly high strength loss.

So the big question is; are you willing to risk a structure that is less than safe?

Note: 1. Adopted from BlueScope’s Literature.
2. The data analysis was based on the coated steel material itself. It does not represent any direct relationship to structural design strength loss.

Source: CPA-TRUSS-MUL-SST-750
Fighting Corrosion With The Right Steel

Shielded with anti-corrosion coating type and its technology

The choice of the alloy coating type and its technology is crucial to the lifespan of coated steel. Produced using BlueScope's proprietary metallic coating technology, TRUECORE® steel delivers superior corrosion resistance compared to other generic alternatives, thanks to its pioneering mix of aluminum/zinc coating. This is crucial in preserving the high yield strength of TRUECORE® steel which contributes to exceptional long-lastingness.

The images below showed different degrees of red rust after 750 hours of Salt Spray Test (SST).

<table>
<thead>
<tr>
<th>TRUECORE® Steel</th>
<th>Alternative Aluminium Zinc</th>
<th>Alternative Galvanised Steel (GI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Side</td>
<td>Top Side</td>
<td>Top Side</td>
</tr>
<tr>
<td>Bottom Side</td>
<td>Bottom Side</td>
<td>Bottom Side</td>
</tr>
</tbody>
</table>

Note: 1. SST is a type of accelerated corrosion test that produce a corrosion attack to coated steel via continuous salt spray test accordance to ASTM B117-18 test method. It does not have direct correlation with environments in which the product may be exposed in service or as indicating the relative corrosion resistance of different coatings.

Source: CPA-TRUSS-MUL-SST-750
Proven Performance Against The Test Of Time

A case study on TRUECORE® steel

A study was recently conducted in a local school on the performance of TRUECORE® steel after 10 years of use. With a proper, fully enclosed design and installation in accordance to BlueScope’s Technical Bulletin TB-34, the structure continued to exhibit excellent performance and showed no signs of corrosion. The findings on these actual applications demonstrated the assurance of quality performance in TRUECORE® steel.

Source: BlueScope Case Study (June 2019): TRUECORE® steel after 10 years.
For product identification and originality, please check the reverse side of the sheet for the following branding text.

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TRUECORE® (R) AZ150 G550 steel made by BlueScope hh:mm dd:mm:yy II
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