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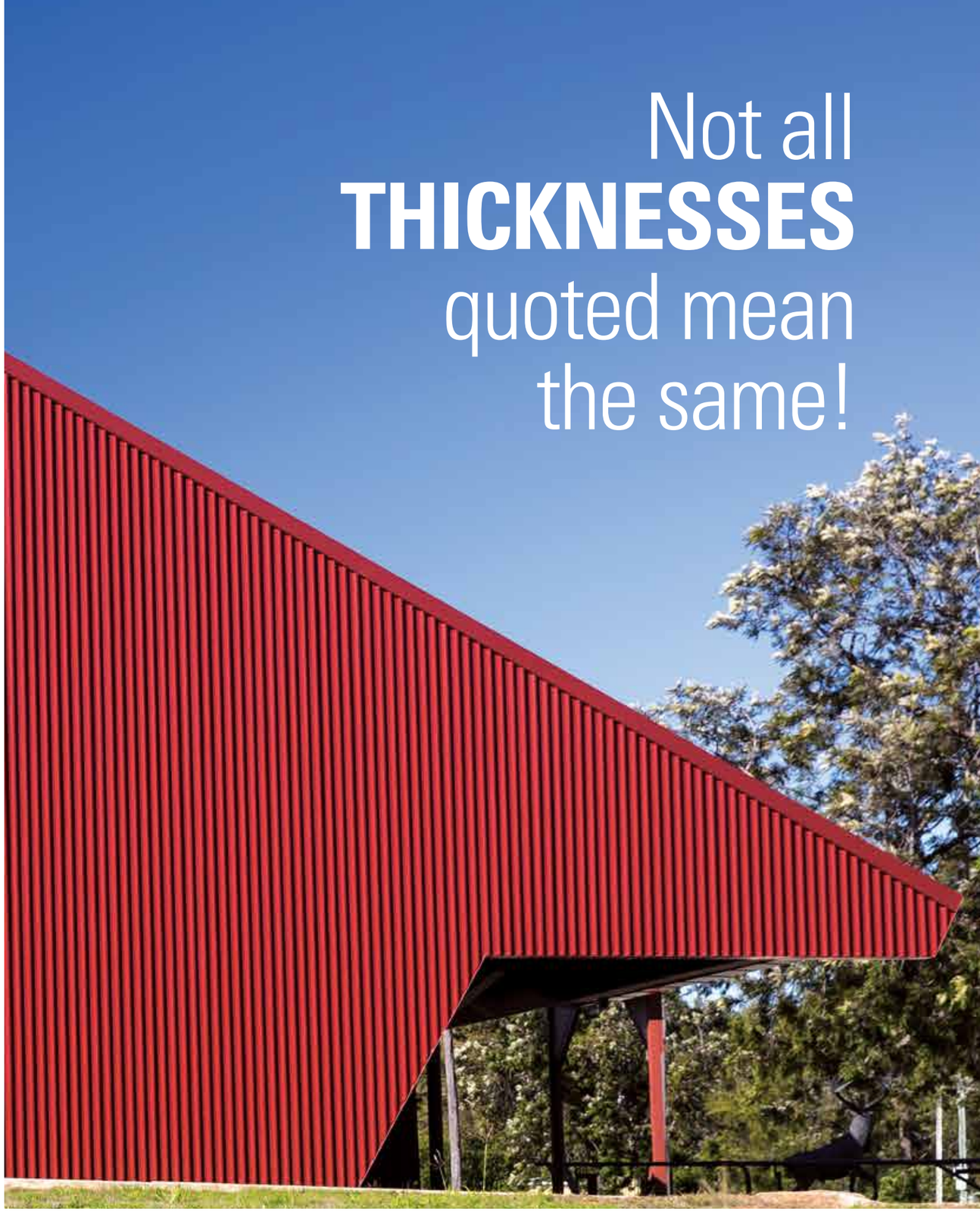
FA/0719/4S

Not all **THICKNESSES** quoted mean the same!



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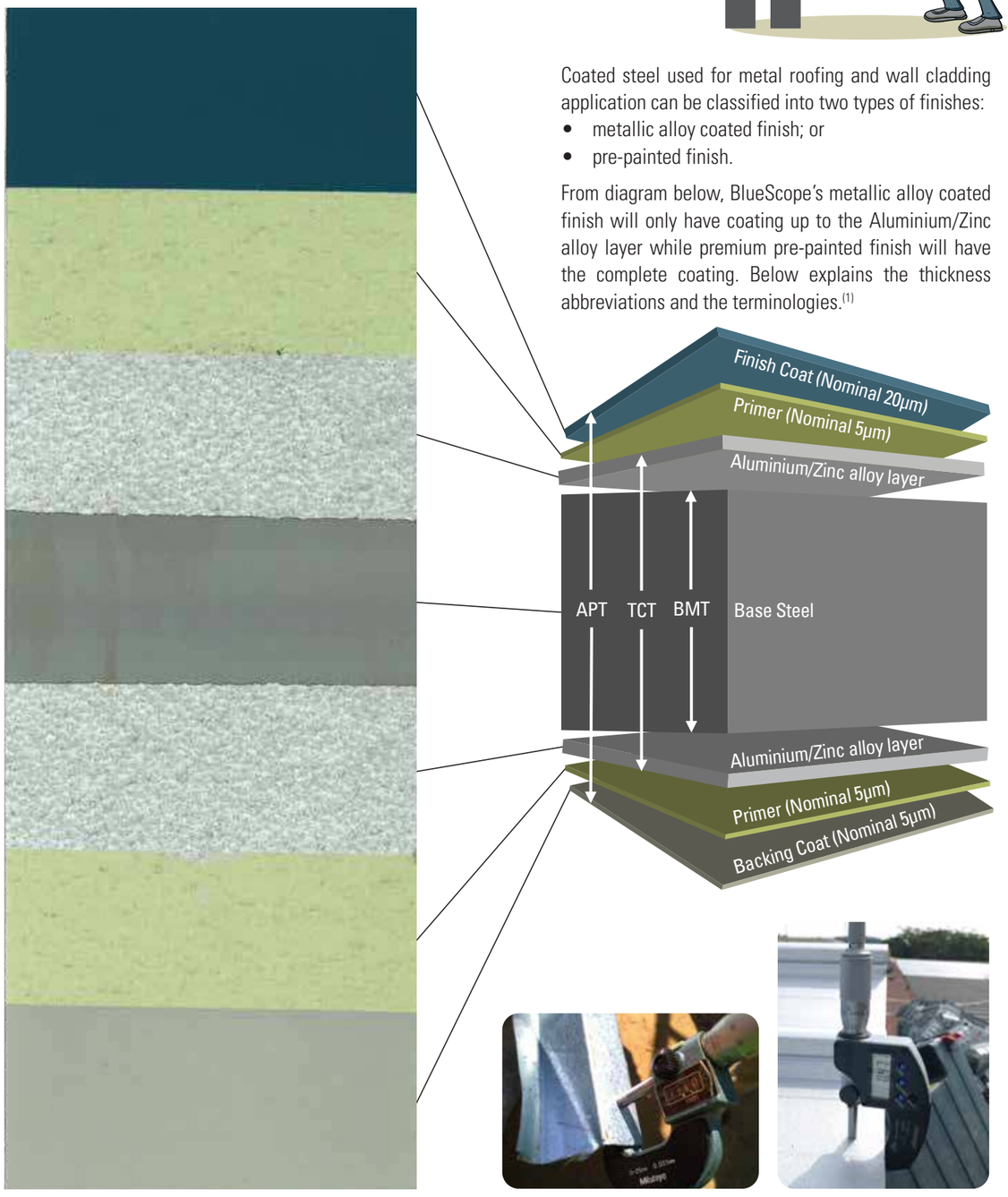
Does the thickness add up?



Cross sectional view of coated steel.[2]

Coated steel used for metal roofing and wall cladding application can be classified into two types of finishes:

- metallic alloy coated finish; or
- pre-painted finish.

From diagram below, BlueScope's metallic alloy coated finish will only have coating up to the Aluminium/Zinc alloy layer while premium pre-painted finish will have the complete coating. Below explains the thickness abbreviations and the terminologies.[1]

An example of how to conduct measurement on site.[3]

Notes:
1. BMT – Base Metal Thickness; TCT – Total Coated Thickness; APT – After Painted Thickness.
2. Sample is for illustration purpose only and the ratio of layers is not to scale and not proportional to actual product.
3. The finished product thickness, depending on the type of finishes, TCT or APT, can be measured on site using micrometer screw gauge. To determine thickness of individual layers, lab measurement is required.

Impact of Insufficient Base Metal Thickness (BMT)

The recommended minimum base metal thickness (steel) for roofing is 0.42mm as specified in JKR Standard Specifications for Building Works 2014 (Section G Roofing Works, Clause 6.1.2) and NCC 2015 Building Code of Australia – Volume Two (Figure 3.5.1.5).

Effects of Different Metallic Alloy Coating Thickness[4]

Z120

Z220

ZINCALUME® steel

Tests show higher metallic alloy coating thickness will have longer lifespan. Metallic alloy type is also a key factor, i.e. Type "AZ" coating has significantly longer lifespan than Type "Z" coating (GI).

Effects of Low and Inconsistent Paint Thickness

Poor control of paint thickness during coil painting process will result in paint peels off and inconsistent colour fading.

Summary of BlueScope Product Thicknesses[5]

Thicknesses in millimetres

Brand	COLORBOND® steel (AZ150)				COLORBOND® ULTRA steel (AZ200)				ZINCALUME® steel (AZ150)				TRUECORE® steel (AZ150)			
BMT	0.35	0.42	0.48	0.55	0.35	0.42	0.48	0.55	0.35	0.42	0.48	0.55	0.45	0.50	0.75	1.00
TCT[6]	0.40	0.47	0.53	0.60	0.41	0.48	0.54	0.61	0.40	0.47	0.53	0.60	0.50	0.55	0.80	1.05
APT	0.43	0.50	0.56	0.63	0.44	0.51	0.57	0.64	–	–	–	–	–	–	–	–

For your convenience, scan the QR codes for more information.

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Notes:
4. Samples went through 500 hours Salt Spray Test (SIRIM Test Reports References: 2007KL0045 and 2008KL1064).
5. Subjected to thickness tolerance in accordance to requirements of AS/NZS 1365 and AS/NZS 2728.
6. According to AS 1397 – Table C2, approximate coating thickness of AZ150 is 0.05mm; AZ200 is 0.06mm.