Cladding material for barns fights condensation damage

The technology has a layered synthetic non-woven fibre of "thermoplastic microspheres" adhered to the interior of the steel panel

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Exeter – The outward appearance of a steel cladding material developed in Holland looks similar to standard steel cladding but has a whole different dimension on the inside.

Condensation is a constant concern in the use of steel roofing because of the difference in exterior and interior temperatures – especially in livestock housing. This is overcome on standard steel roof structures by installing a felt or fleece insulating material under the steel.

CondenStop steel siding makes that extra step unnecessary through a layered synthetic non-woven fibre of "thermoplastic microspheres" adhered to the interior of the steel panel.

The fibre material is soaked while it is hot during the formation process and as it dries it expands to form the numerous microspheres with their moisture absorbing property. The fibre is delivered to the rolling mill for manufacturing roofing with a protective foil covering. It is then adhered to the interior side of the steel during the rolling process.

The microspheres create 60 square feet of surface area for every 1 square foot of sheeting material. This allows the fibre layer to absorb up to 1,500 gms of moisture per square metre.

CondenStop can then be applied directly to steel structures or wooden trussed rafters buildings without the need for an insulating material to prevent condensation, said Tony Lane, sales representative for Agway Metals in Exeter. This represents cost savings for both labor and equipment.

Agway Metals, also located in Brampton, is the Ontario distributor for CondenStop. The unique style of roofing has been sold in Holland and several other countries for the past 17 years by Lantor, the company developing the production process.

Compared to standard steel roofing/siding the CondenStop costs 35 cents more per square foot.

While the interior applied fibre creates a light grey color, the exterior can come in as many color options and lengths as standard steel, said Lane.

"It is easier to install on a roof on a windy day than trying to lay down blowing insulation at the same time," he added. It is fastened in exactly the same way as standard steel roofing and siding.

Agway Metals have distributed CondenStop for two years, applied on a wide variety of agriculture buildings. The roofing has been proven to be 20 to 60 percent more absorbent of moisture than felt or fleece materials.

Moisture absorbed by CondenStop is retained until it can be released to evaporate into ambient interior air through convection.