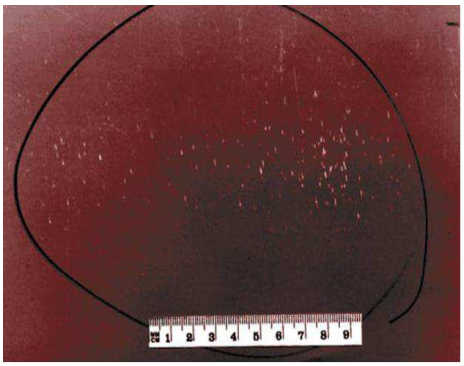
# FACT SHEET 1 – Scuffing & Galling

**FS1-Revision 1 : 30 March 2020**

The objective of this fact sheet is served as a reference of surface defects which could be generated during the handling of coated and painted steel coil, strip and roll-formed sheets.

# SCUFFING

## Description



*Scuffs* are small comet shaped gouges that can occur as an odd scuff or cluster of scuffs. A scuffed area is brighter than the surrounding surface and occurs on both surfaces. Scuffs can vary in severity and can affect a few metres or a number of tonnes mainly in the bore of coils.

## Causes of Scuffing

### A) Movement between wraps during coiling & uncoiling

–Wraps sliding instead of uncoiling caused by the loose wraps

Scuffing occurs when there is movement between wraps in a coil. This can occur during coiling or uncoiling operations. When an uncoiler generates loose outer wraps, this material tends to slide within inner wraps rather than uncoiling process.

– Severe speed changed (sudden acceleration or deceleration) during roll-forming process

When uncoiler experiences rapid speed change (acceleration or deceleration) this could cause wraps movement within the coil. Over time, this can generate scuffing defects and cause coils to sag or collapse.

### B) Mismatched roll speeds during processing

Scuffing can occur during processing where roll speeds are mismatched with the strip feed. In case of roll-formers where there are many rolls and strip can be contacting more than one point on a roll (different diameter = different speed) there is potential for roll speed to mismatch strip speed.

## Best Practices to reduce Scuffing issue

– To reduce inserting the coil too frequent into the recoiler/uncoiler
– Ensure there was no mismatched roll speed during the roll-forming process

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# GALLING

## Description

*Galling*, often referred to as “Road burn” in the transport industry is a roughened area on the strip or sheet surface that can vary in size, severity and extent. These roughened areas can be individual spots or patches of spots. In the worst-case galling can result in total removal of metallic coating and paint film in the galled area. Galling most often occurs during transportation


Galling on painted products

## Causes of Galling

### A) Coil movement during transport

Galling can occur if there is coil movement during transport. This is exacerbated if coils have been poorly chocked or cradled or placed on hard and uneven surface ( such as steel checker plate) resulting in pressure point.

### B) Poor coil handling

Bore horizontal coil that’s are frequently moved can result in galling, this is more likely to occur if coil storage is substandard such as if racks or chocks have pressure point, coils stacked or stored on uneven or poorly maintained floor.

### C) Poor loading practices

Sheets packs (flat sheets or roll-formed panels) with poor loading and transportation practice can also result in galling of sheets. If the sheets packs loaded on the truck was loaded with heavier item on top of the sheets, it will generate galling on the sheet pack due to pressure point.

Galling on coated products

## Best Practices to reduce galling issue

Good coil handling and storage practices kindly refer to the guidelines Storage and Handling BlueScope Product based on the following link:
http://www.bluescopesteel.com.au/files/dmfile/GuidelinesStorageAndHandlingBlueScopSteelProductsMarch2013.pdf

*Source reference: BlueScope Steel “ Steel Inspection Atlas”. Revision 2, August 2006 and BlueScope complaint investigation analysis power point presentation pack.*

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