

Coating and Corrosion Inspection

A protective coating and corrosion inspection of steelwork: structure, coating system and corrosivity category, each area or member with breakdown, corrosion, where it is, film thickness if measured, priority and photos.

1. Structure

Project

Client

Site *

Site address

Inspection date *

Time

Inspector *

Company

Structure or area (building, frame, bay) *

Structure location

Mark it at the structure, useful for tanks, gantries, bridges and yards. Tap Mark current location on site. It saves the coordinates, a grid reference and the accuracy.

Coating system (from the specification or records, if known)

Specified minimum dry film thickness (microns), if known

From the coating specification. The form compares readings with it and sets no figure of its own.

Date last coated or maintained, if known

Corrosivity category (ISO 12944-2), from the specification if known (choose one)

- ☐ C1 very low
- ☐ C2 low
- ☐ C3 medium
- ☐ C4 high
- ☐ C5 very high
- ☐ CX extreme
- ☐ Not known

Access (choose one)

- ☐ Full access
- ☐ Part access
- ☐ From the ground only

BS EN ISO 12944-2:2017 classifies the corrosivity of environments from C1 to CX. Its examples run from heated buildings with clean atmospheres, such as offices and schools (C1), through unheated buildings where condensation can occur, such as depots and sports halls (C2), to industrial and coastal areas with high humidity or salinity (C5). Grade coating breakdown (rusting, blistering, cracking, flaking) to the ISO 4628 series, and measure dry film thickness on steel to ISO 19840. Corrosion needs moisture and oxygen together.

This form is for protective coatings on steelwork. For the look of decorative paint finishes, use a paint finish inspection instead.

Weather capture

Digital form: use Record current conditions. On paper, record date/time, temperature (°C), wind (mph and direction), conditions and source. Keep observed conditions separate from forecast estimates.

2. Areas and members

Areas (copy this block for each one)

Gridline, bay or member mark *

Member (choose one)

- ☐ Column
- ☐ Beam
- ☐ Bracing
- ☐ Connection
- ☐ Base plate
- ☐ Purlin or rail
- ☐ Handrail or balustrade
- ☐ Other

Coating and corrosion seen (tick all that apply)

- ☐ Blistering
- ☐ Flaking or peeling
- ☐ Cracking
- ☐ Chalking
- ☐ Rust spots
- ☐ Rust staining
- ☐ Pitting or loss of steel
- ☐ Mechanical damage
- ☐ None seen

Extent (if applicable; choose one)

- ☐ Isolated spots ☐ Local area ☐ Widespread

Where on the member (if applicable; tick all that apply)

- ☐ Flat surfaces
- ☐ Edges and corners
- ☐ Welds
- ☐ Bolts and connections
- ☐ Crevices or lap joints
- ☐ Base or ground contact
- ☐ Water or dirt trap

Length of the affected patch (m) (if applicable)

Measure from a square-on photo with a rule taped to the member, or the member's known flange width, as the reference, or use a tape. Measuring from a photo gives an estimate.

Width of the affected patch (m) (if applicable)

Affected area (m²) (if applicable; worked out automatically in the app)

Dry film thickness reading (microns), if measured

Against the specification (if applicable; worked out automatically in the app)

Below specification (1 = yes) (worked out automatically in the app)

Visible loss of steel section?

- ☐ Yes ☐ No

If applicable: Visible loss of steel section. Refer it to a structural engineer before the coating is repaired.

Priority * (choose one)

- ☐ No action ☐ Monitor ☐ Coating repair ☐ Refer to a structural engineer

Photos (with the member mark in view) (photos: attach, or note the file names)

Areas or members inspected (worked out automatically in the app)

Coating repair (worked out automatically in the app)

Monitor (worked out automatically in the app)

Readings below the specified thickness (if applicable; worked out automatically in the app)

Total affected area measured (m²) (worked out automatically in the app)

Areas with visible loss of section (worked out automatically in the app)

Areas referred to an engineer (worked out automatically in the app)

Structures with many small components and fasteners are harder to protect than large flat surfaces (BS EN ISO 12944-3 covers design for corrosion protection). Crevices hold water and lead to crevice corrosion, and water and dirt traps accelerate corrosion. Look closely at connections, edges, crevices and bases.

Areas not seen and why (height, cladding, stored goods)

Walk Cam: coating and corrosion inspection

Walk Cam video walk-through: available in the SiteSurvey app only.

3. Actions and sign-off

Record every aspect of the inspection and any problems found, with the grading standard used (ISO 4628 for breakdown, ISO 19840 for dry film thickness). The Institute of Corrosion runs a certification scheme for painting and coating inspectors in the UK.

Are further actions needed?

☐ Yes ☐ No

Further actions (copy this block for each one; if applicable)

What needs doing? *

Priority (choose one)

☐ Urgent ☐ High ☐ Medium ☐ Low

Who will do it?

Due date

Status (choose one)

☐ Open ☐ In progress ☐ Completed

Inspector name *

Position or company

Inspector signature

Next inspection due

Set by the coating specification, the maintenance plan or the duty holder.

Days to next inspection (if applicable; worked out automatically in the app)

If applicable: The next due date is before the date of this record. Check the date entered.

Signing records what was found on the day. It does not make unsafe equipment safe or replace a thorough examination, design check or service by a competent person.