

NWI Fabrication

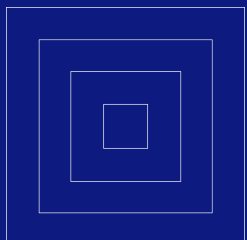
Weighbridge Construction Quality Documentation.



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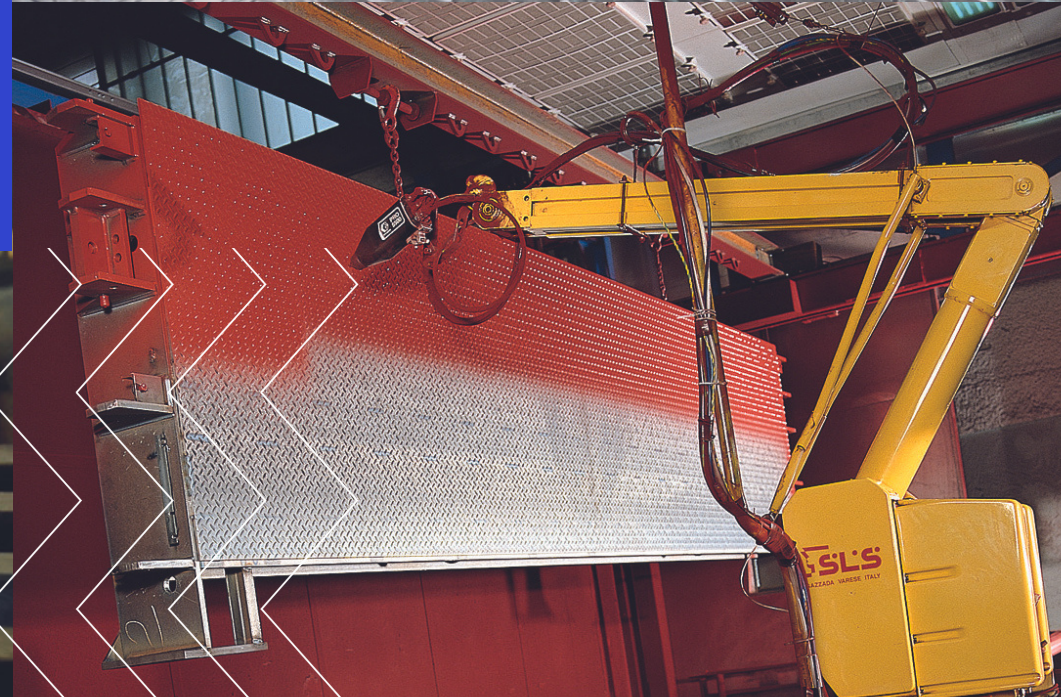
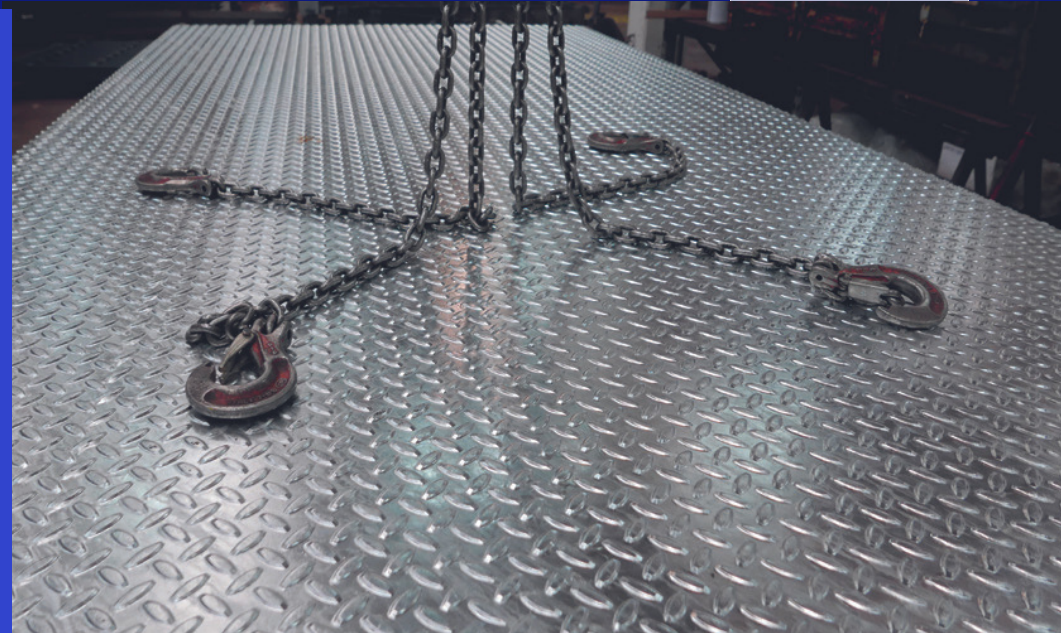


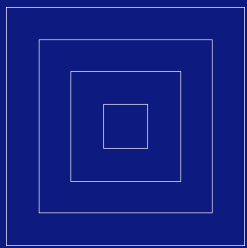
10. Centurion & Titan Weighbridge Construction Standards

Quality Standards

NWI Group is accredited with the following:

- ISO 17025 - NWI Group provide laboratory and onsite calibration services across a wide range of industries. ISO 1702 is an internationally recognized accreditation which sets out the requirements for the competence of testing and inspection laboratories, thereby allowing companies to identify reliable service providers. It requires documented quality management system. By commissioning a weighbridge from an ISO 17025 accredited provider, you can be sure in the knowledge that you will be receiving a high standard of after-sales service and support.
- ISO 9001 - NWI Group's supply chain is ISO 9001 accredited. This standard is used by organizations to demonstrate their ability to consistently provide products and services that meet customer and regulatory requirements and to demonstrate continuous improvement.





Surface Preparation

Inadequate surface preparation is often the leading cause of early problems with weighbridge constructions. When a surface has contaminants coating it, the service life of the coating may be compromised.

Cleanliness of the substrate is an essential and integral component of the coating system. Types of surface contaminants include: rust, mill scale, grease and oil, dirt and dust, soluble salts, water, chalk, deteriorated coatings, compressed air contaminants, etc.

SPC-SP10/NACE 2, Near-White Metal Blast Cleaning

NWI's weighbridges use a surface preparation standard which employs abrasive blasting to remove all grease, oil, dirt, dust, mill scale, rust, coatings, oxide, corrosion byproducts and other foreign matter that are visible without magnification, except for random staining.

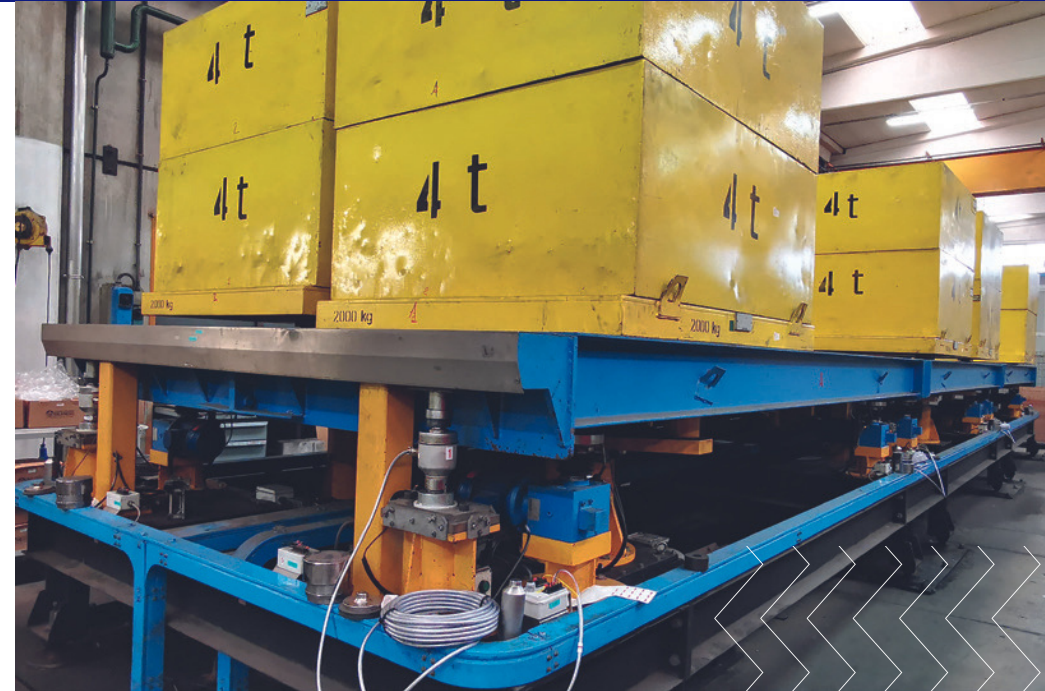
NWI ensure that at least 95% of each 9-inch square area shall be free of all visible residues.

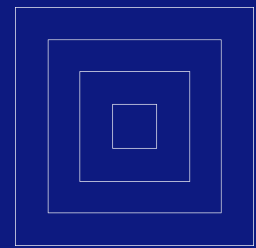
Photographic Inspection Standards:



The ISO, SSPC and NACE/SSPC visual reference photographs are supplemental aids for evaluating cleanliness, however they are not intended as a substitute for surface cleanliness requirements defined in the surface preparation standard used.

We inspect the surface before our surface preparation standard is used. The reason for inspecting the surface before using the surface preparation method is that different degradations on the same steel surface will have different appearances after using the same surface preparation method: i.e. heavy mill scale vs light and heavily rusted areas.

The ISO 8501-1 is one of the main standards that cover blast cleaning, and it covers surface preparation, hand flame and acid cleaning.





Cleaning standard	Initial steel condition (see also table 1).			
	A	B	C	D
St2 – Hand tool cleaning	Not applicable			
St3 - Power tool cleaning	Not applicable			
Sa1 - Brush-off blast	Not applicable			
Sa2 - Commercial blast	Not applicable			
Sa2.5 - Near white metal				
Sa3 - White metal				

Surface Standard Photographs

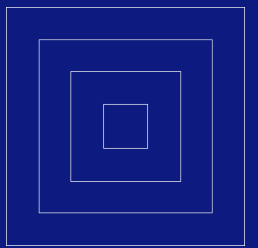
NWI Group's standards are SA2.5 and SA3.0 (SA3.0 needs to be specially ordered). On the right are images of surfaces displaying four grades (A,B,C,D) of steel rusting/corrosion. These images are graded by what level of steel surface preparation is required prior to protective painting.

These grades are presented as a series of pictorial examples, which provide a clearer idea of the rust grades. The rust grades are shown in images A, B, C, and D and various areas of the surface to be cleaned may match one or more of the initial condition photographs.

The initial surfaces preparation normally complies with rust grades A or B according to BS EN ISO 8501-1.

The rust grades seen in images C or D should not be used as this level of corrosion is extremely difficult to clean during surface preparation.

Pictorial examples of surface preparation according to ISO 8501-1

**Painting Application/Corrosion Protection:**

Our surfaces are coated using a pressurized pump. This pump operates by increasing the compressed air inlet pressure by a stated ration (35:1) using two pistons on a common shaft.

Paints are applied to steel surfaces using many methods, but in all cases a wet film is created on the surface. The thickness of the wet film will be measured before the solvent evaporates using a comb-gauge. As the solvent evaporates a film formation occurs, leaving the binder and the pigments on the surface as a dry film. This dry film thickness will be measured with a digital electro-magnetic induction gauge.

The volume of solids in the paint defines the final 'dry film' thickness. A thicker dry film thickness equals a higher corrosive protection.

For extra protection against corrosion, NWI Group also supply Hot Dip Galvanized finishes as one of our options. Our hot dip galvanized standard conforms to the AS4680 Standard.

Quality Standards of Dry Film Thickness (DFT)

At NWI Group, we take pride in the fact that our weighbridge top plate is thicker than most other weighbridge providers, as standard. This extra density increases the longevity of the weighbridge and ensures that the weighbridge will not warp under heavy loads.

1. The DFT of the fabricated weighbridge top-plate is 180-200 μ m.
2. The DFT of two sides of fabricated U-beams and side plates are 150cm - 200 μ m.
3. The DFT of other parts of the weighbridge should be 130cm - μ m.

80% of measure points should reach the DFT standard, and the DFT of the remaining 20% measure points should reach 80% of the standard thickness.





NWI
GROUP

**Weighing
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