

NACE International; Formerly the National Association of Corrosion Engineers, NACE International represents members from 92 countries and is the largest organization in the world dedicated to the study of corrosion. NACE works to protect people, infrastructure, the environment, and the economy from the effects of corrosion by promoting engineering and research. Approximately 100 standards cover subjects such as laboratory corrosion testing, corrosion prevention and blast cleaning.

Surface Preparation

A Visual Explanation of the Surface Preparation Standard NACE 5/SSPC 12 1995.

"Surface preparation and cleaning of steel and other hard surfaces by High and Ultra high Pressure Water Jetting prior to recoating." The following images are linked to show the surface prior to preparation and then in stages to the best possible standard with water jetting.

There are four visual surface preparation definitions, these are:-

WJ-4



The surface shall have all loose rust, loose mill scale and loose coating uniformly removed.

WJ-3



The surface shall be cleaned to a matte finish with at least two-thirds of the surface free of all visible residues (except mill scale) and the remaining one-third containing randomly dispersed stains of previously existing rust, coatings and foreign matter.

WJ-2



The surface shall be cleaned to a matte finish with at least 95% of the surface area free of all previous visible residues and the remaining 5% containing only randomly dispersed stains of rust, coatings and foreign matter.

WJ-1



The surface shall be free from all previously visible rust, coatings, mill scale and foreign matter and have a matte metal finish.

Practical Example



Old Coating - Initial Condition

Old Coating - Initial Condition

Description:

A multilayer system with undercoat flaking and slight rust.

Requirement:

To prepare the surface for recoating by the use of high or ultrahigh pressure water jetting without the use of abrasive to various WJ Standards: 1-4.

Standards: 1-4.



WJ 4

Standard: WJ 4

Description:

The surface shall have all loose rust, loose mill scale and loose coating uniformly removed.

Approximate requirements to achieve this standard:

500 - 800 bar @ 16 - 40 Litres/min.

Approximate work rates:

7 - 15 square metres per hour.



WJ 3

Standard: WJ 3

Description:

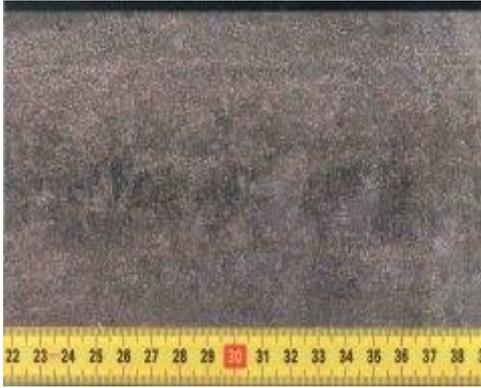
The surface shall be cleaned to a matte finish with at least 67% of the surface free of all visible residues (except mill scale) and the remaining 33% containing randomly dispersed stains of previously existing rust, coatings and foreign matter.

Approximate requirements to achieve this standard:

850 - 1000 bar @ 35 - 50 Litres/min.

Approximate work rates:

8 - 12 square metres per hour.



WJ 2

Standard: WJ 2

Description:

The surface shall be cleaned to a matte finish with at least 95% of the surface area free of all previous visible residues and the remaining 5% containing only randomly dispersed stains of rust, coatings and foreign matter.

Approximate requirements to achieve this standard:

1400 - 2000 bar @ 15 - 25 Litres/min.

Approximate work rates:

8 - 12 square metres per hour.



WJ 1

Standard: WJ 1

Description:

The surface shall be free from all previously visible rust, coatings, mill scale and foreign matter and have a matte metal finish.

Approximate requirements to achieve this standard:

2000 - 2500 bar @ 15 - 25 Litres/min.

Approximate work rates:

6 - 10 square metres per hour.