

POLYFLEX 201

Using Polyurea for Immersion Services
The St. Lawrence Seaway Management Corporation.

January 2017

For the past decade, the immersion system of choice at the locks of the St Lawrence Seaway in Ontario has been plural applied rapid set polyurethane/Polyurea type coatings. The single greatest (and most critical) difficulty has been the inability to stripe coat the work well due to the rapid gel time of the products (typically seconds to a few minutes maximum) and the short recoat window of the coating themselves....making good intercoat adhesion very difficult to obtain thereby compromising the integrity of the coating



Polyval solved this critical problem by introducing their Polyflex 53 (slow set brush grade for striping) followed by the plural applied Polyflex 201 Polyurea for the main high build application.

Now the painters had sufficient time to properly stripe the steel first (as per SSPC Good Painting Practices and Standard Protective Coating Procedures.)

Furthermore though the high build Polyflex 201 has a typically 3–4 hours user unfriendly recoat window it has a unique “activator” solvent.... that is simply wiped on the surface if the window is exceeded to “activate” it and recoat or touch ups can proceed with good confidence.

The recommended DFT of 50 mils minimum was easily achieved and with a 3 to 5 second gel time the contractor’s QC department could monitor the coating thickness immediately and any light areas be forthwith addressed.

The ability to properly stripe the steel, instantly monitor and correct any deficiencies, along with the ability to confidently perform any repairs, touch ups or pin-hole remediation well at any point after the recoat window resulted in higher quality of workmanship and time/material savings for the contractor.



“In 30 years I have never seen a plural application on complex steel performed so consistently with such minimal remediation. This Polyflex system solves the two greatest problems of plural high builds....effective striping is now possible and the dreaded recoat window is not an issue.”

Julian Hay, NACE CIP level 3.

Testing & Approvals:

Passed Electrochemical Impedance Spectroscopy (EIS) testing

Canadian Food Inspection Agency - CFIA Approved

Dielectric strength: ASTM D-149-97a @ 19.3 KV/mm (490 V/mil)

