

# Product Case History



## From Concept to Completion - Rotating Drums

### PRODUCT(S) USED:

Exterior Coating 1: Plasite Plasguard 7156 HAR

### AREA COATED:

Four design engineers representing the Owner, Design / Fabricator and Process Design Engineering firms were discussing the day's work over dinner. One major portion of their design was unresolved. The four reviewed their objectives and possible solutions to their design. Agreeing on one idea, they focused on this concept and scratched out some thoughts and preliminary details on a table napkin.

The "napkin" concept was then developed until it became a full design project that fit all the requirements of their process. The design was taken by the Design / Fabricator to detail how they would build a rotating drum approximately 16 ft. diameter by 40 ft., long plus a cone end. The drum would have to take all the forces and allow it to rotate when it had some 15,000 3-inch diameter holes in the circumference.

### LOCATION:

ALBERTA

### DATE OF APPLICATION:

FALL 2001

### MARKET:

OIL & GAS

### SUBSTRATE:

STEEL

### SURFACE PREP:

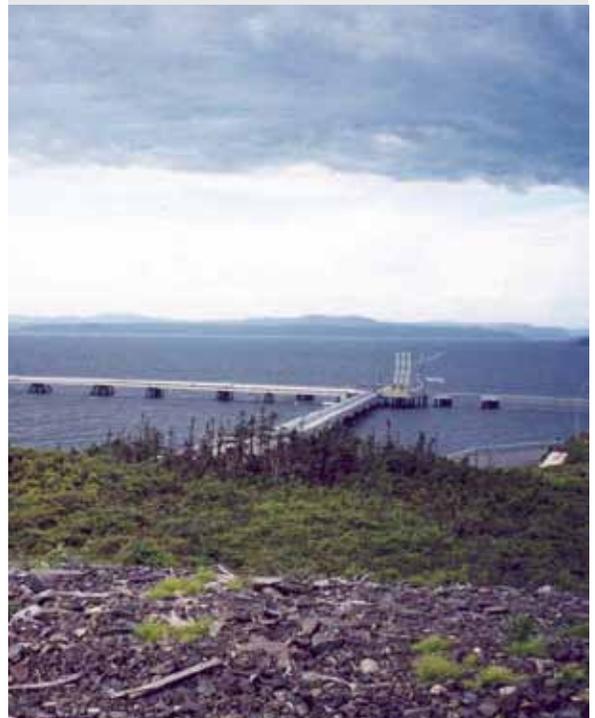
CLEAN & DRY

### EXPOSURE:

FREQ. WET W/FRESH WATER;  
CONDENSATE, SPLASH OR SPRAY

### SURFACE PREP:

SSPC SP-5 MIL PROFILE



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## COATING SELECTION EXPLANATION:

The Design / Fabricator had to resolve a corrosion question and called on StonCor Coatings Specialist, Terry Carr, to answer the call. After much review as to the chemical and physical environment with the Engineers and Plasite Technical service, a recommendation was provided. It was recommended to apply Plasite Plasguard 7156 HAR abrasion resistant epoxy phenolic coating to a 10-12 mil total dry film thickness.

The fabricator's applicator was brought in to provide costing and timelines to coat the structures. Coatings Specialist Ian Hogg met with the applicator to review the project. They then met with the Owner, Designer / Fabricator, and Process Design Engineer to finalize the application process. The applicator faced the problem of applying the coating at a consistent millage to the interior and exterior of the drums as well as the inside of the 3-inch diameter holes in the 2-inch thick plate walls. The engineers added an additional 1,000 holes per drum. Due to the configuration of the structure it was felt that there would have to be a compromise on the DFTs.

The applicator chose to apply the Plasguard 7156 HAR in three coats, which would allow him to adjust his application technique to provide consistent mil readings. Due to the size of the drums, it was decided to build scaffolding around the drum and totally horde the outside. This allowed the applicator to provide heat inside and maintain a consistent temperature. The applicator then force-cured the coating on completion.

The most skilled manpower was used and the applicator exceeded his expectations on his efficiencies for time, material and final results. The quality was excellent and on each of the three drums, the results were even improved. The applicator was highly commended for their work.

The three drums were loaded and transported to site some 500 km's north of Edmonton and installed with very little handling damage. The Owner, Designer/ Fabricator, and Process Design Engineer were all extremely pleased and are waiting for the plant start up to see how their "napkin" design will run.