GRADY-WHITE ENGINEERING TEST REPORT

Acrylico Windshield and Wiper Evaluation

Date: 2/7/11
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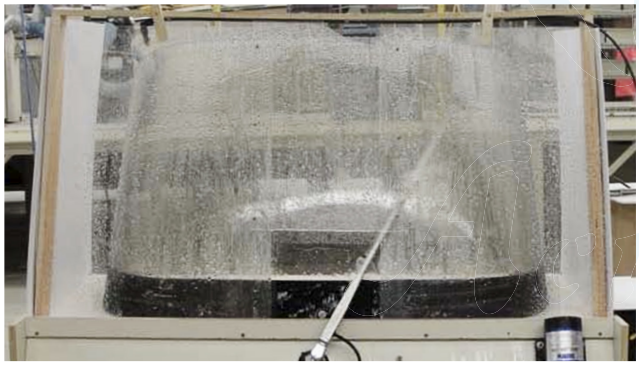
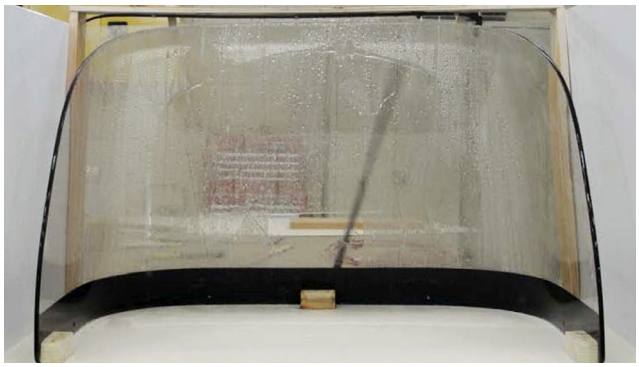
The purpose of this test was to determine if the Acrylico Coated windshield could withstand the use of a wiper without distorting, hazing, or scratching.

The components used for the test were a standard coated 230 Console Windshield, GW#10-1179, and a Marinco Premier Wiper Arm and Blade.

A platform was built to mount the windshield. Above the windshield a 1/4" tube with a series of small holes was placed to irrigate the windshield via a low volume diaphragm pump. This provided a constant spray of water onto the windshield when desired. A wiper motor was mounted below the windshield, at a similar height and angle as for wiper motors on production boats. Therefore, the pressure of the wiper arm against the windshield would have been comparable to current technical configurations.





The standard procedure for the test was to run the wiper with saltwater during normal working hours of approximately 8 hours each day. Frequently during the day the windshield was visually monitored and inspected for any changes.

Overnight the windshield was left to dry in such a manner a salt coating would crystallize over its surface. The windshield was not cleaned in between testing intervals, except when required to perform thorough evaluations; approximately every 20 hours. The endurance test was performed over a period of 100 hours, estimated at 330,000 wiper cycles.

At one point, the wiper was run dry with absence of water, and with the crystallized salt coating not removed from the windshield; this test lasted 30 minutes.

At the end of the standard test, the windshield was cleaned using a variety of solvents which are generally regarded as inappropriate for use on acrylic: These included Windex, Ammonia, and Acetone.

Up to this point, the tests carried out could be considered representative of field conditions.

In a bid to test the windshield far beyond normal conditions, in the final experiment it was subjected to extreme aggressive misapplication, in rigors which fall well outside of normal wear and tear. So for this phase, two wads of steel wool (#00 & #0000) were placed under the wiper blade: one on the top and the other at the base of the blade. The wiper was then run continuously for a period of one hour.

At the end of all tests, the windshield was completely free from any visible damage; a testament to AcryliCo's outstanding manufacturing standards and excellent hard coating finish.