

REPORT OF AQUA X WATER TEST

PROJECT:

HDPE MANHOLE ADJUSTMENT RING WATER CHAMBER TESTING AET LABORATORY ST. PAUL, MINNESOTA

REPORTED TO:

LADTECH, INC. 6704 MEADOWLARK COURT LINO LAKES, MN 55038

ATTN: MARTY PITZEN

AET PROJECT NO: 05-06572

DATE: SEPTEMBER 22, 2015 **UPDATED:** OCTOBER 15, 2015

INTRODUCTION

American Engineering Testing (AET) has completed the water sealant testing of the Aqua X foam adhesive. The objective of the testing was to confirm that Aqua X would provide a water tight seal.

CONCLUSIONS

AET has confirmed that the Aqua X will provide a water tight seal based on the results of our testing.

TEST PROCEDURES

Prior to the application of sealants the concrete floor was brushed clean and the manhole rings and concrete manhole cover were wiped clean with a dry rag before applying the Aqua X foam sealant. This process was repeated for each manhole ring layer until the height of the stacked manhole rings was about 6 inches. The sandwiched manhole rings were allowed to cure for about 1 to 1-1/2 hours before water was poured into the center of the rings. The water was poured to a depth of about 5 to 6 inches and was left in place for at least 2 hours to determine if any leaks were present.

RESULTS

We performed a single test of the Aqua X sealant on September 21, 2015 and determined that the Aqua X foam sealant was water tight since no water leaks were observed around the outside edges of the rings while water was present in the center of the sandwiched manhole rings.

Another test was conducted on October 13, 2015. The foam was allowed to cure for 30 minutes before adding water to the center of the manhole rings. This test was left in place for at least 20

hours before removing the water. No leaks were detected after 20 hours. The concrete surface around the exterior side of the manhole rings did not show any moisture.

LIMITATIONS

Our authorized work scope was limited to our observations in the requested areas only. As such, our conclusions and recommendations pertain only to those areas observed. Should conditions differing from those documented by AET at the time our work be found in the future, AET reserves the right to review our conclusions and recommendations and modify them accordingly.

STANDARD OF CARE

The work performed by American Engineering Testing, Inc., has been conducted in a manner consistent with that level of skill and care ordinarily exercised by other members of the profession currently practicing in this area.

REMARKS

It has been a pleasure to have been of service to you on this project. Should you have any questions or concerns regarding this report please contact us.

Report Prepared By: American Engineering Testing, Inc.

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