

# Extracts from the H R Wallingford Test Report for Floodgate Limited For gates to a length of 955mm (in unexpanded state)

## Summary

### CERTIFICATION OF FLOOD PROTECTION PRODUCTS

Prepared for BSI (SM04444722)

May 2003

The following test report gives the results of the tests on Floodgate flood protection system in accordance with amended BSI PAS 1188-1 (April 2003). This test report has been prepared for BSI. Floodgate flood protection system is produced by Floodgate Limited, 49/51 Lamma Street, Carmarthen, Wales SA31 3AL.

This test report contains:

**Test 1 : Static water test results** for the specimen of the product.

**Test 2 : Wave test results** for the specimen of the product.

**Test 3 : Current test results** for the specimen of the product.

### TEST 1 : STATIC WATER LEAKAGE TEST

#### Test 1

#### Intermediate depth tests

The manufacturer specified a maximum test depth of 600mm above the laboratory floor. Measurements for leakage rate were recorded at two-thirds maximum test depth only.

The door gate was successful at meeting the specification leakage standard for the two-thirds maximum depth test. Observations made over the hour of the test indicated that there was very little leakage through the door gate. The recorded leakage rate for the door was measured as 0.21 l/hr/m.

#### Static water test 1

For the static water test at full depth the door gate was successful at meeting the specification leakage standard over the first and the last hours of the 48 hour test period.

A leakage rate of 0.88 l/hr/m was recorded during the first hour of the test period. This rate decreased to 0.37 l/hr/m, recorded over the last hour, i.e. less than half the leakage of the initial rate.

#### Test 2

#### Intermediate depth tests

After removal and reinstallation, the door gate was successful at meeting the specified leakage standard at two-thirds maximum test depth. The leakage rate recorded over the hour test was 0.10 l/hr/m, less than half of the value recorded for test 1.

#### Static water test 2

For the second test at full depth the door gate was successful at meeting the specification leakage standard over the first and the last hour of the 48 hour period, as required.

During the first hour, the leakage rate was measured at 0.27 l/hr/m. This decreased slightly over the 48 hour period to a value of 0.23 l/hr/m.

#### Test 3

#### Intermediate depth tests

After removal and reinstallation, the door gate was successful at meeting the specification leakage standard at a water depth of two-thirds maximum depth. The leakage rate was measured at 0.0 l/hr/m. Observations made over the one hour period at two-thirds maximum water depth also showed no leakage throughout the duration of testing.

#### Static water test 3

For the third static water test at full depth the door gate was successful at meeting the specification leakage standard for both tests over the first and last hour of the 48 hour period.

During the first hour, the leakage rate was measured at 0.46 l/hr/m. The rate decreased over the 48 hour period to a value of 0.32 l/hr/m.

### TEST 2 : WAVE LEAKAGE TEST

#### Test 1

The door gate was successful at meeting the specification leakage standard for the one hour wave test. The measured leakage rate was 0.28 l/hr/m.

#### Test 2

After removal and reinstallation, the door gate was successful at meeting the specification leakage standard for the one hour wave test. Leakage measured over the one hour wave test was 0.16 l/hr/m. This was a significant reduction in leakage compared with the first wave test.

### TEST 3 : CURRENT LEAKAGE TEST

#### Test 1

The door gate was successful at meeting the specification leakage standard for the one hour current test. The leakage rate was recorded as 0.22 l/hr/m.

#### Test 2

After removal and reinstallation, the door gate was successful at meeting the specification standard for the one hour current test. The measured leakage rate was 0.22 l/hr/m.

### RESULTS SUMMARY

#### Door Gate

The door gate was successful at meeting the leakage rate standard for all tests carried out, i.e. three static water tests, two wave tests and two current tests. Full report details are available on request.