Corrosion Technology
Coatings Inspection
Testing & Advisory Services

ITI Anti-Corrosion, Inc.
10175 Harwin, Suite 110
Houston, Texas 77036
Telephone (713) 771-0688
Fax: (713) 776-9634

Technical Report No. 94-157

Mr. Richard Hobbs
POLYGUARD
P.O. Box 755
Ennis, TX 75120

# Resistivity of Polyguard "RD-6" Fabric

May 27, 1994

Prepared by Gary Cox

ITI Contract No. 1014

# RESISTIVITY OF POLYGUARD "RD-6" FABRIC

## Introduction

As requested by Mr. Bob Nee of Polyguard, I.T.I. Anti-Corrosion, Inc. has conducted laboratory testing to determine the resistance of Polyguard RD-6 fabric to current flow.

## Apparatus

1. A glass test cell consisting of 2 halves, each being closed on one end and equipped with a grooved flange (to accept an o-ring) on the opposite end to facilitate clamping. Each half of the cell was also equipped with 3 inline ports. (See Diagram)

2. Global Specialties Model 1302 constant current/constant voltage power supply.

3. Fluke Model 21 Series II multimeter.

4. Standard Calomel reference electrodes.

## Procedure

1. The test cell was assembled, using a sample of Polyguard "RD-6" fabric as a septum between the 2 halves. The cell was then filled with a solution of 3% salt water.

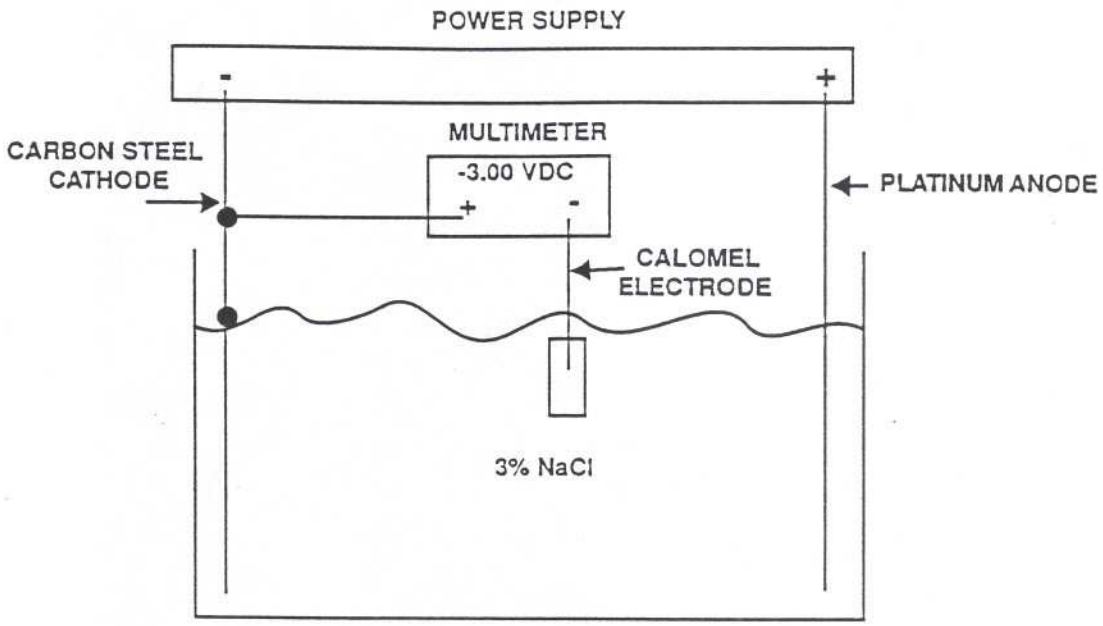
2. The Model 1302 power supply was then attached to a platinum anode and a carbon steel cathode in a vessel containing 3% NaCl solution and the potential adjusted to -3.00 VDC.

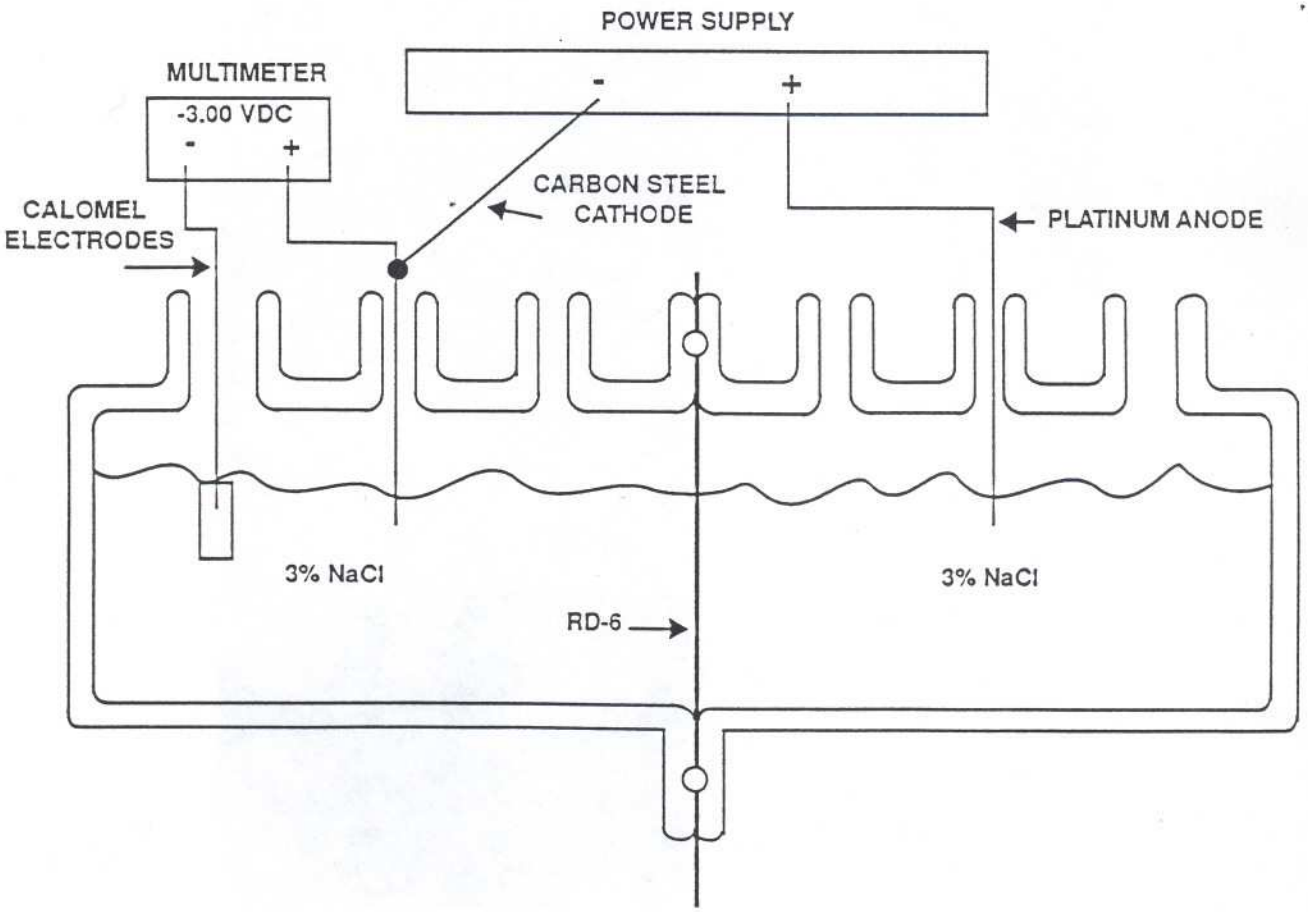
3. The leads were then transferred from the 3% NaCl solution to the test cell, placing the anode and cathode on opposite sides of the "RD-6" septum and the potentials were recorded.

## Results

There was no change in potential across the Polyguard RD-6 septum:

| | |
|---|---|
| Potential in 3% NaCl only: | -3.00 VDC |
| Potential in 3% NaCl across "RD-6" | -3.00 VDC |


POWER SUPPLY
-
+
MULTIMETER
-3.00 VDC
+
-
CARBON STEEL
CATHODE
PLATINUM ANODE
CALOMEL
ELECTRODE
3% NaCl


POWER SUPPLY
-
+
MULTIMETER
-3.00 VDC
-
+
CALOMEL
ELECTRODES
CARBON STEEL
CATHODE
PLATINUM ANODE
3% NaCl
3% NaCl
RD-6