



FR1-QP-TFII-08

PROBLEM SOLVING REPORT

Report No. TFII-CR-030/30/06/53

Company	PORN PROM METAL PUBLIC COMPANY LIMITED
Test problem	Corrosion rate
Test method	Electrochemical test – Tafel technique
Test object	Aluminium alloy and Galvanized steel
Date of test	May 21, 2010

THIS IS REPORT that the specimens were submitted to our laboratory for the purpose of tests.

The results of tests were as follows

The specimen identification:

Al - Aluminium 3XXX

GS – Galvanized steel

Electrochemical tests : Tafel technique

Reference electrode: Ag/AgCl

Counter electrode: Platinum

Tested area: 2 cm<sup>2</sup>

Scan rate potential: 60 mV/min.

Apply voltage: -150 E<sub>oc</sub> (mV/SCE) to +150 E<sub>oc</sub> (mV/SCE)

Electrolytes: 3.5 %(w/v) NaCl



## Result

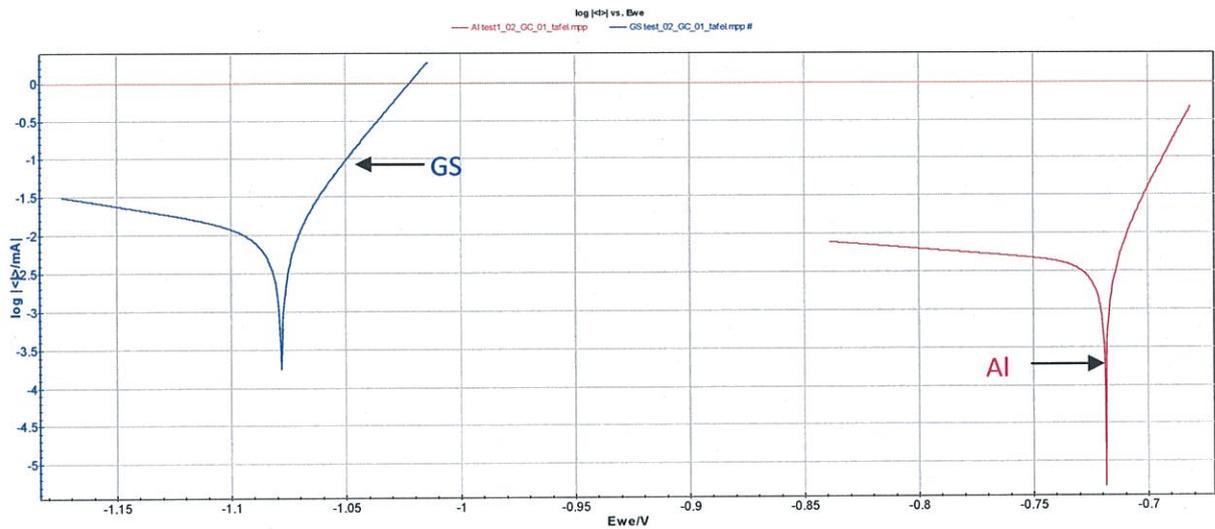


Fig. 1 The an example of the graph obtaining from the Tafel test.

Table 1. showed the corrosion rate values from the specimens during the Tafel test.

Specimen No.	Corrosion rate ( $\mu\text{m}/\text{year}$ )	
	Al	GS
1	22	80.5
2	9.4	51.5
3	46	64.8
Average	<b>25.8</b>	<b>65.6</b>

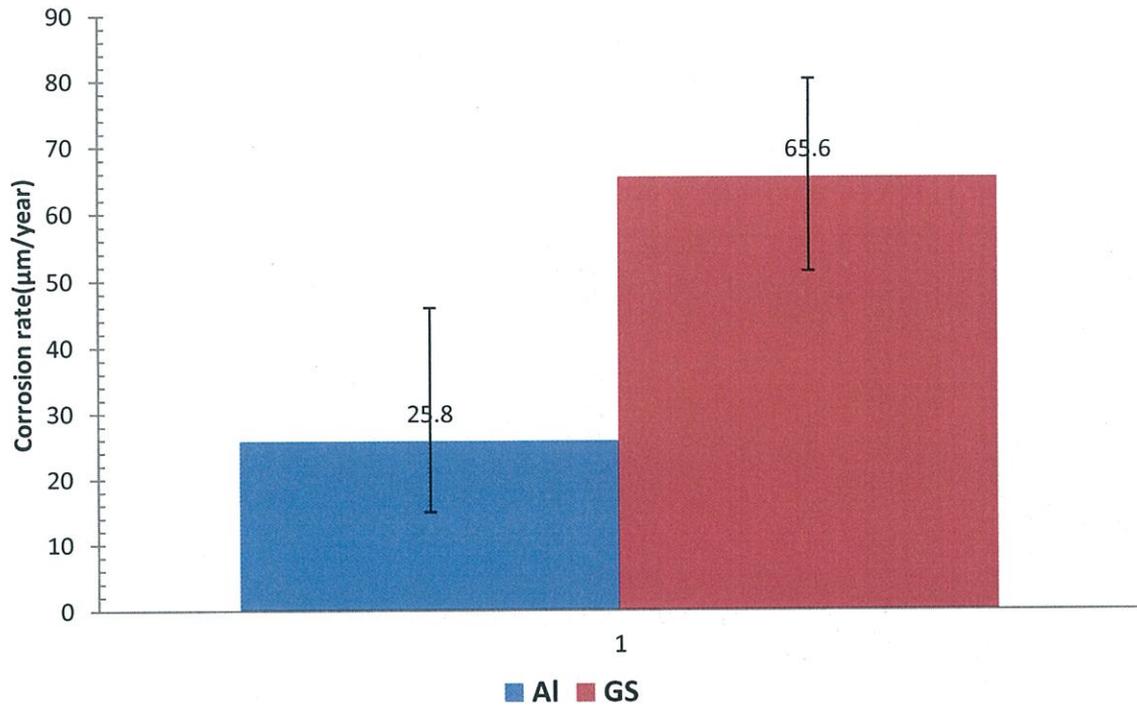


Fig. 2 Showed the corrosion rate from the specimens during Tafel test.



This report reflects our findings at time and place of inspection only

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