

Testing. Advising. Assuring.

SLIP RESISTANCE TEST

PENDULUM FRICTION TEST

BS 7976-2:2002

Saudi American Glass Company Ltd.
PO Box 8418, Riyadh
Kingdom of Saudi Arabia

Request No: D12-02161 (Page 1 of 6) Report No: WR12-06260

23.08.2012

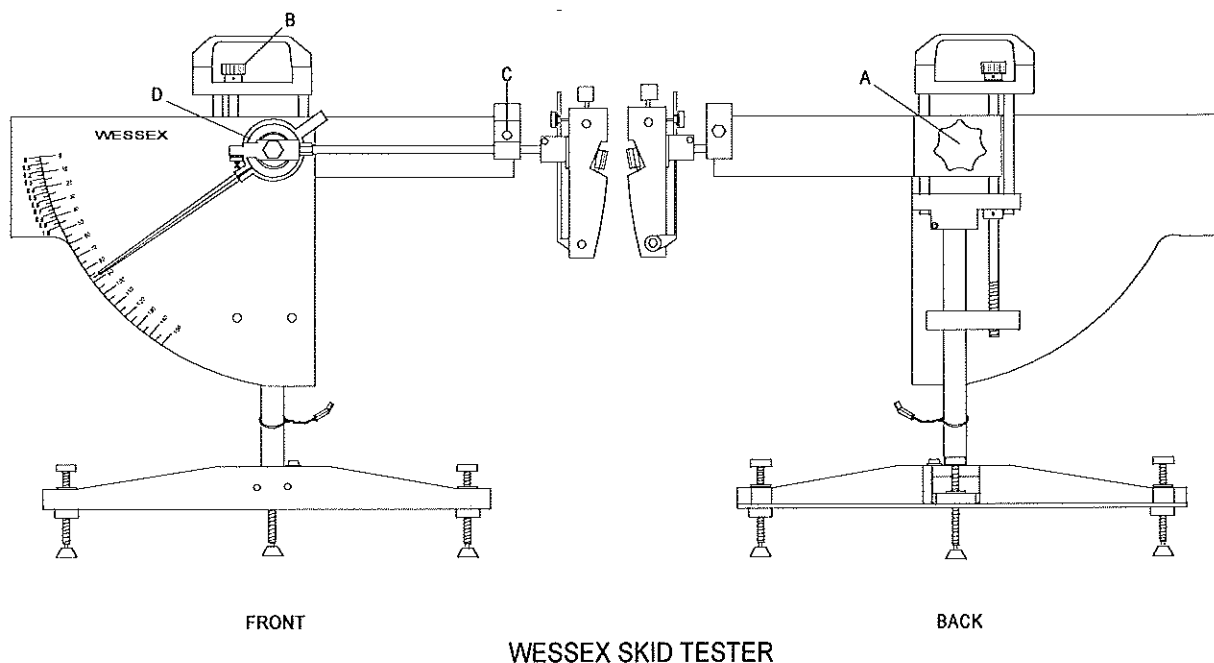
INTRODUCTION

We are instructed to under take Slip Resistance Test on “Tempered Glass” panels in order to establish Slip resistance property at dry and wet conditions.

THE PENDULUM TESTER

The Pendulum Tester was designed by Percy Singler in the 40's and developed at the UK Transport Research Laboratory in 1960's. Originally designed to test road surfaces, but other used have evolved, and new applications are still emerging.

The apparatus measures the skid resistance between a rubber slider (mounted on the end of a pendulum arm) and the test surface.



TEST METHOD

Each location was tested in accordance with BS 7976-2:2002 using the portable skid resistance tester (Pendulum Tester). Tests were carried out in dry and wet conditions using Slider 96 Rubber (Formerly known as 4S Rubber), in two directions, at 90°. Eight readings will be taken on each condition and direction. The PTV will be calculated as the mean of the last five recorded readings, giving the answer to the nearest whole number.

The Pendulum Tester has a range of readings from 0 to 150, high values indicating good slip resistance. Guidance on the interpretation of results using the 96 rubber slider is suggested by the UK Slip Resistance Group as follows:

Potential For Slip	Pendulum Test Value
High	0 to 24
Moderate	25 to 35
Low	36 to 65
Extremely Low	66 and above

The results reported here relate to the surface as tested. It should be noted however, that the slip resistance of surface in service can be changed by various factors such as abrasion, polishing and contamination. Overall assessment of the potential for slip should take into account conditions of used and the environment, in addition to results.

TEST RESULTS**SLIP RESISTANCE TESTING USING THE PENDULUM TESTER****BS 7976 PART2 :2002**

Test Location	Main Lab
Date of Test	22.08.2012
Rubber Slider Type	96 (Formerly known as 4S)

Sample Reference	300x300mm-10mm Grey Tempered Glass with 40% Ceramic dot Matrix on F1 (SGT 177709) KAPSARC							
AFE Sample No.	D12-02161							
	1				2			
Condition of test	DRY		WET		DRY		WET	
Direction	A	90 ⁰ to A	A	90 ⁰ to A	A	90 ⁰ to A	A	90 ⁰ to A
No	PTV	PTV	PTV	PTV	PTV	PTV	PTV	PTV
1	92	92	29	29	100	93	29	29
2	90	90	28	28	103	94	28	28
3	88	90	28	28	105	96	28	28
4	89	90	28	27	100	96	28	27
5	89	89	27	27	96	95	27	27
6	90	90	27	27	102	96	27	27
7	92	91	27	27	103	95	27	27
8	92	91	27	27	96	96	27	27
PTV Mean of the last five readings	90	90	27	27	99	96	27	27
Mean	90		27		98		27	
UKSRG Classification	Extremely Low		Moderate		Extremely Low		Moderate	

TEST RESULTS**SLIP RESISTANCE TESTING USING THE PENDULUM TESTER****BS 7976 PART2 :2002**



Test Location	Main Lab
Date of Test	22.08.2012
Rubber Slider Type	96 (Formerly known as 4S)

Sample Reference	300x300mm-10mm Grey Tempered Glass with 40% Cerfrit dot Matrix on F1 (SGT 177709) KAPSARC							
AFE Sample No.	D12-02161							
	3				4			
Condition of test	DRY		WET		DRY		WET	
Direction	A	90° to A	A	90° to A	A	90° to A	A	90° to A
No	PTV	PTV	PTV	PTV	PTV	PTV	PTV	PTV
1	99	95	27	27	95	95	29	31
2	95	95	27	27	95	95	29	30
3	95	94	27	28	94	92	29	29
4	95	95	28	28	95	94	28	29
5	95	95	28	28	94	94	28	29
6	95	95	28	27	94	93	28	29
7	96	95	27	27	94	95	28	29
8	97	95	28	28	94	94	28	29
PTV Mean of the last five readings	96	95	28	28	94	94	28	29
Mean	96		28		94		29	
UKSRG Classification	Extremely Low		Moderate		Extremely Low		Moderate	

TEST RESULTS**SLIP RESISTANCE TESTING USING THE PENDULUM TESTER****BS 7976 PART2 :2002**

Test Location	Main Lab
Date of Test	22.08.2012
Rubber Slider Type	96 (Formerly known as 4S)

Sample Reference	300x300mm-10mm Grey Tempered Glass with 40% Cerfrit dot Matrix on F1 (SGT 177709) KAPSARC							
AFE Sample No.	D12-02161							
	5				6			
Condition of test	DRY		WET		DRY		WET	
Direction	A	90° to A	A	90° to A	A	90° to A	A	90° to A
No	PTV	PTV	PTV	PTV	PTV	PTV	PTV	PTV
1	104	100	30	27	104	96	25	24
2	106	101	30	27	106	96	25	24
3	105	104	30	27	105	95	25	24
4	103	102	30	29	106	96	25	25
5	105	104	30	28	104	96	25	25
6	105	104	31	29	105	96	25	25
7	105	105	30	29	105	94	25	25
8	105	105	30	29	105	95	25	25
PTV Mean of the last five readings	105	104	30	29	105	95	25	25
Mean	105		30		100		25	
UKSRG Classification	Extremely Low		Moderate		Extremely Low		Moderate	

For and on behalf of Al Futtaim Exova (L.L.C)

Tested by: AVS, Date tested: 23.08.2012

Test witnessed by the representative of the Client

This report shall only be reproduced in full. Approval of the testing laboratory is required for partial reproduction.
Samples will be retained for a period of one month only, unless otherwise requested.
The test results relate only to the samples tested.

 (07)
Al Futtaim Exova LLC
P.O. Box 34924, Dubai, United Arab Emirates
Tel: +971 (0)4 885 1001 Fax: +971 (0)4 885 4004