

Test Report

Number: SZHH01003152

Applicant: TIANJIN RABE R&PS CO.,LTD
LIXIN INDUSTRIAL PARK VILLAGE 2
DUAL-TOWN DUAL-PORT BEICHEN DISTRICT
TIANJIN CHINA

Date: Oct 30, 2015

Attn: CHRISTINE ZHANG

Sample Description:

Four (4) sets of submitted sample said to be :
Item Name : **Cantilever Brakeshoes.**
Model No. : **RB-C111B.**
Date Sample Received : Oct 22, 2015.

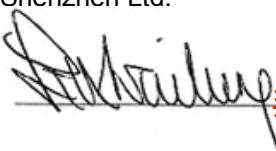
Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Submitted samples	Braking Performance - As per clause 4.6.8 of EN ISO 4210-2:2014	Pass

Authorized by:
For Intertek Testing Services
Shenzhen Ltd.



Ben N.L. Lin
General Manager

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Tests Conducted

1 Braking Performance

As per the client's requirements, with reference to EN ISO 4210-2:2014 clause 4.6.8: braking performance, the submitted brake system was assembled to a 26" bicycle and correctly adjusted, then subjected to the following tests.

Number of sample tested: One (1) set.

Maximum permissible total mass by the manufacturer: 100kgs.

Bicycle type: City bicycle.

Summary result:

Clause	Test item	Requirement				Result
4.6.8	Braking performance	4.6.8.1.2 Machine Test				P (See test data #1)
		when tested in accordance with ISO4210-4:2014 4.6.5 the bicycle shall fulfil the requirements shown in following table				
			Bicycle type	Condition	Brake in use	Minimum braking performance value, B_p N
			City and trekking bicycles	Dry	Front only	340
					Rear only	220
				Wet	Front only	220
					Rear only	140
			Young adult bicycles	Dry	Front only	204
					Rear only	132
				Wet	Front only	132
					Rear only	84
			Mountain bicycles	Dry	Front only	425
					Rear only	280
				Wet	Front only	220
					Rear only	140
			Racing bicycles	Dry	Front only	425
					Rear only	260
				Wet	Front only	220
					Rear only	140
		4.6.8.2 smooth, safe-stop characteristics - for the machine test				P (See test data #2)
		The bicycle shall show smooth, safe-stop characteristics with regard to intended use of the bicycle and the ability if the expected user of the bicycle.				
		A) For the track test <Omit>				
		B) For the machine test, smooth, safe-stop characteristics are defined by compliance with the linearity requirements specified in ISO4210-4:2014 4.6.5.3 and the simple track test described in ISO4210-4:2014 4.6.5.7 Item h).				



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Clause	Test item	Requirement	Result
		<p>4.6.8.3 Ratio between wet and dry braking performance - for the machine test.</p> <p>For city and trekking, young adult, and mountain bicycle ,In order to ensure safety for both wet and dry braking, the ratio of braking performance wet:dry shall be greater than 4:10.</p> <p>The methods for calculating this ratio are given in ISO4210-4:2014 4.6.5.3.11 item c) for the track test and in ISO4210-4:2014 4.6.5.7 item g) for the machine test.</p>	P (See test data #3)

Abreviation : P = Pass

Test data#1 Braking force

Condition	Brake in use	Requirement (N)	Braking force (N)
Dry	Front only	340	426.2
	Rear only	220	407.6
Wet	Front only	220	249.2
	Rear only	140	274.7

#2 Linearity

$F_{op}/F_{op\ intend} (N)$		40	60	80	100	120	140	160	180
Dry	F_{br} average -front brake	215.5	315.4	388.8	426.2	--	--	--	--
	F_{br} average -rear brake	156.4	266.4	334.3	407.6	--	--	--	--
Wet	F_{br} average -front brake	168.4	220.7	249.2	--	--	--	--	--
	F_{br} average -rear brake	136.5	196.4	274.7	--	--	--	--	--



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Intertek Testing Services Shenzhen Ltd.- Hardlines

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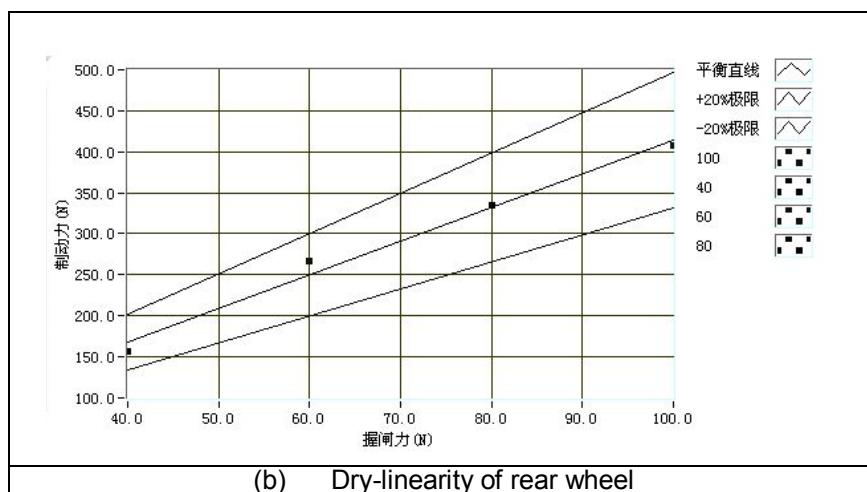
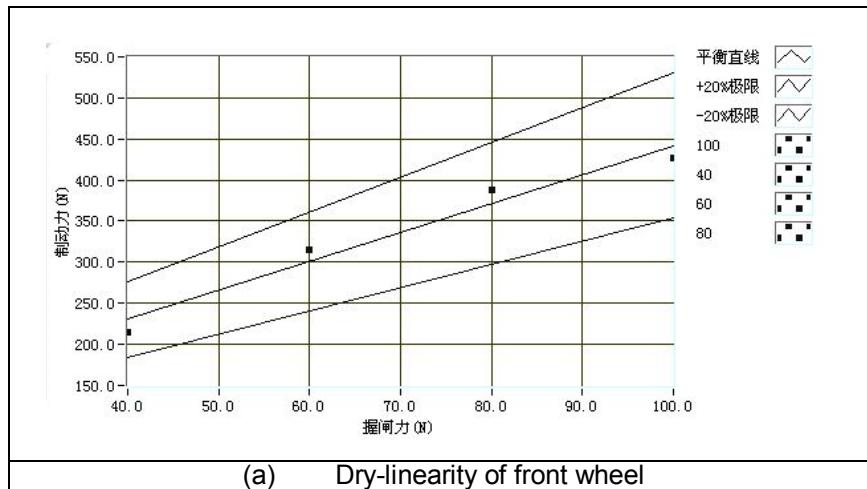
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Attention is drawn to the terms and conditions printed overleaf.

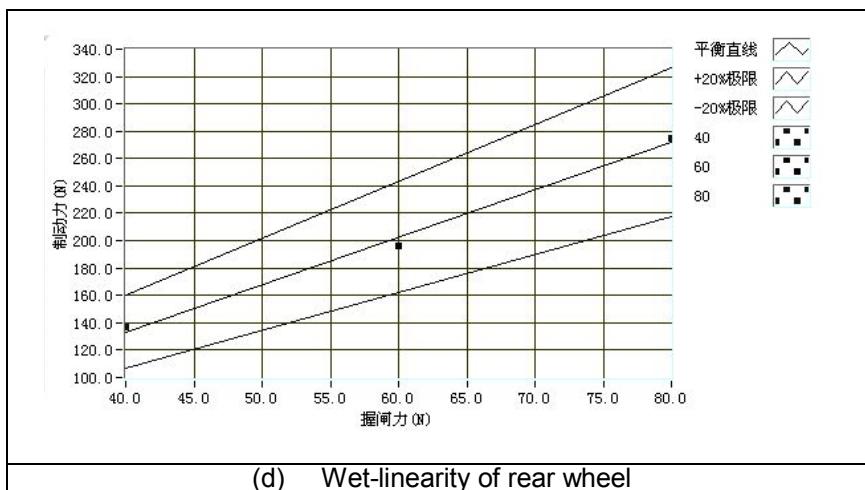
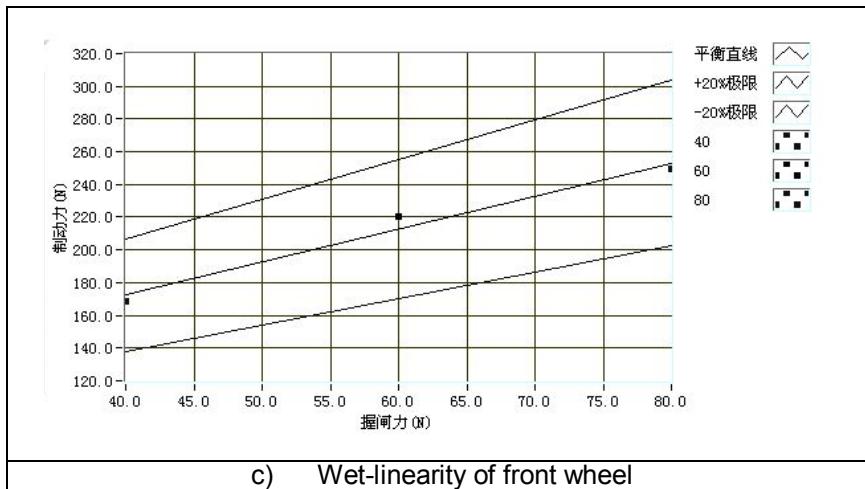
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#3 Ratio between wet and dry braking

$F_{op}/F_{op\ intend}$ (N)		40	60	80	100	120	140	160	180
Front wheel	$F^a_{Br\ average}$ (N)	215.5	315.4	388.8	426.2	--	--	--	--
	$F^w_{Br\ average}$ (N)	168.4	220.7	249.2	--	--	--	--	--
	$F^w_{Br\ average} : f^a_{Br\ average}$	0.78	0.70	0.64	--	--	--	--	--
Rear wheel	$F^a_{Br\ average}$ (N)	156.4	266.4	334.3	407.6	--	--	--	--
	$F^w_{Br\ average}$ (N)	136.5	196.4	274.7	--	--	--	--	--
	$F^w : f^a$	NA	0.74	0.82	--	--	--	--	--

Photo for reference

Setup photo

End of report

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