

## Test Report



Report No. : KK-16-02774ZA

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Date of Report : Apr. 08, 2016

**Project Name****Owner****Construction Supervisor****Contractor****Applicant****Supplier****Sample Name****Structural Position****Sampling Location****Sample Taken By****Sample Submitted By****Date of Sampling****Date of Sample Received****Date of Testing****Testing Method****Remark**

Taiwan Provincial Highway 9 South-Link Tunnel Project C2  
West Coast Expressway Southern Region Engineering Office,  
Directorate General of Highways, Taiwan

CECI Engineering Consultants, Inc., Taiwan

Futsu Construction Co., Ltd.

CECI Engineering Consultants, Inc., Taiwan

WECAND ENTERPRISE Co., Ltd.

Self-drilling Rock Bolt & accessories

Main Tunnel Support

Stack Yard of North Portal

CECI Engineering Consultants, Inc., Taiwan(Pan, Zhong-Bao);

Futsu Construction Co., Ltd.(Yang, Shi-Chang)

CECI Engineering Consultants, Inc., Taiwan(Pan, Zhong-Bao);

Futsu Construction Co., Ltd.(Yang, Shi-Chang)

Mar. 23, 2016

Mar. 24, 2016

Mar. 24, 2016~Apr. 07, 2016

CNS 2111(1996), Scales, Calipers and A measuring tape

1.The information mentioned in the above section is provided  
by Client(Exclude Date of Sample Received and Date of Testing)

2.The sample was transferred by SGS M&E Laboratory-  
Provincial Highway 9 South Round Road Widened to Improve Project  
A2-1 & A2-2 & A3 & B1 & B2 & C1 & C2, and Provincial Highway 9  
Torrential Rain Disaster Repair and Other Projects Site Laboratory  
(Application No. XS-16-00012W C-16-00419. Received date: Mar. 23, 2016)  
for the testing item(s) as below to be performed in  
SGS M&E-Laboratory-Kaohsiung.

**Test Results :**

Specimen No.	Outside Diameter mm	Nominal Weight kg/m	Cross section Area (Remark 1) mm <sup>2</sup>
Rock Bolt	31.17	2.86	364.77

Specimen No.	Yield Strength (0.2% offset) N/mm <sup>2</sup>	Tensile Strength N/mm <sup>2</sup>
Rock Bolt	795	832
Client Requirements	>440	>690

Specimen No.	Tensile Loads ton	Location of the Fracture
Rock Bolt + Coupler	31	11.8 cm away from the coupler
Client Requirements	>15	---

For and on behalf of  
WECAND ENTERPRISE CO., LTD.

The required specification(s) offered in this test report is/are for reference only.

The conformity judgment is at the Applicant's final verdict.

Authorized Signature(s)

Signed for and on behalf of  
SGS Taiwan Ltd.

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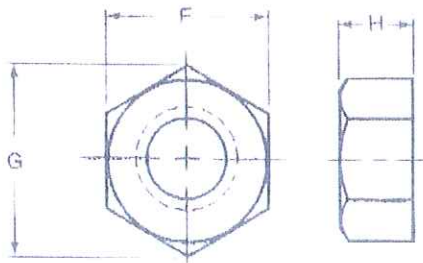
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Testing Method Calipers, CNS 2114(2011)

## Test Results :

Specimen No.	Maximum Diameter mm	Hardness HRC
Drill	50.41	60
Client Requirements	---	$\geq 50$



Specimen No.	Hardness HRBW	Dimension mm		
		G	F	H
Hexagon Nut	96	51.68	46.00	47.16
Client Requirements	$\geq 68$	---	---	---

- Remark: 1. The calculation of cross section area refer to nominal weight of CNS 4435.  
2. The accredited items of tensile test and hardness in this report belong to TAF Testing Laboratory Accreditation.  
3. This Test Report is an additional original report of KK-16-02774Z. Issued date: Oct. 13, 2016.

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For and on behalf of  
WECAND ENTERPRISE CO., LTD.

*Jason Tien*  
Authorized Signature(s)

*CC Li*  
Signed for and on behalf of  
SGS Taiwan Ltd.

The required specification(s) offered in this test report is/are for reference only.

The conformity judgment is at the Applicant's final verdict.

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