

Xiamen Goomax Energy Technology Co., Ltd

- Goomax Group



Contact : Joy

Email : sales60@goomaxsolar.com



Content

1

AS/NZS1170、CE

2

ISO

3

SGS

4

Others



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Ducklands VIC 3008
Phone +61 3 9420 9777
mail@dome.com.au
www.dome.com.au
ABN: 32 146 605 870

ENGINEERING CERTIFICATE

Our Ref: LTR/11832R-Goomax-000

August 2015

This is to certify that at the request of Xiamen Goomax Energy Technology Co., Ltd, Dome Consulting (Aust) Pty Ltd have reviewed the componentry used in the Tile Roof Mounting, Metal Roof Assembly and the Adjustable Solar Mounting Systems Installation Instruction Version 1.0 — updated July 2015.

The elements which were to be checked include:

Rail	GM-R01/R15/R16
Rail Splice Kit	GM-RS-11
Rail Clamp	GM-BR-01
Inter Clamp (30mm, 35mm, 40mm, 45mm, 50mm)	GM-MC
End Clamp (30mm, 35mm, 40mm, 45mm, 50mm)	GM-EC
Tile Roof Hook	GM-CTH-01
Tin Roof Hook L Leg	GM-MRH-L
Adjustable Tilt Front Leg	GM-AS-B01
Adjustable Tilt Rear Leg	GM-AS
Adjustable Triangle Frame	GM-FT
Klip-Lok 406	GM-MRH-07
Klip-Lok 700	GM-MRH-06

The check included a review of all regions of Australia wind loading conditions including Cyclonic conditions, in accordance to AS1170.2/Amdt2/2012.12.24.

The design and documentation has determined that all supporting componentry in the above mentioned documentation was found to be acceptable.

Attention Installer:

For Solar panels installed on metal roof by using klamp locks inspections by be required by a local qualified Engineer prior to any installation, to ensure the existing metal roof is under suitable conditions

Assumption:

The existing roofing is firmly/properly fixed to the existing roof battens.

Should you have any further queries please do not hesitate to contact me.

Yours faithfully,

FOR & ON BEHALF OF DOME CONSULTING PTY LTD



Robert Cilia
BE (Civil) RBP RPEQ TBP

CELAB®

Via Maira snc
04100 Latina
Italy
celab@celab.com



CERTIFICATE

Certificate Number UCN : 802155029882
Job : J24805
Date of Issue : 2015-09-12
Certificate valid up to : 2022-09-11
Brand Name : See Label
Type : Solar Mounting System
Model N : GM-R01—GM-R99, GM-AG1—GM-AG10, GM-MC, GM-EC, GM-FC, GM-FS, GM-RS, GM-F76, GM-M14X40, GM-MRH, GM-EK, GM-E-EL, GM-FG, GM-BN, GM-BR

Manufacturer : Xiamen Goomax Energy Technology Co., Ltd
Address : 905# Jordan Building A, High-tech Park, Huli District, Xiamen, China

Standard Used : EN 1090-1:2009+A1:2011

Conclusion :
After inspection of the technical documentation issued by the customer, and in his request, we express our opinion that the product meets the technical requirement of the following directives and standards: (EU)305/2011 Construction products (CPR)

This opinion is only valid for the directive, the equipment and configuration described, in conjunction with the test data detailed above and with compliance with all applicable legal requirement for the product .
The following manufacturer documents was inspected:

Presence of Declaration of conformity template	✓ OK
Presence of test report using standards as indicated in the declaration of conformity	✓ OK
Test report reference : B-S180919166	✓ OK
Presence of CE symbol in the product label.	✓ OK
Presence of instruction manual	✓ OK
Use of valid Harmonized standard in the declaration of conformity	✓ OK
Presence of product description in the technical construction file	✓ OK

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General Manager — CELAB
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CELAB®

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CERTIFICATE

Certificate Number UCN : 802155029882
Job : J24805
Date of Issue : 2015-09-12
Certificate valid up to : 2022-09-11
Brand Name : See Label
Type : Solar Mounting System
Model N : GM-R01—GM-R99, GM-AG1—GM-AG10, GM-MC, GM-EC, GM-FC, GM-FS, GM-RS, GM-F76, GM-M14X40, GM-MRH, GM-EK, GM-E-EL, GM-FG, GM-BN, GM-BR

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Standard Used : EN 1090-1:2009+A1:2011

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Test report reference : B-S180919166	✓ OK
Presence of CE symbol in the product label.	✓ OK
Presence of instruction manual	✓ OK
Use of valid Harmonized standard in the declaration of conformity	✓ OK
Presence of product description in the technical construction file	✓ OK

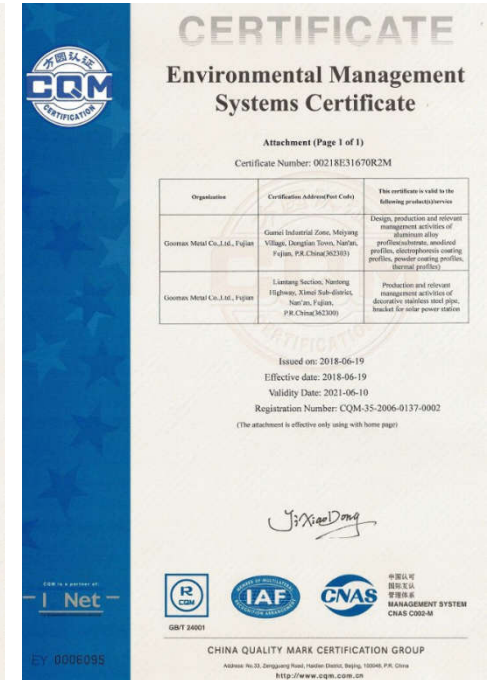
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SGS

TEST REPORT

No. : XMML141005309
Date : Oct 27, 2014
Page : 1 of 3

XIAMEN GOOMAX ENERGY TECHNOLOGY CO., LTD
905# JORDAN BUILDING, HIGH-TECH PARK, HULI DISTRICT, XIAMEN CHINA

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name : BEAM
Material : AL6005-T5
Buyer : Xiamen Goomax Energy Technology Co., Ltd
Manufacturer : Xiamen Goomax Energy Technology Co., Ltd
Sample Information : Product No.: GM-AG1-3R
Test Performed : Selected test(s) as requested by applicant
Date of Receipt : Oct 21, 2014
Test Period : Oct 21, 2014 to Oct 26, 2014
Test result(s) : Please refer to the following page(s)

*****To be continued*****

Signed for
SGS-CSTC Standards Technical
Services Co., Ltd. XM Branch Testing Center

Dean Cheng
Authorized signatory

SGS

TEST REPORT

No. : XMML141005309
Date : Oct 27, 2014
Page : 2 of 3

Test Result:

Sample description: metal

Test item: bend test

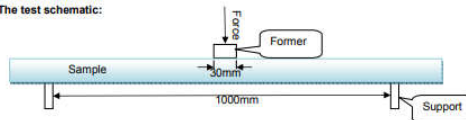
Test method: according to the client's requirements, as the following schematic, place the sample on two supports with the mid-length match the former, load the force vertically till the sample destroyed. Determine the maximum force.

Former: width is 30mm; length is 105mm,

Span length: 1000mm;

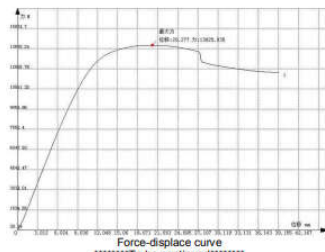
Test rate: 12mm/min.

The test schematic:



Test result: The maximum bend force is 13826N.

Test curve:



*****To be continued*****

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TEST REPORT

No. : XMML141005309
Date : Oct 27, 2014
Page : 3 of 3

Photo(s):



Photo 3: destroyed part

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***** End of Report *****



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Xiamen Branch Testing Center

中国-福建-厦门-大厝 | 大厝 | 产业区海堤路31号 邮编: 361101 T: (86-592) 5791588 F: (86-592) 5791589 E: sgs.china@sgs.com

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TEST REPORT

No. : XMML141105728
Date : Nov 14, 2014
Page : 1 of 3

XIAMEN GOOMAX ENERGY TECHNOLOGY CO., LTD
905# JORDAN BUILDING, HIGH-TECH PARK, HULI DISTRICT, XIAMEN CHINA

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name : CROSS BEAM
Material : AL6005-T5
Buyer : Xiamen Goomax Energy Technology Co., Ltd
Manufacturer : Xiamen Goomax Energy Technology Co., Ltd
Test Performed : Selected test(s) as requested by applicant
Date of Receipt : Nov 11, 2014
Test Period : Nov 11, 2014 to Nov 13, 2014

Test result(s) : Please refer to the following page(s)
*****To be continued*****

Signed for
SGS-CSTC Standards Technical
Services Co., Ltd. XM Branch Testing Center

Dean Cheng
Dean Cheng
Authorized signatory



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TEST REPORT

No. : XMML141105728
Date : Nov 14, 2014
Page : 2 of 3

Test Result:

Sample description: metal

Test item: bend test

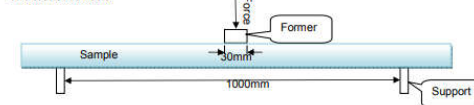
Test method: according to the client's requirements, as the following schematic, place the sample on two supports with the mid-length match the former, load the force vertically till the sample destroyed. Determine the maximum force.

Former: width is 30mm; length is 105mm.

Span length: 1000mm;

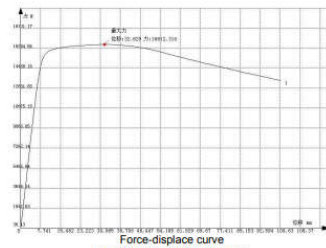
Test rate: 12mm/min.

The test schematic:



Test result: The maximum bend force is 16612N.

Test curve:



*****To be continued*****



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Date : Nov 14, 2014
Page : 3 of 3

Photo(s):



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***** End of Report *****



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TEST REPORT

No. : XMML140904524
Date : Sep 15, 2014
Page: 1 of 3

XIAMEN GOOMAX ENERGY TECHNOLOGY CO., LTD
905# JORDAN BUILDING, HIGH-TECH PARK, HULI DISTRICT, XIAMEN CHINA

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Name : MID CLAMP, RAIL
Material : AL6005-T5
Buyer : Xiamen Goomax Energy Technology Co., Ltd
Manufacturer : Xiamen Goomax Energy Technology Co., Ltd
Test Performed : Selected test(s) as requested by applicant
Date of Receipt : Sep 09, 2014
Test Period : Sep 09, 2014 to Sep 15, 2014
Test result(s) : Please refer to the following page(s)
*****To be continued*****

Signed for and on behalf of
SGS-CSTC Ltd.

Dean Cheng

Dean Cheng
Technical Engineer



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Xiamen Testing Service Co., Ltd.
Xiamen Branch of SGS-CSTC Testing Service Co., Ltd.

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TEST REPORT

No. : XMML140904524
Date : Sep 15, 2014
Page: 1 of 3

XIAMEN GOOMAX ENERGY TECHNOLOGY CO., LTD
905# JORDAN BUILDING, HIGH-TECH PARK, HULI DISTRICT, XIAMEN CHINA

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Test Performed : Selected test(s) as requested by applicant
Date of Receipt : Sep 09, 2014
Test Period : Sep 09, 2014 to Sep 15, 2014
Test result(s) : Please refer to the following page(s)
*****To be continued*****

Signed for and on behalf of
SGS-CSTC Ltd.

Dean Cheng

Dean Cheng
Technical Engineer



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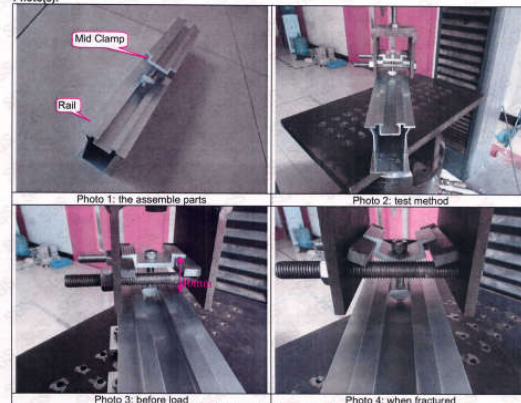
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TEST REPORT

No. : XMML140904524
Date : Sep 15, 2014
Page: 3 of 3

Photo(s):



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TEST REPORT

No. : XMML141005310
Date : Oct 27, 2014
Page : 1 of 3

XIAMEN GOOMAX ENERGY TECHNOLOGY CO., LTD
905# JORDAN BUILDING, HIGH-TECH PARK, HULI DISTRICT, XIAMEN CHINA

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Name : RAIL
Material : AL6005-T5
Buyer : Xiamen Goomax Energy Technology Co., Ltd
Manufacturer : Xiamen Goomax Energy Technology Co., Ltd
Sample Information : Product No.: GM-AG1-SR
Test Performed : Selected test(s) as requested by applicant
Date of Receipt : Oct 21, 2014
Test Period : Oct 21, 2014 to Oct 26, 2014

Test result(s) : Please refer to the following page(s)
*****To be continued*****

Signed for
SGS-CSTC Standards Technical
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Dean Cheng
Dean Cheng
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TEST REPORT

No. : XMML141005310
Date : Oct 27, 2014
Page : 2 of 3

Test Result:

Sample description: metal

Test item: bend test

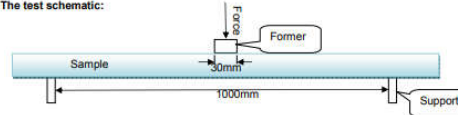
Test method: according to the client's requirements, as the following schematic, place the sample on two supports with the mid-length match the former, load the force vertically till the sample destroyed. Determine the maximum force.

Former: width is 30mm; length is 105mm;

Span length: 1000mm;

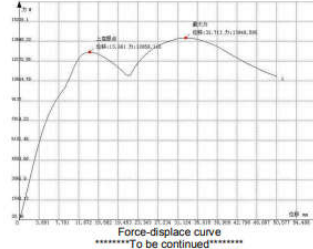
Test rate: 12mm/min.

The test schematic:



Test result: The maximum bend force is 13949N.

Test curve:



*****To be continued*****



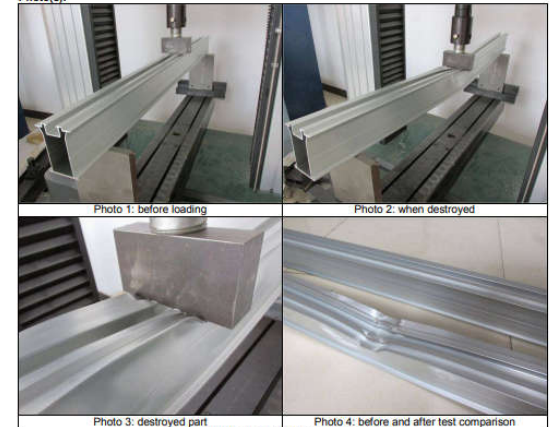
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TEST REPORT

No. : XMML141005310
Date : Oct 27, 2014
Page : 3 of 3

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www.gamcorp.com.au melbourne@gamcorp.com.au
 Suite 4, 346 Ferntree Gully Rd, Notting Hill VIC 3168
 Tel: 03 9543 2211 Fax: 03 9543 4046



Our Ref: 3344-GM-U1 / LVS
11 July 2017

XIAMEN GOOMAX ENERGY TECHNOLOGY CO.,LTD
Suite 905, Jordan Building, High-tech Park, Huli District
Xiamen, China

Array Frame Engineering Certificate

RE: Single Pole GM Solar system (single support) – assessment for wind regions A in Australia and New Zealand

Gamcorp (Melbourne) Pty Ltd, being Structural Engineers within the meaning of Australian and NZ Building Regulations, have carried out a structural design check of the Single Pole GM Solar system (single support) within Australian and New Zealand's wind region A. The design check has been based on the information and drawings of the system and its components, provided by Xiamen Goormax Energy Technology Co., LTD.

We find the Single Pole GM Solar system (single support) to be structurally sufficient for Australian and New Zealand use, based on the following conditions:

- Wind Loads to AS/NZ1170.2:2011, Amendment 3-2012:
 - Wind Terrain Category 2;
 - Wind average recurrence interval of 500 years (VR=45m/s);
 - Wind region A;
- Solar Panel length 1.64m, width 0.992m, mass 19kg;
- Tilt angle 30 degrees;
- Frame material: Q235 for the post, other members Aluminium AL/6005-T5;
- Maximum frame spacing = 3.2m* and possible footing options:
 - 1) driven post, L=2.5m in soil*;
 - 2) post embedded in concrete pier ø300mm, 1.5m in soil**.

Notes

- This certification is applicable for Single Pole GM Solar system (single support) with dimensions as shown on page 2 of this letter. Contact Gamcorp for customised system or if the site conditions do not covered by the soil classes considered in this assessment.

*The maximum frame spacing is based on the structural capacity of the frame in the edge (perimeter) zone of array. We recommend to perform tests on site for the geotechnical capacity of the driven post. The spacing may need to be decreased to achieve the available geotechnical capacity of the driven post following from the test results.

*Footing option 2 recommended for 'Firm' soils with allowable end bearing capacity of 100 kPa (damp clays, sandy clays, damp sands). Other pier sizes are possible. Contact Gamcorp for site specific conditions (to find out whether a more cost effective solution is possible).

Construction is to be carried out strictly on accordance with the instruction manual. This work was designed in accordance with the provisions of Australian Building Regulations and in accordance with sound, widely accepted engineering principles.

Yours faithfully,
Gamcorp (Melbourne) Pty Ltd

M. Gamble
Managing Director
MAICD

L. Van Spaandonk
Principal Engineer
MIEAust NER

ISO 9001:2008 Registered Firm
Certificate No: AU1222

3344 - Compliance Letter Goomax U Post - panels 1640x992.odt



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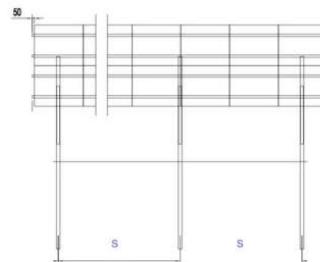


Fig. 1

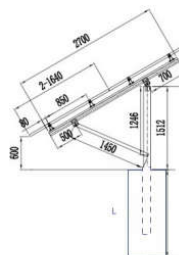
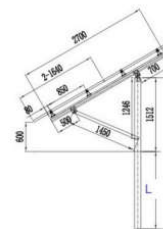


Fig. 2

Attachments:

Attachments:
5 drawings with member sections.

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