



APPLICATION FOR CE REPORT

On Behalf of

CHANGZHOU SUNNERGY ENERGY TECHNOLOGY CO.,LTD.

Safety Helmet

**Model: SNHE, SNH2, SNHD, SNHO, SNHP, SNHU,
SNHC-H, SNH-1,SNH-7**

Prepared For : CHANGZHOU SUNNERGY ENERGY TECHNOLOGY
CO.,LTD.
No.1-715/716, FUHANYUAN, EAST TAIHU ROAD, XINBEI
DISTRICT, CHANGZHOU CITY, JIANGSU PROVINCE.

Prepared By : **TMC Testing Services (Shenzhen) Co., Ltd.**
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TEST Report

EN 397-2012+A1-2012

Standard specifies physical and performance requirements, methods of test and marking requirements for industrial safety helmets. The mandatory requirements apply to helmets for general use

Report

Reference No..... TMC181119105-S

Tested by (+ signature)..... Jack He

Jack He

Approved by (+ signature)..... Lemon Rao

Date of issue..... Nov. 28, 2018

Contents..... 11 pages

Testing laboratory

Name..... TMC Testing Services (Shenzhen) Co., Ltd.

Address..... 1st Floor, Block A1, Zone A, Xinshidai Gongrong Industrial Park, No. 2, Shihuan Road, Shiyan Street, Baoan District, Shenzhen, China

Testing location..... Same as above

Applicant Name : CHANGZHOU SUNNERGY ENERGY TECHNOLOGY CO.,LTD. .

Address..... No.1-715/716, FUHANYUAN, EAST TAIHU ROAD, XINBEI DISTRICT, CHANGZHOU CITY, JIANGSU PROVINCE

Test specification

Standard..... EN 397-2012+A1-2012

Test procedure Compliance with EN 397-2012+A1-2012

Procedure deviation..... N.A.

Non-standard test method..... N.A.

Test item

Description..... Safety Helmet

Trademark..... N/A

Model and/or type reference..... SNHE

Manufacturer..... CHANGZHOU SUNNERGY ENERGY TECHNOLOGY CO.,LTD. .

Address..... No.1-715/716, FUHANYUAN, EAST TAIHU ROAD, XINBEI DISTRICT, CHANGZHOU CITY, JIANGSU PROVINCE

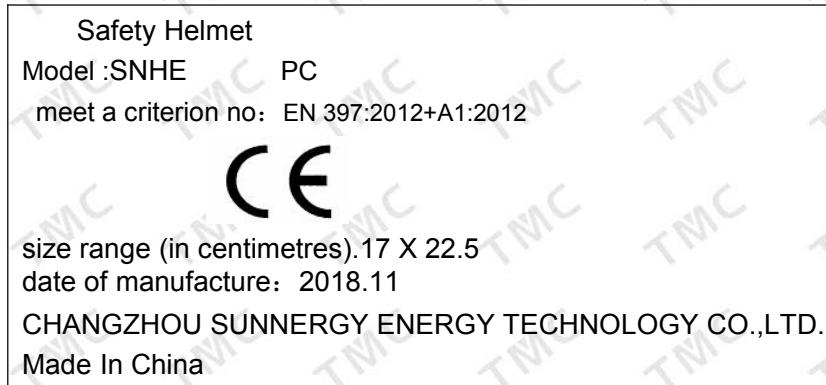
Rating(s)..... N/A

Test case verdicts

Test case does not apply to the test object..... : N(.A.)
 Test item does meet the requirement..... : P(ass)
 Test item does not meet the requirement..... : F(ail)

Testing

Date of receipt of test item(sample).....	Nov. 23, 2018.
Date (s) of performance of tests.....	Nov 23, 2018 - Nov.28, 2018.

Copy of marking plate (for example model SNHE):


Note: marking label for other models are identical to above except for model name and rating.

Remark:

-The above markings are the minimum requirements required by the safety standard. For the final productions samples, the additional markings which do not give rise to misunderstanding may be added.

Label testing

Rubbing for 15 s with a piece of cloth soaked with water. And a further 15 s with a piece of cloth soaked with petroleum.-

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Clause	Requirement + Test	Result - Remark	Verdict
3	Terms and definitions		P
3.1	industrial safety helmet		P
3.2	shell		P
3.3	peak		P
3.4	brim		P
3.5	harness		P
	a) of maintaining the helmet in position on the head		P
	b) of absorbing kinetic energy during an impact		P
3.5.1	headband		P
3.5.2	nape strap		P
3.5.3	cradle		P
3.5.4	cushioning		P
3.5.5	anti-concussion tapes		P
3.5.6	comfort band or sweatband		P
3.6	protective padding		P
3.7	ventilation holes		N/A
3.8	chin strap		P
3.9	chin strap anchorage		P
	a) the component(s) fitted to the ends of the chinstrap material for this purpose		P
	b) that part of the helmet shell or of the headband where the chin strap is attached		P
3.10	helmet accessories		P
3.11	wearing height		P
3.12	external vertical distance		P
3.13	internal vertical distance		P
	1) with the cradle present		P
	2) with the cradle and any protective padding in the crown area removed, so that the shell rests on the headform		P
3.14	internal vertical clearance		P
	1) with the cradle present;		P
	2) with the cradle removed and any protective padding in the crown area left in place		P
3.15	horizontal distance		P
4	Physical requirements		P
4.1	Materials and construction		P
4.2	External vertical distance		P
4.3	Internal vertical distance		P
4.4	Internal vertical clearance		P

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Clause	Requirement + Test	Result - Remark	Verdict
4.5	Horizontal distance		P
4.6	Wearing height		P
	--80 mm for helmets mounted on headform size designation 525		P
	--85 mm for helmets mounted on headform size designation 555		P
	--90 mm for helmets mounted on headform size designation 585		P
4.7	Harness		P
4.7.1	Headband/nape strap		P
4.7.2	Cradle		P
4.7.3	Comfort band or sweatband		P
4.8	Chin strap		P
4.9	Ventilation		P
4.10	Accessories		P

5	Performance requirements		P
5.1	Mandatory requirements		P
5.1.1	Shock absorption		P
5.1.2	Resistance to penetration		P
5.1.3	Flame resistance		P
5.1.4	Chin strap anchorages		P
5.1.5	Label		P
5.2	Optional requirements		P
5.2.1	Very low temperature (– 20 °C or – 30 °C)		P
5.2.2	Very high temperature (+ 150 °C)		P
5.2.3	Electrical properties		P
5.2.4	Lateral deformation		P
5.2.5	Molten metal splash		P
	a) be penetrated by the molten metal.		P
	b) show any deformation, measured at right angles to the base plane of the helmet, greater than 10 mm.		P
	c) burn with the emission of flame after a period of 5 s has elapsed after the pouring of molten metal has ceased.		P

6	Test requirements		P
6.1	Samples		P
6.2	Conditioning for testing		P
6.2.1	Temperature conditioning cabinet		P
6.2.2	Pre-conditioning		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.2.3	Low temperature		P
6.2.4	High temperature		P
6.2.5	Water immersion		P
6.2.6	Artificial ageing		P
6.2.6.1	Apparatus		P
6.2.6.2	Procedure		P
6.2.7	Very low temperature		P
6.2.8	Very high temperature		P
6.2.8.1	Apparatus		P
6.2.8.2	Procedure		P
6.3	Testing atmosphere		P
6.4	Headforms		P
6.4.1	Construction		P
6.4.2	Selection of size		P
6.5	Measurement of clearance, distances and wearing height		P
6.6	Shock absorption		P
6.6.1	Principle		P
6.6.2	Apparatus		P
6.6.3	Test procedure		P
	a) the sample shall be mounted on the appropriate headform (see 6.4.2) in the manner in which it is intended to be worn on the head, ensuring (minimal) clearance between the headband and the headform.		P
	b) the striker shall be allowed to fall on to the centre of the crown of the helmet shell from a height of 1 000 mm ± 5 mm, measured from the point of impact on the helmet to the underside of the striker.		P
6.7	Resistance to penetration		P
6.7.1	Principle		P
6.7.2	Apparatus		P
6.7.3	Test procedure		P
	a) the sample shall be mounted on the appropriate headform (see 6.4.2), ensuring (minimal) clearance between the headband and the headform.		P
	b) the striker shall be allowed to fall on to the helmet shell from a height of 1 000 mm ± 5 mm, measured from the point of impact on the helmet shell to the point of the striker. The impact point shall be within a circle of radius 50 mm centred on the top of the helmet. The helmet shall be tilted on the headform as necessary.		P

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Clause	Requirement + Test	Result - Remark	Verdict
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	c) each of the helmets as specified in 6.1 shall be impacted in a different position.		P
6.8	Resistance to flame		P
6.8.1	Principle		P
6.8.2	Apparatus		P
6.8.3	Test procedure		P
6.9	Chin strap anchorage		P
6.9.1	Principle		P
6.9.2	Apparatus		P
6.9.3	Procedure		P
6.10	Electrical properties		P
6.10.1	Test 1		P
6.10.1.1	Principle		P
6.10.1.1	Procedure		P
6.10.2	Test 2		P
6.10.2.1	Principle		P
6.10.2.2	Procedure		P
6.10.3	Test 3		P
6.10.3.1	Principle		P
6.10.3.2	Procedure		P
6.11	Lateral deformation		P
6.11.1	Principle		P
6.11.2	Procedure		P
6.12	Molten metal splash		P
6.12.1	Principle		P
6.12.2	Apparatus		P
6.12.3	Procedure		P
	a) whether any metal penetrated the helmet shell.	NO	P
	b) the extent of any deformation of the shell.	NO	P
	c) if the shell burned with the emission of flame after a period of 5 s.	NO	P

7	Marking		P
7.1	Markings on the helmet		P
	a) number of this European Standard.		P
	b) name or identification mark of the manufacturer.		P
	c) year and quarter of manufacture.		P
	d) type of helmet (manufacturer' s designation). This shall be marked on both the shell and the Harness.		P
	e) size or size range (in centimetres). This shall be marked on both the shell and the harness		P

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Clause	Requirement + Test	Result - Remark	Verdict
	f) abbreviation for the material of the shell shall be in accordance with EN ISO 472. (For example, ABS, PC, HDPE, etc.)		P
7.2	Additional information		P
7.2.1	A label shall be attached to each helmet giving the following information, provided precisely and comprehensively in the language of the country of sale:		P
	<p>“For adequate protection this helmet must fit or be adjusted to the size of the user’s head.</p> <p>The helmet is made to absorb the energy of a blow by partial destruction or damage to the shell and the harness, and even though such damage may not be readily apparent, any helmet subjected to severe impact should be replaced.</p> <p>The attention of users is also drawn to the danger of modifying or removing any of the original component parts of the helmet, other than as recommended by the helmet manufacturer.</p> <p>Helmets should not be adapted for the purpose of fitting attachments in any way not recommended by the helmet manufacturer.</p> <p>Do not apply paint, solvents, adhesives or self-adhesive labels, except in accordance with instructions from the helmet manufacturer.”</p>		P
7.2.2	Each helmet shall carry moulded or impressed marking or shall carry a durable self-adhesive label stating the optional requirements complied with, as follows:		P
	Optional requirement	Marking/Label	P
	Very low temperature	– 20 °C or – 30 °C as appropriate	P
	Very high temperature	+ 150 °C	P
	Electrical insulation	440 V a.c.	P
	Lateral deformation LD	Molten metal splash MM	P
7.2.3	The following information, provided precisely and comprehensibly in the official language(s) of the country of sale, shall accompany each helmet:		P
	a) the name and address of the manufacturer;		P
	b) instructions or recommendations regarding adjustment, fitting, use, cleaning, disinfection, maintenance, servicing and storage. Substances recommended for cleaning, maintenance or disinfection shall have no adverse effect on the helmet and shall not be known to be likely to EN 397:2012+A1:2012 (E) 22 have any adverse effect upon the wearer, when applied in accordance with the manufacturer’s instructions;		P

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Clause	Requirement + Test	Result - Remark	Verdict
	c) details of suitable accessories and appropriate spare parts;		P
	d) the significance of the optional requirements complied with and given in accordance with 7.2.2, and guidance regarding the limits of use of the helmet, corresponding to the respective risks;		P
	e) guidance regarding the obsolescence deadline or period of obsolescence of the helmet and its component parts;		P
	f) guidance regarding details of the type of packaging suitable for transportation of the helmet.		P
A	Annex A(informative)		N/A
	Recommendations for the materials and construction of industrial safety helmets		N/A
B	Annex B(informative)		P
	Alternative procedure for artificial ageing		P
C	Annex C(normative)		P
	Test results — Uncertainty of measurement		P
D	Annex D(informative)		P
	Significant technical changes between this European Standard and EN 397:1995		P
ZA	Annex ZA(informative)		N/A
	Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC Personal Protective Equipment	(EU) 2016/425	N/A

attachment 3: Photo Documents

Appendix 1
Photo documentation

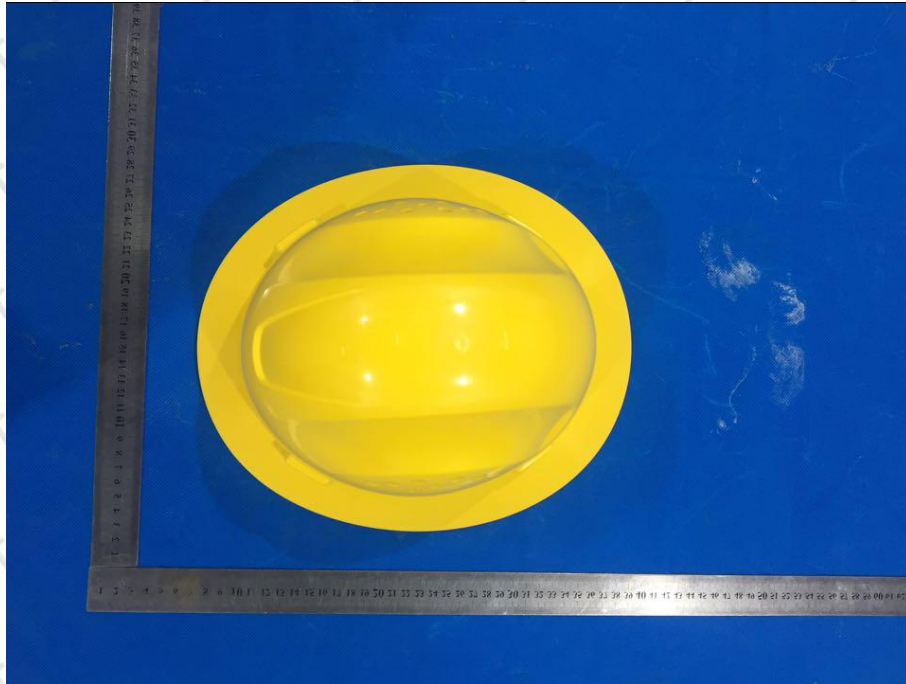
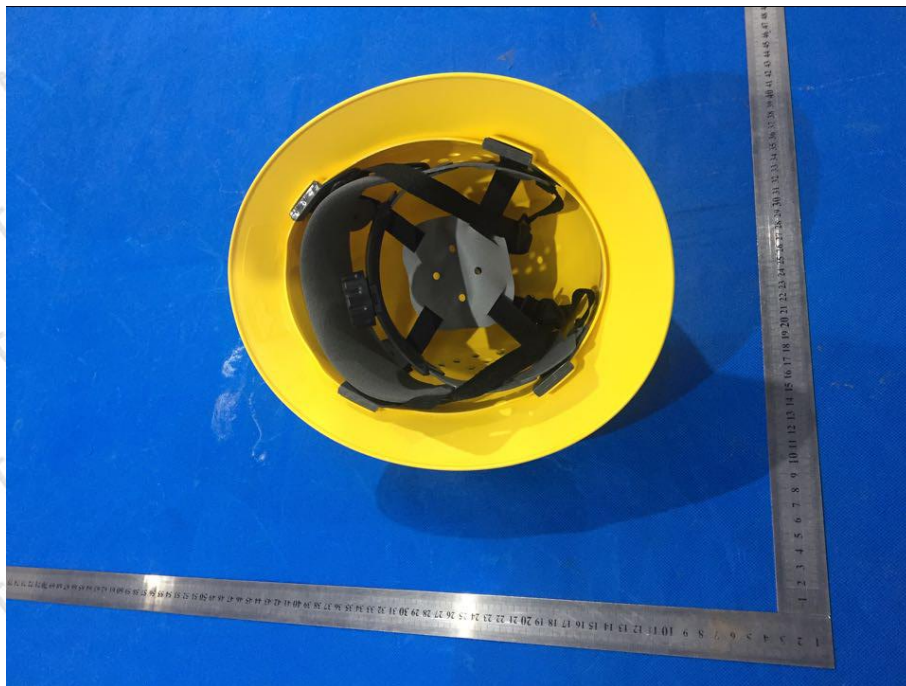


Fig.1



attachment 3: Photo Documents



Fig.3

*****ENDOFREPORT*****