

IEC 62716:2013 Photovoltaic (PV) modules

- Ammonia corrosion testing Confirmation of test results

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Applicant: Wuxi Suntech Power Co., Ltd.

VDE Renewables File Ref.: 10011/ ET-20221016-187

16 Xin Hua Road, Xinwu District, 214028 Wuxi City, China

Product: Crystalline silicon Photovoltaic (PV)-Modules

Type: A) STPXXXS-C72/Nshb A) STPXXXS-C72/Nshb

A) STPXXXS-C72/Nshm
B) STPXXXS-C54/Nshb
B) STPXXXS-C54/Nshm

B) STPXXXS-C54/Nshy

XXX in the type replace the power in Watt and can be any number between:

545 – 580 for A); 405 – 435 for B)

Manufacturer: Wuxi Suntech Power Co., Ltd.

Standard: IEC 62716:2013, Ammonia corrosion testing

Test conditions

Hours including heating up: 8 h

NH3 -concentration (ppm): 6667

Chamber temperature: 60°C

Relative Humidity: 100 %

Hours including cooling: 16 h

NH3 -concentration (ppm): 0

Chamber temperature: 23°C

Relative Humidity: 75 %

Pass criteria

Power degradation: < 5%

Dry Insulation: $> 40 \text{ M}\Omega\text{m}^2$

Wet insulation: $> 40 \text{ M}\Omega\text{m}^2$

Ground continuity: $< 0.1\Omega$

Bypass diode functionality: Shall be functional after test

BIC: DEUTDEFFXXX



Summary of test results:

Maximum power degradation: allowed max. 5 %

measured max. 0.75 %

The measured degradation is below the allowed degradation.

Dry insulation resistance: required min. 15.5 M Ω

measured $>500 M\Omega$

The measured dry insulation resistance is above the limit.

Wet insulation resistance: required min. 15.5 M Ω

measured $>500 M\Omega$

The measured wet insulation resistance is above the limit.

Ground continuity test: required max. 0.1Ω

measured max. 0.0112Ω

The measured ground continuity test is below the limit.

Visual inspection: No findings

Bypass diode functionality test: Still functional after test

The complete test results and the relevant bill of materials are given

in Test Report No.: TRPVM- ET-20221016-187-6.

VDE Renewables GmbH

Zhiyao Wang

Shanghai, 2023-02-02

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