



IEC 62716:2013
Photovoltaic (PV) modules
- Ammonia corrosion testing -
Confirmation of test results

VDE Renewables File Ref.: 10011/2020-40028

Applicant: Wuxi Suntech Power Co., Ltd.
16 Xin Hua Road, Xinwu District, 214028 Wuxi, Jiangsu, China.

Product: Crystalline silicon Photovoltaic (PV)-Modules

Type:

| | |
|----------------------------|----------------------------|
| A) STPXXXS-B72/Vnh | B) STPXXXS-B72H/Vnh |
| C) STPXXXS-B60/Wnh | D) STPXXXS-B60H/Wnh |
| E) STPXXXS-B60/Wnhm | F) STPXXXS-B60/Wnhb |
| G) STPXXXS-A72/Vnh | H) STPXXXS-A72H/Vnh |
| I) STPXXXS-A60/Wnh | J) STPXXXS-A60H/Wnh |
| K) STPXXXS-A60/Wnhb | L) STPXXXS-A60/Wnhm |
| M) STPXXX-A72/Vfh | N) STPXXX-A72H/Vfh |
| O) STPXXX-A60/Wfh | P) STPXXX-A60H/Wfh |

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

| | |
|----------------------|------------------------------|
| 415 – 445 for A), B) | 345 – 370 for C), D), E), F) |
| 365 – 410 for G), H) | 305 – 340 for I), J), K), L) |
| 325 – 390 for M), N) | 275 – 325 for O), P) |

Manufacturer: Wuxi Suntech Power Co., Ltd.

Standard: IEC 62716:2013, Ammonia corrosion testing

Test conditions

| | |
|---------------------------------------|-------|
| Hours including heating up: | 8 h |
| NH ₃ -concentration (ppm): | 6667 |
| Chamber temperature: | 60°C |
| Relative Humidity: | 100 % |
| Hours including cooling: | 16 h |
| NH ₃ -concentration (ppm): | 0 |
| Chamber temperature: | 23°C |
| Relative Humidity: | 75 % |



Pass criteria

Power degradation: < 5%

Dry Insulation: > 40 MΩm²

Wet insulation: > 40 MΩm²

Ground continuity: < 0.1Ω

Bypass diode functionality: Shall be functional after test

Summary of test results:

| | | |
|-----------------------------------|----------|-------------|
| Maximum power degradation: | allowed | max. 5 % |
| | measured | max. 1.29 % |

The measured degradation is below the allowed degradation.

| | | |
|-----------------------------------|----------|--------------|
| Dry insulation resistance: | required | min. 18.0 MΩ |
| | measured | >1000 MΩ |

The measured dry insulation resistance is above the limit.

| | | |
|-----------------------------------|----------|--------------|
| Wet insulation resistance: | required | min. 18.0 MΩ |
| | measured | >1000 MΩ |

The measured wet insulation resistance is above the limit.

| | | |
|--------------------------------|----------|--------------|
| Ground continuity test: | required | max. 0.1Ω |
| | measured | max. 0.0083Ω |

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-2020-40028-3.

VDE Renewables GmbH


Dean Wen


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63755 Alzenau, 2020-07-03