National Measurement & Regulation Office

OIML CERTIFICATE OF CONFORMITY

Issuing authority:	**National Measurement and Regulation Office**
Person responsible:	**Paul Dixon – Director, Certification Services**
Applicant:	**Nanjing Sanai Industrial Automation Co., Ltd** **2 Xiyan Road** **Binjiang Development Zone** **Jiangning, Nanjing** **Jiangsu** **PR China 211162**
Manufacturer:	**The applicant**
Identification of the certified pattern:	**SA-600 Array Belt Weigher**

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organisation of Legal Metrology (OIML):

OIML R 50 - Edition 2014(E) for **accuracy classes**: 0.2, 0.5, 1 and 2

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

Important note: Apart from the mention of the certificates reference number and the name of the OIML Member State in which the certificate was issued, partial quotation of the certificate or of the associated test report is not permitted, though they may be reproduced in full.

Issue Date: 10 April 2015
Reference No: TS0102/0003

Signatory: G Stones
for   Chief Executive

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The conformity was established by tests described in the associated pattern evaluation report P00821 which includes 19 pages.

Characteristics of the instrument:

This pattern of a fixed speed, automatic continuous totaliser (beltweigher), designed to weigh large quantities of loose material from bulk to bulk, is designated the "SA-600 Array Belt Weigher". It comprises:

- Data Processing Unit (DPU)
- Signal Gathering Unit (SGU)
- Weighing platform
- Speed sensor
- Junction box

The weighing platform comprises up to 8 Weighing Units type 0943ADB1 installed in succession.

A Weighing Unit consists of two weighing idlers installed on a load receptor supported by one load cell.

Any compatible speed sensor may be used.

The SGU collects analogue signals from the load cells, translate them into digital signals and performs preliminary calculations.
The DPU serves as the storage, processor and human interface of the system.

Load cells:

Any compatible load cell(s) may be used providing the following conditions are met:

- There is a respective OIML Certificate of Conformity (R60) issued for the load cell.
- The certificate contains the load cell types and the necessary load cell data required for the manufacturer's declaration of compatibility of modules, and any particular installation requirements. A load cell marked NH is allowed only if humidity testing to R76 has been conducted on this load cell.
- The compatibility of the load cells and indicator is established by the manufacturer by means of the compatibility of modules calculation at the time of verification.
- The load cell transmission conforms to a standard type.

Devices:

- Main totalising device
- Semi-automatic zero-setting device
- Indication of the flow rate
- Indication of the belt speed
- Indication of the totalised weight
- Error messages and alarms
- Data storage device

Interfaces:

- Load cells connection
- Power supply (to DPU and SGU)
- Communication DPU / SGU
- Speed sensor

Technical characteristics:

Power supply	100 - 240 VAC, 50 Hz
Totalisation scale interval	≥ 0.001 t
Q_{max}	Dependent upon application
Q_{min}	$\geq 10\%$ Q_{max}
Σ_{min}	Dependent upon application
Operating speed	0.4 to 5.0 m/s
Weigh length	Dependent upon application
Load cells excitation voltage	8 VDC
Minimum load cell impedance	75 Ω
Maximum load cell impedance	1100 Ω
Minimum input voltage per verification scale interval	3.13 µV
Minimum dead load voltage	0.62 µV
Measuring range minimum voltage	6.88 mV
Climatic environment	-10 °C to 40 °C Non-condensing (closed)
Electromagnetic environment	E2
Accuracy classes	0.2, 0.5, 1 and 2
Load cell cable	4 wire and screen

Software:

The legally relevant software comprises the following modules:

DPU: Executable file: SA600.exe
           Configuration files: DataConfig.dat, Alarm.dat, HistoryData.dat
           Data log files
SGU: Whole software

The legally relevant modules can only be modified via the sealed internal ports on the DPU and SGU.

The legally relevant software identification shall be as follows:

- DPU: A141003.XXX
- SGU: A140919.XXX

with:

- A reflecting the language (non-legally relevant, e.g. E for English)
- 141003 and 140919 indicating the legally relevant version
- XXX reflecting changes to the non-legally relevant software

The software identification can be displayed via the user menu.

The legally relevant parameters are password-protected; a non-editable counter increments every time these parameters are changed. The counter can be displayed via the user menu, and must be written on a tamper-evident label on the rating plate at initial verification.

Sealing measures:

The following parts shall be sealed using a tamper-evident solution bearing an identification mark:

- Inner protective casing of DPU
- SGU enclosure
- Head of screws connecting the upper casing of the Weighing Units and the top plate
- Connection between Weighing Unit and idler bracket
- Junction box

Markings:

The instrument bears the following indelible markings, on a secured plate located on the SGU:

- Identification mark of the manufacturer
- Serial number and type designation of the instrument
- The inscription: "Zero-setting shall involve at least ..... revolutions"
- Mains voltage V
- Mains frequency ...... Hz (if applicable)
- Designation of type(s) of product to be weighed
- Weigh length, WL ...... m
- Type approval sign
- Maximum capacity, Max ...... g, kg or t
- Temperature range ...... °C / ...... °C, (if applicable)
- Accuracy class = 0.2, 0.5, 1 or 2
- Totalisation scale interval, d = ... g, kg or t
- Nominal speed(s) of the belt v = ... m/s
- Maximum flowrate, Q_{max} = ... g/h, kg/h or t/h
- Minimum flowrate, Q_{min} = ... g/h, kg/h or t/h
- Minimum totalized load, Σ_{min} = ... g, kg or t
- Supplementary markings (if applicable)

Certificate History

ISSUE NO.	DATE	DESCRIPTION
R50/2014-GB1-15.01	10 April 2015	Certificate first issued
-	-	No revisions have been issued.