

## CERTIFICATE OF CONFORMITY

08/X29/1/3953657-1001-6

## TO: UNE-IEC 61822, 2<sup>nd</sup> Edition AENA DIN/DSEYN/PPT/002 -05/13

| Product: |               |
|----------|---------------|
|          | AES-CCR-2100S |

Manufacturer: Airfield Equipment & Services, S.L.

Applications:

Constant Current Regulator Size 2,5 kVA - 30 kVA

We hereby certify:

That we conducted an inspection, review and documental study of the characteristics of the above mentioned equipment based on the test witnessed by **LCIE Bureau Veritas**.

On the base of all the foregoing, and in view of the results obtained; we confirm that: the constant current regulator model **CCR-2100S** above referenced, manufactured by Airfield Equipment & Services, S.L., designed for airfield regulators applications,

## **FULFIL SATISFACTORILY**

the demands and requirements of the above mentioned standards and of technical provisions of AENA referred in the present document, and specifically the specifications of the UNE-IEC 61822 and AENA PPT 002 -05/13.

| Test                           | Constant current regulator | Result       |
|--------------------------------|----------------------------|--------------|
|                                | Reference (IEC)            | It fulfils   |
| a. Visual inspection           | 7.1                        | Satisfactory |
| b. Safety                      | 7.2                        | Satisfactory |
| c. Power frequency             | 7.3.1                      | Satisfactory |
| d. Enclosure temperature       | 7.4                        | Satisfactory |
| e. Open circuit                | 7.5.1                      | Satisfactory |
| f. Over current                | 7.5.2                      | Satisfactory |
| g. Operation                   | 7.6                        | Satisfactory |
| h. Regulation (resistive load) | 7.7.1.1                    | Satisfactory |
| i. Regulation (reactive load)  | 7.7.1.2                    | Satisfactory |
| j. Efficiency                  | 7.7.2                      | Satisfactory |
| k. Power factor                | 7.7.3                      | Satisfactory |
| I. Output current surge        | 7.7.4                      | Satisfactory |
| m. Dynamic response            | 7.7.5                      | Satisfactory |
| n. Power supply interruptions  | 7.7.6                      | Satisfactory |
| ñ. Output waveforms            | 5.4.2                      | Satisfactory |
| o. Mechanical option           | 7.7.7                      | Satisfactory |



| p. EMC                 | 7.7.8 | Satisfactory |
|------------------------|-------|--------------|
| q. BIL                 | 7.3.2 | Satisfactory |
| r. Lightning arrestors | 7.7.9 | Satisfactory |
| s. Low temperature     | 7.8.1 | Satisfactory |
| t. High temperature    | 7.8.2 | Satisfactory |

As well as the requirements of both standard, the additional accessories required by AENA detailed below:

| Test   | Constant current regulator<br>Reference (IEC) | Result<br>It fulfils |
|--|---|----------------------|
| i. Supervision interface voltages                    | 5.3.9.2                                       | Satisfactory         |
| ii. Earth fault detection                            | 5.7.1   | Satisfactory         |
| iii. Load indicator                                  | 5.7.2   | Satisfactory         |
| iv. Lamp fault detection                             | 5.7.3   | Satisfactory         |
| v. Output lightning arrestors                        | 5.7.4   | Satisfactory         |
| vi. Field circuit isolator                           | 5.7.5   | Satisfactory         |
| vii. Non-illumination current step                   | 5.7.6   | Satisfactory         |
| viii. Out of range indicator                         | 5.7.7   | Satisfactory         |
| ix. Output ammeter                                   | 5.7.8   | Satisfactory         |
| x. Short circuit protection                          | 5.7.9   | Satisfactory         |
| xi. Serial wiring                                    | 5.7.10  | Satisfactory         |
| xii. Temperature sensor                              | 4.1.4 (PPT)                                   | Satisfactory         |
| xiii. Mechanical design - wheels                     | 4.1.5 (PPT)                                   | Satisfactory         |
| xiv. Control and supervision connector configuration | 4.1.6 (PPT)                                   | Satisfactory         |
| xv. Protection against electric shock                | 4.3 (PPT)                                     | Satisfactory         |

And for the record for the appropriate purposes we issue and sign this Certification in Barcelona, on May  $23^{\text{th}}$  of 2019.

