



Marine & Offshore

Certificate number: 06986/G0 BV

File number: ACE 05/160/01

Product code: 2852I

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**EREMU S.A.**

Astigarraga - SPAIN

*for the type of product*

**AIR-COOLED TRANSFORMERS**

Transformer Natural Air Cooled - Type 23-BBCCDD.

### Requirements:

BV Rules for the Classification of Steel Ships - Part C, Chap. 2, Sec. 5.

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 29 Nov 2027**

### For Bureau Veritas Marine & Offshore,

At BV BILBAO, on 29 Nov 2022,

Juan jose GUTIERREZ GARCIA

***This certificate was created electronically and is valid without signature***



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=zew3im6qaq>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

Air-cooled Three Phases Power Transformer type 23-BBBCCDD.

#### Legend:

- 23** Dry Type 3-phase transformer  
**BBB** Rated Power  
**CC** Code for primary Rated Voltage  
**DD** Code for secondary Rated Voltage

#### Specification:

<b>Frequency:</b>	50/60 Hz
<b>Primary Voltage:</b>	Up to 690V
<b>Secondary Voltage:</b>	Up to 400V
<b>Power:</b>	Up to 500kVA
<b>Index of Protection:</b>	IP23
<b>Insulation Class:</b>	F
<b>Cooling:</b>	AN

### 2. DOCUMENTS AND DRAWINGS:

Technical Dossier 3-Phase Transformer Power up to 500kVA Rev. D dated 26/03/2012.

### 3. TEST REPORTS:

#### Test Reports:

- BV 145-SSB-95 AC BV 8.8.95
- BV 0387 SSB 04 PM BV 17-12-04
- BV 0387 SSB 04 PM BV 16-12-04
- BV 0106 SSB 11 RI dated 23/03/2011

#### Inspection certificates n°s:

- 0098/SSB/03 dated 06/03/2003
- 0125/SSB/03 dated 24/03/2003
- 0229/SSB/02 dated 24/09/2002
- 0130/SSB/01 dated 09/08/2001
- 0055/SSB/00 dated 15/06/2000
- 0044/SSB/00 dated 17/05/2000
- 0022/SSB/00 dated 16/02/2000
- 0021/SSB/00 dated 16/02/2000.
- 0387/SSB/04 dated 03/01/2005
- 0121/SSB/05 dated 15/04/2005

### 4. APPLICATION / LIMITATION:

BV Rules for the Classification of Steel Ships and IEC 60076-11

### 5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **EREMU S.A** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

5.4 - **EREMU S.A** has declared to Bureau Veritas the following production site:

**EREMU S.A**  
**Donostia Ibilbidea,70 -**  
**Parcelas 5 y 6**  
**20115 Astigarraga**  
**Guipuzcoa**  
**SPAIN**

### 6. MARKING OF PRODUCT:

- Maker's name or trade mark,
- Serial number of the units,
- Equipment type number or model identification under which it was type-tested,

- Society's brand as relevant.

**7. OTHERS:**

7.1 - It is **EREMU S.A**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 06986/F0 BV issued on 24 October 2017 by the Society.

**\*\*\* END OF CERTIFICATE \*\*\***