



Certificate number: 02859/H0 BV

File number: ACE 14/163/02

Product code: 2662H

*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

ERICO FRANCE SARL
ANDREZIEUX BOUTHEON - FRANCE

for the type of product

INSULATED BUSBARS (LOW VOLTAGE)

Insulated Conductor

Type: nVent ERIFLEX Flexibar and nVent ERIFLEX Flexibar Advanced

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

IEC 61439-1 (2020), IEC 61439-2 (2020)

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: 06 Jan 2031

For Bureau Veritas Marine & Offshore,

At BV LYON, on 06 Jan 2026,

Michaël Vavro

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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Flexible Insulated Conductor model or type designation:

- Single core "**FLEXIBAR**"
- Single core "**FLEXIBAR ADVANCED**"

Technical data:

- Voltage rating: 1000 VAC; 1500 VDC
- Material: Electrolytic copper Cu-ETP + Thermoplastic Elastomer
- Short-circuit rating: To be evaluated on each case
- Admissible current intensities: The following values based on a temperature rise of 45°C may be considered subject that limitation specified in § 4.2 is satisfied

Number of laminate	Width of laminates (mm)	Thickness of laminates (mm)	Current ratings at 45°C ambient T°(A)
8	6	0.5	157
3	9	0.8	127
6	9	0.8	232
9	9	0.8	251
3	13	0.5	158
6	13	0.5	240
2	15.5	0.8	201
4	15.5	0.8	304
6	15.5	0.8	381
10	15.5	0.8	432
2	20	1	261
3	20	1	342
4	20	1	381
5	20	1	398
6	20	1	438
10	20	1	612
2	24	1	360
3	24	1	392
4	24	1	441
5	24	1	488
6	24	1	537
8	24	1	643
10	24	1	759
2	32	1	385
3	32	1	455
4	32	1	520
5	32	1	607
6	32	1	678
8	32	1	816
10	32	1	987
2	40	1	432

Number of laminate	Width of laminates (mm)	Thickness of laminates (mm)	Current ratings at 45°C ambient T°(A)
3	40	1	495
4	40	1	583
5	40	1	721
6	40	1	816
8	40	1	987
10	40	1	1120
3	50	1	562
4	50	1	690
5	50	1	882
6	50	1	982
8	50	1	1115
10	50	1	1323
3	63	1	640
4	63	1	811
5	63	1	977
6	63	1	1153
8	63	1	1323
10	63	1	1518
3	80	1	785
4	80	1	963
5	80	1	1115
6	80	1	1304
8	80	1	1518
10	80	1	1684
4	100	1	1162
5	100	1	1314
6	100	1	1470
8	100	1	1722
10	100	1	1883
12	100	1	2006
10	120	1	2210

2. DOCUMENTS AND DRAWINGS:

Manufacturer's Catalogue - 8802 & Specifications dated 2004.

Manufacturer's Catalogue Ref. ERIFLEX-CAT-P1300C-P274LT17EUFR-FR-1805, dated 2018

BV Test and Inspection Laboratory Report Ref. PV0118_25 dated on 17/11/2025.

3. TEST REPORTS:

CETIM PV N° 3/6/2196 of 7 March 1983.

LCIE Test Report N° 284 156 of 19 September 1985.

POLYREC PV N° CB of 2 September 1988.

LI N° 16303 of 26 September 1989.

UNIVERSITÄT KAISERSLAUTERN - Test Report of July 1988.

Test Report ERICO N° 43/98 of 30 November 1998.

ERICO Test Report N° 57/04 dated 25/06/2004.

ERICO Test Report N° PV 81/09 dated 12/Oct./2009. The tests were witnessed by a Society Surveyor.

APAVE Test Report N° 9556430-001-1, dated 01 Mar 2017.

APAVE Test Report N° 9533892-001-1, dated 11 Jun 2018.

4. APPLICATION / LIMITATION:

4.1 - According to BV Rules for the Classification of Steel Ships and IEC 60092 series.

4.2 - The admissible current intensities specified in this certificate shall apply subject to the condition that the housings in which these busbars are installed, are equipped with a cooling system designed to evacuate the heat dissipated by these busbars, as well as by all other electrical components housed within the enclosures.

4.3 - It shall be verified for each installation that the busbar is designed in such a way that under the anticipated short-circuit conditions, its final temperature does not exceed 160°C and supports, if used, are capable to withstand the electromagnetic forces generated by the short-circuit current.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **ERICO FRANCE SARL** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **ERICO FRANCE SARL** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **ERICO FRANCE SARL** has declared to Bureau Veritas the following production site:

ERICO FRANCE SARL
Rue Benoît-Fourneyron
B.P.31
Z.I. Sud
42161 ANDREZIEUX BOUTHEON
FRANCE

6. MARKING OF PRODUCT:

- Trade name,
- Date of manufacture and serial number,
- Equipment type number or model identification under which it was type-tested.

7. OTHERS:

7.1 - It is **ERICO FRANCE SARL**'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. 02859/G0 BV issued by the Society.

*** END OF CERTIFICATE ***