



# NIPPON KAIJI KYOKAI

## *Certificate*

Certificate No.  
TA26494E(N)

*OF*

### *APPROVAL*


|                  |  |
|------------------|--|
| Item             | : A-0 / 30 / 60 class pipe penetration<br>(Bulkhead and Deck)  |
| Product name     | : Penetration type 866, 866.032, 868                           |
| Specifications   | : See the drawings in Annex.                                   |
| Applicant        | : BLÜCHER Metal A/S<br>Pugdølvej 1, DK-7480 Vildbjerg, Denmark |
| Manufacturer     | : The same as the Applicant.                                   |
| Testing standard | : 2010 FTP Code Annex 1 / Part 3                               |
| Test reports     | : See Annex.   |
| Limitations      | : See Annex  |

THIS IS TO CERTIFY that the above type of products has been approved by Nippon Kaiji Kyokai with type approval No. 26FPA26DA, and that the products of the above type will be accepted for use onboard ships classed with the Society as complying with the relevant requirements of the Society's *Rules for the Survey and Construction of Steel Ships* and those of the *International Convention for the Safety of Life at Sea, 1974*, as amended, conditional upon the manufacturer having a quality control system audited by a competent authority to ensure continuous compliance with the type approval conditions.

This certificate is valid from 16 February 2026 until 15 February 2031.

Issued at Tokyo on 17 April 2026.

NIPPON KAIJI KYOKAI

  
M. Irisawa  
General Manager

Material and Equipment Department



## 1. Test reports

### 1-1. Penetration type 866

| Test laboratory (Test place)  | Report number | Date of issue   |
|---|---------------|-----------------|
| Danish Institute of Fire and Security Technology<br>(Jernholmen 12, DK-2650 Hvidovre, Copenhagen,<br>Denmark) | PGA11265A     | 29 August 2018  |
|   | PGA11214A     | 14 Sep. 2018    |
|   | PGA11317A     | 12 March 2019   |
|   | PGA11555A     | 19 Nov. 2019    |
|   | PHA11296B     | 20 January 2020 |
|   | PGA11215A     | 8 July 2020     |
|   | PGA11316A     | 8 July 2020     |

### 1-2. Penetration type 866.032

| Test laboratory (Test place)  | Report number | Date of issue |
|---|---------------|---------------|
| Danish Institute of Fire and Security Technology<br>(Jernholmen 12, DK-2650 Hvidovre, Copenhagen,<br>Denmark) | PGA11214A     | 14 Sep. 2018  |
|   | PGA11317A     | 12 March 2019 |
|   | PGA11215A     | 8 July 2020   |
|   | PGA11316A     | 8 July 2020   |
|   | PGA11296A     | 9 July 2020   |

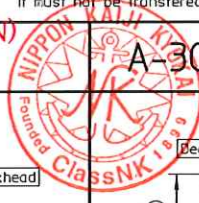
### 1-3. Penetration type 868

| Test laboratory (Test place)  | Report number | Date of issue   |
|---|---------------|-----------------|
| Danish Institute of Fire and Security Technology<br>(Jernholmen 12, DK-2650 Hvidovre, Copenhagen,<br>Denmark) | PGA11264A     | 28 August 2018  |
|   | PGA11265A     | 29 August 2018  |
|   | PGA11214A     | 14 Sep. 2018    |
|   | PGA11317A     | 12 March 2019   |
|   | PGA11554A     | 15 Nov. 2019    |
|   | PHA11296B     | 20 January 2020 |
|   | PGA11215A     | 8 July 2020     |
|   | PGA11316A     | 8 July 2020     |

## 2. Limitations

1. In case that A-60 class penetration is used as A-15/A-30 class penetration, such penetration is to be applied to the specification for A-60 class penetration described in the attached drawings.
2. In case that A-60 class penetration is used as A-0 class penetration, any insulation fitted (on the penetration itself and 200mm around) to be fitted also for A-0 class penetration.

Annex to the Certificate No. TA26494E(N)

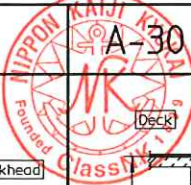


| Dimension | Penetration | A-0 | A-30 Insulation | A-60 Insulation |
|-----------|-------------|-----|-----------------|-----------------|
| Ø50       |             |     |                 |                 |
| Ø75       |             |     |                 |                 |
| Ø110      |             |     |                 |                 |
| Ø160      |             |     |                 |                 |

SI

|   |           |           |                |                           |                      |                   |   |                                      |        |
|---|-----------|-----------|----------------|---------------------------|----------------------|-------------------|---|--------------------------------------|--------|
| Small changes   | Update    | Update    |                |                           |                      |                   |   |                                      |        |
| 160308 JO   | 191106 JO | 250501 JO |                |                           |                      |                   |   |                                      |        |
| ikke angivne tolerancer ifølge :<br>DS/ISO 2768-c                           |           |           |                |                           |                      | Overflade/Surface |   | Areal/Area<br>0.00000 m <sup>2</sup> |        |
| Materiale/Material<br>Werkst. Nr. 1.4301                                    |           |           | Målestok/Scale | Tegnet/Drawn<br>051108 JO | Kontrolleret/Checked |                   | Erstattet af/<br>Replaced by<br>1234      |                                      | Rev. A |
| Titel/Designation<br>Insulation dimensions on Blücher penetrations type 866 |           |           |                |                           |                      |                   | Erstating for/<br>Replacement for<br>1234 |                                      | Rev. A |
|   |           |           |                |                           |                      |                   | Tegning Nr./Drawing No.<br>S-0377-300     |                                      | Rev. C |

Annex to the Certificate No. TA26494E(N)

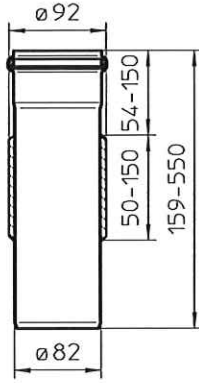
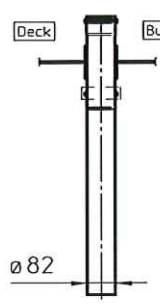
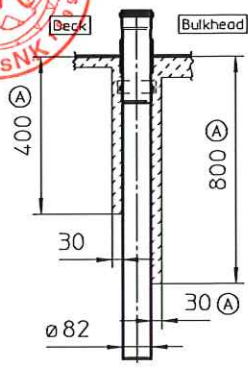
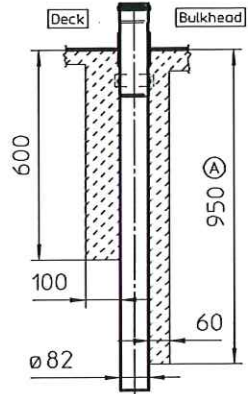


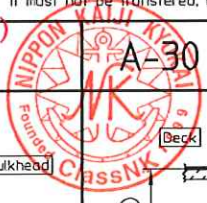
| Dimension | Penetration | A-0 | A-30 Insulation | A-60 Insulation |
|-----------|-------------|-----|-----------------|-----------------|
| Ø125      |             |     |                 |                 |
| Ø40       |             |     |                 |                 |
| Ø200      |             |     |                 |                 |

SI

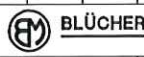
|  |                    |           |           |                |  |                   |  |  |  |
|--|--------------------|-----------|-----------|----------------|--|-------------------|--|--|--|
| ø40/ø200 added   | Small dia. changes | Update    | Update    |                |  |                   |  |  |  |
| 110308 JO  | 160308 JO          | 191106 JO | 250501 JO |                |  |                   |  |  |  |
| Ikke angivne tolerancer ifølge :<br>Not stated tolerances according to : |                    |           |           | DS/ISO 2768-c  |  | Overflade/Surface |  | Areal/Area                                 |  |
| Materiale/Material   |                    |           |           | Målestok/Scale |  | Tegnet/Drawn      |  | Kontrolleret/Checked                       |  |
| Werkst. Nr. 1.4301   |                    |           |           |                |  | 090406 JO         |  | Erstatter af/ Replaced by 1234 Rev. A      |  |
| Titel/Designation  |                    |           |           |                |  |                   |  | Erstatter for/ Replacement for 1234 Rev. A |  |
| Insulation dimensions on Blücher penetrations type 866                   |                    |           |           |                |  |                   |  | Tegning Nr./Drawing No. S-0377-308 Rev. D  |  |

Annex to the Certificate No. TA26494E(N)

| Dimension | Penetration   | A-0   | A-30 Insulation  | A-60 Insulation   |
|-----------|---|---|--|---|
| Ø82       |  |  |  |  |
|           |   |   |  |   |
|           |   |   |  |   |
|           |   |   |  |   |

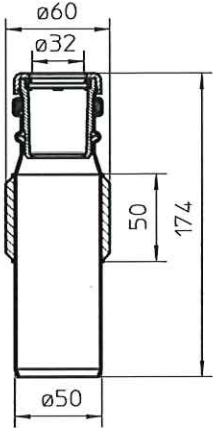
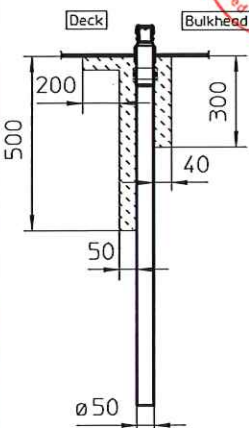
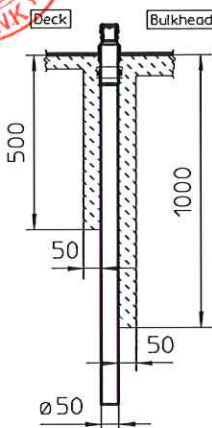
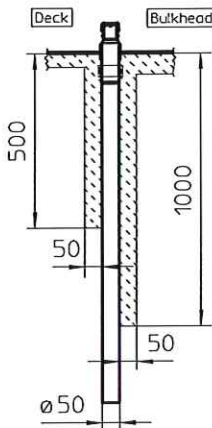
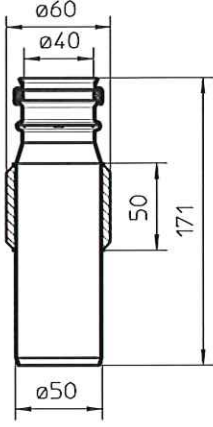
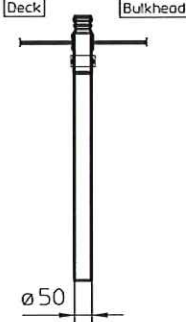
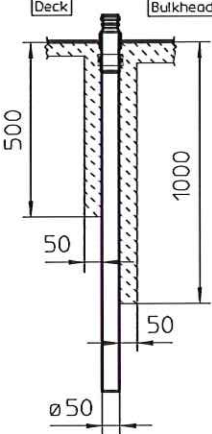
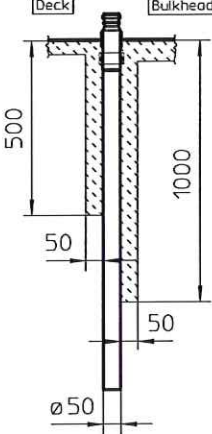


SI

|  |     |                |              |   |   |                                    |   |                        |   |
|--|-----|----------------|--------------|---|---|------------------------------------|---|------------------------|---|
| Update   | (A) | B              | C            | (D)   | E | F                                  | G | H                      | I |
| 250501 JO  |     |                |              | 250501  |   |                                    |   |                        |   |
| Ikke angivne tolerancer ifølge :<br>Not stated tolerances according to : |     |                |              |  <b>BLÜCHER</b> |   | Overflade/Surface                  |   | Areal/Area             |   |
| DS/ISO 2768-c  |     |                |              |   |   |                                    |   | 0.00000 m <sup>2</sup> |   |
| Materiale/Material   |     | Målestok/Scale | Tegnet/Drawn | Kontrolleret/Checked  |   | Erstatter af/<br>Replaced by       |   | 1234 Rev. A            |   |
| Werkst. Nr. 1.4301   |     |                | 040322 JO    |   |   | Erstatning for/<br>Replacement for |   | 1234 Rev. A            |   |
| Titel/Designation  |     |                |              |   |   | Tegning Nr./Drawing No.            |   | Rev.                   |   |
| Insulation dimensions on Blücher penetrations type 866                   |     |                |              |   |   | S-0377-363                         |   | A                      |   |

Annex to the Certificate No. TA26494E(N)

This drawing is the property of BLÜCHER Metal A/S, Denmark and is protected by pending law. It must not be transferred, lent or reproduced without an explicit written permission from the company.

| Dimension | Penetration  | A-0  | A-30 Insulation   | A-60 Insulation  |
|-----------|--|--|---|--|
| Ø32       |   |   |   |   |
| Ø40       |  |  |  |  |
|           |  |  |   |  |



EPDM

|  |   |   |                             |                           |                      |                                       |        |                                      |
|--|---|---|-----------------------------|---------------------------|----------------------|---------------------------------------|--------|--------------------------------------|
| A  | B | C | D                           | E                         | F                    | G                                     | H      | I                                    |
| Ikke angivne tolerancer ifølge :<br>Not stated tolerances according to :<br><b>DS/ISO 2768-c</b> |   |   |                             |                           |                      | Overflade/Surface                     |        | Areal/Area<br>0.00000 m <sup>2</sup> |
| Materiale/Material<br><b>Werkst. Nr. 1.4301</b>  |   |   | Målestok/Scale<br>191210 JO | Tegnet/Drawn<br>191210 JO | Kontrolleret/Checked | Erstatlet af/<br>Replaced by<br>1234  | Rev. A |                                      |
| Titel/Designation<br>Insulation dimensions on penetrations type 866.032.                         |   |   |                             |                           |                      | Tegning Nr./Drawing No.<br>S-0377-334 | Rev. A |                                      |

Annex to the Certificate No. TA26494E(N)



| Dimension | Penetration | A-0 Insulation | A-30 Insulation | A-60 Insulation |
|-----------|-------------|----------------|-----------------|-----------------|
| Ø50       |             |                |                 |                 |
| Ø75       |             |                |                 |                 |
| Ø110      |             |                |                 |                 |

SI

|  |                    |   |                |   |                      |   |                                   |   |                        |
|--|--------------------|---|----------------|---|----------------------|---|-----------------------------------|---|------------------------|
| Small changes/Update   | A                  | B | C              | D | E                    | F | G                                 | H | I                      |
| 160308 JO 191106 JO  |                    |   |                |   |                      |   |                                   |   |                        |
| ikke angivne tolerancer ifølge :<br>Not stated tolerances according to : | DS/ISO 2768-c      |   | Målestok/Scale |   | Tegnet/Drawn         |   | Overflade/Surface                 |   | Areal/Area             |
| Materiale/Material   | Werkst. Nr. 1.4301 |   | 051108 JO      |   | Kontrolleret/Checked |   | 1234                              |   | 0.00000 m <sup>2</sup> |
| Titel/Designation  |                    |   |                |   |                      |   | Erstillet af/<br>Replaced by      |   | Rev. A                 |
| Insulation dimensions on Blücher penetrations type 868                   |                    |   |                |   |                      |   | Erstating for/<br>Replacement for |   | Rev. A                 |
|  |                    |   |                |   |                      |   | Tegning Nr./Drawing No.           |   | Rev. B                 |
|  |                    |   |                |   |                      |   | S-0377-301                        |   |                        |

Annex to the Certificate No. TA26494E(N)

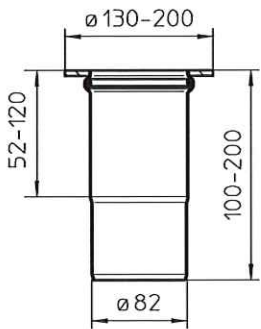
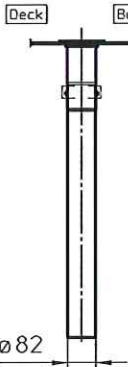
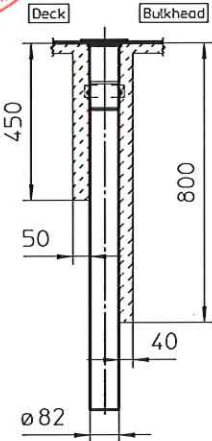
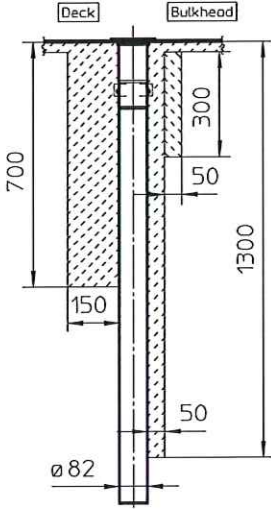


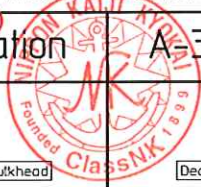
| Dimension | Penetration | A-0 Insulation | A-30 Insulation | A-60 Insulation |
|-----------|-------------|----------------|-----------------|-----------------|
| Ø40       |             |                |                 |                 |
| Ø125      |             |                |                 |                 |
| Ø160      |             |                |                 |                 |
| Ø200      |             |                |                 |                 |

SI

|  |     |     |                       |     |                                  |   |                      |  |   |
|--|-----|-----|-----------------------|-----|----------------------------------|---|----------------------|--|---|
| More dia   | (A) | (B) | (C)                   | (D) | (E)                              | (F)   | (G)                  | (H)  | (I)   |
| 191118 JO  |     |     |                       |     |                                  |   |                      |  |   |
| Ikke angivne tolerancer ifølge :<br>Not stated tolerances according to :<br><b>DS/ISO 2768-c</b> |     |     |                       |     |                                  | Overflade/Surface                                 |                      | Areal/Area<br>0.00000 m <sup>2</sup>         |   |
| Materiale/Material<br><b>Werkst. Nr. 1.4301</b>  |     |     | Målestok/Scale<br>1:1 |     | Tegnet/Drawn<br><b>110308 JO</b> |   | Kontrolleret/Checked |  | Erstallet af/<br>Replaced by<br>1234 Rev. A |
| Titel/Designation<br><b>Insulation dimensions on Blücher penetrations type 868</b>               |     |     |                       |     |                                  | Erstalling for/<br>Replacement for<br>1234 Rev. A |                      | Tegning Nr./Drawing No.<br><b>S-0377-330</b> |   |
|  |     |     |                       |     |                                  |   |                      | Rev. A                                       |   |

Annex to the Certificate No. TA26494E(N)

| Dimension  | Penetration   | A-0 Insulation  | A-30 Insulation  | A-60 Insulation   |
|------------|---|---|--|---|
| <p>Ø82</p> |  |  |  |  |
|            |   |   |  |   |
|            |   |   |  |   |



SI

|  |   |   |                             |                    |                      |  |                                      |   |
|--|---|---|-----------------------------|--------------------|----------------------|--|--------------------------------------|---|
| A  | B | C | D                           | E                  | F                    | G  | H                                    | I |
| Ikke angivne tolerancer ifølge :<br>Not stated tolerances according to :<br><b>DS/ISO 2768-c</b> |   |   |                             |                    |                      | Overflade/Surface                            | Areal/Area<br>0.00000 m <sup>2</sup> |   |
| Materiale/Material<br><b>Werkst. Nr. 1.4301</b>  |   |   | Målestok/Scale<br>220317 JO | Tegner/Drawn<br>JO | Kontrolleret/Checked | Erstatlet af/<br>Replaced by<br>1234         | Rev. A                               |   |
| Titel/Designation<br><b>Insulation dimensions on Blücher penetrations type 868</b>               |   |   |                             |                    |                      | Tegning Nr./Drawing No.<br><b>S-0377-364</b> | Rev. A                               |   |