

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Electrode**

with trade name  
**Excalibur 7018 MR**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>3 YH5</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>max. 6.4 mm (1/4 in)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Electrode**

with trade name  
**Excalibur 7018-1 MR**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>3 YH5</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>max.6.4 mm (1/4 in)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**

# VERIFICATION STATEMENT

**This is to verify:**

**That the Electrode**

with trade name  
**Excalibur 7018 XMR**

Distributed by  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>3 YH5</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>max. 6.4 mm (1/4 in)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-02-28**

This Statement is valid until **2025-02-27**.

DNV GL local station: **Houston**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-02-28, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Electrode**

with trade name  
**Millennium Arc 7018-1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>3 YH5</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>2.4mm – 4.0mm (3/32 in. - 5/32 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding.</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2017-05-19**

This Certificate is valid until **2022-05-18**.

DNV GL local station: **Houston**

Approval Engineer: **Hans-Joachim Vogt**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2017-05-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Electrode**

with trade name  
**Excalibur 10018-D2 MR**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>3 Y62H5</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>2.4 - 4.0 mm (3/32 - 5/32 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-06-30**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Electrode**

with trade name  
**Excalibur 7028**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>3 YH10</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>4.0 mm - 5.6 mm (5/32 in. - 7/32 in.)</b>
<b>Positions</b>	<b>Flat and Horizontal (PB)</b>
<b>Remarks</b>	<b>For fillet welding only</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Høvik** on **2017-01-01**

This Certificate is valid until **2021-12-31**.

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 09.05.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

### That the Electrode

with trade name  
**Fleetweld 5P+**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>3</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>2.4 - 4.8 mm (3/32 - 3/16 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-02-22**

This Certificate is valid until **2022-12-31**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Dau, Gabi  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-02-22, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# VERIFICATION STATEMENT

**This is to verify:**

**That the Electrode**

with trade name  
**Pipeliner 6P+**

Distributed by  
**Lincoln Electric Company**  
**CLEVELAND OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>3</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>2.4 - 4.8 mm (3/32 - 3/16 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-02-22**

This Statement is valid until **2022-12-31**.  
DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Dau, Gabi  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-02-22, on behalf of

**Thorsten Lohmann**  
**Head of Section**



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024K**  
Revision No:  
**1**

## This is to certify:

### That the Electrode

with trade name  
**Fleetweld 37**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>1</b>
<b>Current</b>	<b>AC/DC(±)</b>
<b>Approved diameter</b>	<b>2.0 mm - 4.8 mm (5/64 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat and horizontal</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

for **DNV GL**



Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

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LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW0000261**  
Revision No:  
**1**

## This is to certify:

### That the Electrode

with trade name  
**Jetweld LH-70**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>3 Y40H5</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>2.4 mm - 6.4 mm (3/32 in. - 1/4 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024G**  
Revision No:  
**1**

## This is to certify:

### That the Electrode

with trade name  
**Jetweld 1**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>1</b>
<b>Current</b>	<b>AC/DC(±)</b>
<b>Approved diameter</b>	<b>3.2 mm - 6.4 mm (1/8 in. - 1/4 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

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LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Gas combination**

with trade name  
**Pipelinex 80Ni1 / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V Y50MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.0 - 1.2 mm (0.04 - 0,047 inch)</b>
<b>Positions</b>	<b>All, incl. vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2019-02-19**

This Certificate is valid until **2023-06-30**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wenning, Martin

Location: DNV GL Hamburg, Germany

Signing Date: 2019-02-19, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024Y**  
Revision No:  
**1**

## This is to certify:

**That the Wire/Gas combination**

with trade name  
**SuperArc L-50 / C1**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>0.8 mm - 1.6 mm (0.03 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

for **DNV GL**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

**Thorsten Lohmann**  
**Head of Section**

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LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024E**  
Revision No:  
**1**

## This is to certify:

**That the Wire/Gas combination**

with trade name  
**SuperArc L-50 / M21**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>0.8 mm - 1.6 mm (0.03 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

for **DNV GL**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

**Thorsten Lohmann**  
**Head of Section**

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# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Gas combination**

with trade name  
**SuperArc L-56 / C1**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>0.6 mm - 1.6 mm (0.025 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

for **DNV GL**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Wire/Gas combination**

with trade name  
**SuperArc L-56 / M21**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>0.6 mm - 1.6 mm (0.025 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.  
DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: **Widhagen, Christian**  
Location: **DNV GL Hamburg, Germany**  
Signing Date: **05.02.2021, on behalf of**

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW00002YB**  
Revision No:  
**1**

**This is to certify:**

**That the Wire/Gas combination**

with trade name  
**SuperArc L-59 / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III Y40MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>0.9 mm - 1.6 mm (0.035 in. - 1/16 in.)</b>
<b>Positions</b>	<b>Flat, Horizontal and Vertical upwards</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-06-25**

This Certificate is valid until **2022-05-01**.

DNV GL local station: **New York**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 25.06.2018, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024X**  
Revision No:  
**1**

## This is to certify:

**That the Flux Cored Wire**

with trade name  
**Innershield NR-203MP**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(-)</b>
<b>Approved diameter</b>	<b>1.7 mm, 2.0 mm (0.068 in., 5/64 in.)</b>
<b>Positions</b>	<b>All, incl. vertical downwards</b>
<b>Remarks</b>	<b>Self-shielded Flux Cored Wire</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW0000254**  
Revision No:  
**1**

## This is to certify:

### That the Flux Cored Wire

with trade name  
**Innershield NR-203 Nickel (1%)**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(-)</b>
<b>Approved diameter</b>	<b>2.0 mm (5/64 in.)</b>
<b>Positions</b>	<b>All, incl. vertical downwards</b>
<b>Remarks</b>	<b>Self-shielded Flux Cored Wire</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

for **DNV GL**



Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire**

with trade name  
**Innershield NR-207**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H15)</b>
<b>Current</b>	<b>DC(-)</b>
<b>Approved diameter</b>	<b>1.7 mm, 2.0 mm (0.068 in., 5/64 in.)</b>
<b>Positions</b>	<b>Flat, Overhead and Vertical downwards</b>
<b>Remarks</b>	<b>Self-shielded Flux Cored Wire</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.  
 DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
 Digitally Signed By: Wildhagen, Christian  
 Location: DNV GL Hamburg, Germany  
 Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
 LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

**TYPE APPROVAL CERTIFICATE**

**This is to certify:**

**That the Flux Cored Wire**

with trade name  
**Innershield NR-207**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H15)</b>
<b>Current</b>	<b>DC(-)</b>
<b>Approved diameter</b>	<b>1.7 mm, 2.0 mm (0.068 in., 5/64 in.)</b>
<b>Positions</b>	<b>Flat, Overhead and Vertical downwards</b>
<b>Remarks</b>	<b>Self-shielded Flux Cored Wire</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
 Digitally Signed By: Wildhagen, Christian  
 Location: DNV GL Hamburg, Germany  
 Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

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 LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW0000255**  
Revision No:  
**1**

## This is to certify:

**That the Flux Cored Wire**

with trade name  
**Innershield NR-232**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H15)</b>
<b>Current</b>	<b>DC(-)</b>
<b>Approved diameter</b>	<b>1.7 mm - 2.0 mm (0.068 in. - 5/64 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Self-shielded Flux Cored Wire</b> <b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

for **DNV GL**



Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024T**  
Revision No:  
**2**

## This is to certify:

**That the Flux Cored Wire**

with trade name  
**Innershield NR-305**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>II YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>2.0 mm, 2.4 mm (5/64 in., 3/32 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>Self-shielded Flux Cored Wire</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

for **DNV GL**



Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024V**  
Revision No:  
**1**

**This is to certify:**

**That the Flux Cored Wire**

with trade name  
**Innershield NR-311 Ni**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>II YMS</b>
<b>Current</b>	<b>DC(-)</b>
<b>Approved diameter</b>	<b>2.0 mm - 2.8 mm (5/64 in. - 7/64 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>Self-shielded Flux Cored Wire</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

for **DNV GL**



Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire**

with trade name  
**Innershield NR 440-Ni2**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV YMS(H5)</b>
<b>Current</b>	<b>DC(-)</b>
<b>Approved diameter</b>	<b>1.6 mm, 2.0mm (1/16 in., 5/64 in.)</b>
<b>Positions</b>	<b>All except vertical downwards</b>
<b>Remarks</b>	<b>Self-shielded wire</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Høvik** on **2017-02-28**

This Certificate is valid until **2022-02-27**.

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje  
Location: DNV GL Høvik, Norway  
Signing Date: 07.03.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024R**  
Revision No:  
**1**

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**Outershield 70 / C1**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>II YMS(H15)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.6 mm - 2.4 mm (1/16 in. - 3/32 in.)</b>
<b>Positions</b>	<b>Flat and horizontal fillet welding</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

for **DNV GL**



Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

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LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 71C / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.0 - 1.6 mm (0.045 - 1/16 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-02-22**

This Certificate is valid until **2022-12-31**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Dau, Gabi  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-02-22, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**Outershield 71M / C1**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>0.9 mm - 1.6 mm (0.035 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

for **DNV GL**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**Outershield 71M / M21**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>0.9 mm - 1.6 mm (0.035 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

for **DNV GL**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 71A85 / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.0 – 1.6 mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>Flat, Vertical upwards and Overhead</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-12-31**.

Issued at **Høvik** on **2017-01-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 712C / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm - 1.6 mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All except vertical downwards</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-12-31**.

Issued at **Høvik** on **2017-01-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 712A80 / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm - 1.6 mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>Flat, Vertical upwards and Overhead</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-07-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**



# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 712A80-H / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV YMS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 - 1.6 mm (0.045 - 1/16 inch)</b>
<b>Positions</b>	<b>Flat, vertical and overhead</b>
<b>Remarks</b>	<b>Also for fillet welding.</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-06-30**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 81Ni1A75-H / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y46MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm - 1.6 mm ( 0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All except vertical downwards</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-07-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 81Ni1C-H / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y46MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm - 1.6 mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All except vertical downwards</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-07-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 81Ni2A75-H / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III Y40MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm - 1.6 mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>Flat, Vertical upwards and Overhead</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-07-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 09.05.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 81Ni2C-H / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>III Y40MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm - 1.6 mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>Flat, Vertical upwards and Overhead</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-07-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje  
Location: DNV GL Høvik, Norway  
Signing Date: 22.09.2016, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 81K2A75-H / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y46MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 - 1.6 mm (0.045 - 1/16 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-06-30**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore HD-C / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm - 1.6 mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-07-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore HD-M / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm - 1.6 mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-07-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje  
Location: DNV GL, Høvik, Norway  
Signing Date: 05.10.2016, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**



# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore HD-12M / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.0 – 1.6mm (0.045 - 1/16in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding.</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-09**  
This Certificate is valid until **2024-06-30**.  
DNV GL local station: **New York**

for **DNV GL**

Approval Engineer: **Dietmar Liebich**

.....  
**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore HD-12C / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>III YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.0 – 1.6mm (0.045 - 1/16in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 712A80-H Plus / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV YMS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 - 1.6 mm (0.045 - 1/16 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-02-22**

This Certificate is valid until **2022-12-31**.  
DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Dau, Gabi  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-02-22, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 81K2C-H Plus / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>IV Y46MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.0 – 1.6mm (0.045 - 1/16in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 81Ni1C-H Plus / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>IV Y46MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>Ø1.0 – 1.6mm (0.045 - 1/16in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 81Ni1M-H Plus / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y46MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 - 1.6 mm (0.045 - 1/16 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding.</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-06-30**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 91K2M-H Plus / M21**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y50MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 - 1.6 mm (0.045 - 1/16 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding.</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-06-30**.  
DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 91K2C-H Plus / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y50MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 - 1.6 mm (0.045 - 1/16 inch)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding.</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-06-30**.  
DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**



# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore 712C-H Plus / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y40MS(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.1 mm – 1.6mm (0.045 in. - 1/16 in.)</b>
<b>Positions</b>	<b>All except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Høvik** on **2017-01-26**

This Certificate is valid until **2022-01-25**.

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Flux Cored Wire/Gas combination**

with trade name  
**UltraCore HD Marine / C1**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>II YMS(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.3 – 1.6mm (0.052 – 1/16in.)</b>
<b>Positions</b>	<b>All, except vertical downwards</b>
<b>Remarks</b>	<b>Also for fillet welding</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-09-23**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Flux combination**

with trade name  
**Lincolnweld L-61 / Lincolnweld 761**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YM</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.6 mm - 4.8 mm (1/16 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.  
DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

## This is to certify:

### That the Wire/Flux combination

with trade name  
**Lincolnweld L-61 / Lincolnweld 780**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>II YTM</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.6 mm - 4.8 mm (1/16 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW000024J**  
Revision No:  
**1**

## This is to certify:

That the **Wire/Flux combination**

with trade name  
**Lincolnweld L-61 / Lincolnweld 8500**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV YM</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.6 mm - 4.8 mm (1/16 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.**

Issued at **Hamburg** on **2021-03-08**

This Certificate is valid until **2025-12-31**.  
DNV local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV**  
Digitally Signed By: **Wenning, Martin**  
Location: **DNV GL Hamburg, Germany**  
Signing Date: **2021-03-08**, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



# TYPE APPROVAL CERTIFICATE

## This is to certify:

### That the Wire/Flux combination

with trade name  
**Lincolnweld L-61 / Lincolnweld 860**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YM / II YT</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.6 mm - 4.8 mm (1/16 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>T: t&lt;=19 mm</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

## This is to certify:

### That the Wire/Flux combination

with trade name  
**Lincolnweld L-70 / Lincolnweld 761**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YTM</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>2.0 mm - 4.8 mm (5/64 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>Two run technique with 3 wires on DC(+). T: t ≤ 30 mm.</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-12-31**.

Issued at **Høvik** on **2017-01-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Gas combination**

with trade name  
**Lincolnweld L-70 / Lincolnweld 8500**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>III YM(H10)</b>
<b>Current</b>	<b>AC</b>
<b>Approved diameter</b>	<b>2.0 mm - 4.8 mm (5/64 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Høvik** on **2017-02-28**

This Certificate is valid until **2022-02-27**.

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 07.03.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**



# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Wire/Flux combination**

with trade name  
**Lincolnweld L-S3 (LNS 133U, L-50M) / Lincolnweld 8500**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>V Y42M(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>2.4 mm - 4.0 mm (3/32 in. - 5/32 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-09-14**.

Issued at **Høvik** on **2016-09-15**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje  
Location: DNV GL Høvik, Norway  
Signing Date: 28.10.2016, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Wire/Flux combination**

with trade name  
**Lincolnweld L-S3 (LNS 133U, L-50M) / Lincolnweld 888**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>IV Y42M</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>1.6 mm</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

### That the Wire/Flux combination

with trade name  
**Lincolnweld L-S3 (LNS 133U, L-50M) / Lincolnweld 842-H**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>V Y42M(H5)</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>5/64 (2.0mm), 3/32 (2.4mm), 1/8 (3.2mm), 5/32 (4.0mm)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-10-31**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 on behalf of

**Thorsten Lohmann**  
**Head of Section**

**TYPE APPROVAL CERTIFICATE**

**This is to certify:**

**That the Wire/Flux combination**

with trade name  
**Lincolnweld L-50 / Lincolnweld 880 M**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V YM</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.6 mm - 4.8 mm (1/16 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.  
 DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
 Digitally Signed By: Wildhagen, Christian  
 Location: DNV GL Hamburg, Germany  
 Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

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 LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Wire/Flux combination**

with trade name  
**Lincolnweld L-56 / Lincolnweld 888**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V Y50M(H5)</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>1.6 - 4.0 mm (1/16 - 5/32 inch)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2019-02-20**

This Certificate is valid until **2023-12-31**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**

for **DNV GL**



Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2019-02-20, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Wire/Flux combination**

with trade name  
**Lincolnweld L-56 / 880M**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV YM</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>1.6 - 4.0 mm (1/16 - 5/32 inch)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-06-30**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Flux combination**

with trade name  
**Lincolnweld LA-71 / Lincolnweld 880M**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y46M(H5)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>2.4 - 4.0 mm (3/32 - 5/32 inch)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-12-10**.  
DNV GL local station: **New York**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Wire/Flux combination**

with trade name  
**Lincolnweld LA-84 / Lincolnweld 888**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>IV Y55M</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>2.4 - 4.0 mm (3/32 - 5/32 inch)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-06-30**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**



# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Flux combination**

with trade name  
**Lincolnweld LA-84 (LNS 164) / Lincolnweld 842-H**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V Y55M(H5)</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>2.0 mm - 4.0 mm (5/64 in. - 5/32 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Høvik** on **2017-01-01**

This Certificate is valid until **2021-12-31**.

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 09.05.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Flux combination**

with trade name  
**Lincolnweld LA-85(LNS 165) / Lincolnweld 8500**

Manufacturer  
**Lincoln Electric Company**  
**Cleveland, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V YM46(H10)</b>
<b>Current</b>	<b>DC(+)</b>
<b>Approved diameter</b>	<b>2.4 mm - 4.8 mm (3/32 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2021-02-05**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Houston, Approval CMC**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**  
Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 05.02.2021, on behalf of

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.  
LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Wire/Flux combination**

with trade name  
**Lincolnweld LA-85 / Lincolnweld 888**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL rules for classification – Ships**  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V Y50M(H5)</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>2.4 - 4.8 mm (3/32 - 3/16 inch)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2018-12-11**

This Certificate is valid until **2023-12-10**.

DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Ludger Hachmöller**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian  
Location: DNV GL Hamburg, Germany  
Signing Date: 2018-12-11, on behalf of

**Thorsten Lohmann**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Flux combination**

with trade name  
**Lincolnweld LA-85 (LNS 165) / Lincolnweld 842-H**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V Y50M(H5)</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>2.0 mm - 4.8 mm (5/64 in. - 3/16 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Høvik** on **2017-01-01**

This Certificate is valid until **2021-12-31**.

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 09.05.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Wire/Flux combination**

with trade name  
**Lincolnweld LAC-690 / Lincolnweld 888**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND OH, United States**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V YM69(H5)</b>
<b>Current</b>	<b>AC/DC(+)</b>
<b>Approved diameter</b>	<b>2.4 mm - 4.0 mm (3/32 in. - 5/32 in.)</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>-</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

This Certificate is valid until **2021-12-31**.

Issued at **Høvik** on **2017-01-01**

DNV GL local station: **New York**

Approval Engineer: **Maxim Bobrov**

for **DNV GL**



Digitally Signed By: Gran, Terje

Location: DNV GL Høvik, Norway

Signing Date: 31.01.2017, on behalf of

**Hanne Anita Hjerpetjønn**  
**Head of Section**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Wire/Flux combination**

with trade name  
**Lincolnweld LAC-690 / Lincolnweld 842-H**

Manufacturer  
**Lincoln Electric Company**  
**CLEVELAND, OH, USA**

is found to comply with  
**DNV GL class programme DNVGL-CP-0069 – Type approval – Welding consumables**  
**DNV GL rules for classification – Ships**

with this approval

<b>Grade</b>	<b>V Y62M(H5)</b>
<b>Current</b>	<b>AC</b>
<b>Approved diameter</b>	<b>2.4 mm - 4.0 mm</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Issued at **Hamburg** on **2020-01-22**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **New York**

Approval Engineer: **Dietmar Liebich**



for **DNV GL**

Digitally Signed By: Hachmoeller, Ludger  
Location: DNV GL Hamburg, Germany  
Signing Date: 2020-01-22 , on behalf of

**Thorsten Lohmann**  
**Head of Section**