Certificate No: TAW0000111

### **VERIFICATION STATEMENT**

This is to verify: That the Electrode

with trade name EI 309L

Distributed by Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	4332
Current	DC +
Approved diameter	2,5 - 5,0mm
Positions	All, except vertical-down
Remarks	Impact test at -20° C > 34 J

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

This Statement is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

This Verification Statement is valid provided the manufacturers approval is maintained.

Certificate No: TAW0000112

### **VERIFICATION STATEMENT**

This is to verify: That the Electrode

with trade name EI 316L

Distributed by Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	4435
Current	DC +
Approved diameter	2,5 - 5,0mm
Positions	All, except vertical-down
Remarks	Impact test at -20° C > 47J

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

This Statement is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

This Verification Statement is valid provided the manufacturers approval is maintained.



## **VERIFICATION STATEMENT**

This is to verify: That the Electrode

with trade name
MAGMAWELD ESB-44

Distributed by Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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	
Grade	3 YH10
Current	DC(+)
Approved diameter	2.0 mm - 5.0 mm
Positions	All, except vertical downwards
Remarks	

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

Issued at **Hamburg** on **2018-07-31** This Statement is valid until **2021-12-31**. DNV GL local station: **Istanbul** 

Approval Engineer: Ludger Hachmöller

for **DNV GL** 

Thorsten Lohmann Head of Section

This Verification Statement is valid provided the manufacturers approval is maintained.

Form code: WELD 1422a

Revision: 2016-12



## VERIFICATION STATEMENT

This is to verify: That the Electrode

with trade name
MAGMAWELD ESB-48

Distributed by Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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

with this approvalGrade3 YH10CurrentDC(+)Approved diameter2.5 mm - 5.0 mmPositionsAll, except vertical downwardsRemarks

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

Issued at **Hamburg** on **2018-07-31** This Statement is valid until **2021-12-31**. DNV GL local station: **Istanbul** 

for DNV GL

Approval Engineer: Ludger Hachmöller

Thorsten Lohmann Head of Section

This Verification Statement is valid provided the manufacturers approval is maintained.

Form code: WELD 1422a

Revision: 2016-12

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## **VERIFICATION STATEMENT**

Certificate No: **TAW000010Z** Revision No: **1** 

DNV·GL

This is to verify: That the Electrode

with trade name
MAGMAWELD ESB-50

Distributed by Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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

with this approvalGrade3 YCurrentDC(+), ACApproved diameter2.0 mm - 5.0 mmPositionsAll, except vertical downwardsRemarks

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

Issued at **Hamburg** on **2018-07-31** This Statement is valid until **2021-12-31**. DNV GL local station: **Istanbul** 

for **DNV GL** 

Approval Engineer: Ludger Hachmöller

Thorsten Lohmann Head of Section

This Verification Statement is valid provided the manufacturers approval is maintained.

Form code: WELD 1422a

Revision: 2016-12

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Certificate No: TAW000010N

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Electrode

with trade name **MAGMAWELD ESB 52** 

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	3 YH5
Current	AC, DC ±
Approved diameter	2,5 - 5,0mm
Positions	All, including vertical-down
Remarks	

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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



Certificate No: TAW00003W5

# TYPE APPROVAL CERTIFICATE

This is to certify: That the Electrode

with trade name **EXTRACITO** 

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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	
Grade	3 YH10
Current	DC(+)
Approved diameter	2.5 mm - 5.0 mm
Positions	All, except vertical downwards
Remarks	

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

Issued at **Hamburg** on **2018-07-31** This Certificate is valid until **2021-12-31**. DNV GL local station: **Istanbul** 

for **DNV GL** 

Approval Engineer: Ludger Hachmöller

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

Certificate No: TAW000010R

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Flux Cored Wire/Gas combination

with trade name Magmaweld FCW 11 / C1

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	III YH5S
Current	DC +
Approved diameter	1,2 - 1,6mm
Positions	All, including vertical-down
Remarks	

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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

Certificate No: TAW000010Y

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Flux Cored Wire/Gas combination

with trade name Magmaweld FCW 12 / M21

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	III YH5S
Current	DC +
Approved diameter	1,2 - 1,6mm
Positions	All, including vertical-down
Remarks	

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

This Certificate is valid until .

Issued at Hamburg on

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

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

Certificate No: TAW000010X

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Flux Cored Wire/Gas combination

with trade name Magmaweld FCW 16 / C1

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	III YS
Current	DC +
Approved diameter	1,2 - 1,6mm
Positions	All, including vertical-down
Remarks	

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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

Certificate No: TAW00002DE

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Flux Cored Wire/Gas combination

with trade name FCW 21 / M21

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	III YMS H5
Current	DC +
Approved diameter	1,0 - 1,6mm
Positions	All including vertical downwards
Remarks	

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

This Certificate is valid until **2021-12-11**.

Issued at Hamburg on 2016-12-12

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

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



Certificate No: TAW000010S

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Electrode

with trade name INOX 309L

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-istanbul, Turkey

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

with this approval

Grade	4332
Current	DC +
Approved diameter	2,5 - 5,0mm
Positions	All, except vertical-down
Remarks	Impact test at -20° C > 34J

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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



Certificate No: TAW000010U

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Electrode

with trade name INOX-BWL

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	4435
Current	DC +
Approved diameter	2,5 - 5,0mm
Positions	All, except vertical-down
Remarks	

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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

Certificate No: TAW0000116

### **VERIFICATION STATEMENT**

This is to verify: That the Wire/Gas combination

with trade name MAGMAWELD MG-2 / C1

Distributed by Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	III YMS
Current	DC +
Approved diameter	1,2 -1,6mm
Positions	PA, PC, PE (1G, 2G, 4G)
Remarks	For Gas metal arc welding (GMAW)

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

This Statement is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

This Verification Statement is valid provided the manufacturers approval is maintained.

Certificate No: TAW0000117

### **VERIFICATION STATEMENT**

This is to verify: That the Wire/Gas combination

with trade name MAGMAWELD MG-2 / M21

Distributed by Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	III YMS
Current	DC +
Approved diameter	1,2 - 1,6mm
Positions	PA, PC, PE (1G, 2G, 4G)
Remarks	For Gas metal arc welding (GMAW)

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

This Statement is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

This Verification Statement is valid provided the manufacturers approval is maintained.



Certificate No: TAW00003W4

# TYPE APPROVAL CERTIFICATE

This is to certify: That the Wire/Flux combination

with trade name SF 104 / SW702

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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	
Grade	III YM
Current	DC(+)
Approved diameter	up to 4.0 mm
Positions	Flat
Remarks	

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

Issued at **Hamburg** on **2018-07-31** This Certificate is valid until **2022-12-31**. DNV GL local station: **Istanbul** 

for **DNV GL** 

Approval Engineer: Ludger Hachmöller

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



Certificate No: TAW0000114

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Wire/Gas combination

with trade name SG.2 / C1

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-istanbul, Turkey

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

with this approval

Grade	III YMS
Current	DC +
Approved diameter	1,2 and 1,6mm
Positions	PA , PC, PF (1G, 2G, 4G)
Remarks	For Gas metal arc welding (GMAW)

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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



Certificate No: TAW0000115

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Wire/Gas combination

with trade name SG.2 / M21

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-istanbul, Turkey

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

with this approval

Grade	III YMS
Current	DC +
Approved diameter	1,2 -1,6mm
Positions	PA, PC, PE ( 1G, 2G, 4G)
Remarks	For Gas metal arc welding (GMAW)

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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



Certificate No: TAW00003W6

# TYPE APPROVAL CERTIFICATE

This is to certify: That the Electrode

with trade name **SPEZIAL** 

Manufacturer

#### Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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	
Grade	3 YH10
Current	DC(+)
Approved diameter	2.0 mm - 5.0 mm
Positions	All, except vertical downwards
Remarks	

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

Issued at **Hamburg** on **2018-07-31** This Certificate is valid until **2021-12-31**. DNV GL local station: **Istanbul** 

for **DNV GL** 

Approval Engineer: Ludger Hachmöller

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

Certificate No: **TAW0000113** Revision No: **1** 

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Electrode

with trade name **SUPERCITO** 

Manufacturer

#### Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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	
Grade	3 Y
Current	DC(+), AC
Approved diameter	2.0 mm - 5.0mm
Positions	All, except vertical downwards
Remarks	

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

Issued at **Hamburg** on **2018-07-31** This Certificate is valid until **2021-12-31**. DNV GL local station: **Istanbul** 

for **DNV GL** 

Approval Engineer: Ludger Hachmöller

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



Certificate No: TAW00003W3

# **TYPE APPROVAL CERTIFICATE**

This is to certify: That the Wire/Gas combination

with trade name TG-2 / I1

Manufacturer

#### Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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	
Grade	III YMS
Current	DC(-)
Approved diameter	1.2 mm - 4.0 mm
Positions	All, including vertical downwards
Remarks	For GTAW

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

Issued at Hamburg on 2018-07-31 This Certificate is valid until **2022-12-31**. DNV GL local station: Istanbul

for DNV GL

Approval Engineer: Ludger Hachmöller

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



Certificate No: TAW000010V

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Wire/Gas combination

with trade name Magmaweld TI 309L

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	4332
Current	DC -
Approved diameter	1,6 - 2,4mm
Positions	All, including vertical-down
Remarks	Impact test at -20° C > 47J

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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



Certificate No: TAW000010W

## TYPE APPROVAL CERTIFICATE

This is to certify: That the Wire/Gas combination

with trade name Magmaweld TI 316L

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Sefakoy-Istanbul, Turkey

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

with this approval

Grade	4435
Current	DC -
Approved diameter	1,2 - 3,2
Positions	All, including vertical-down
Remarks	

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

This Certificate is valid until **2021-02-24**.

Issued at Hamburg on 2016-02-25

DNV GL local station: Istanbul

Approval Engineer: Dietmar Liebich

for **DNV GL** 

Thorsten Lohmann

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



## TYPE APPROVAL CERTIFICATE

Certificate No: **TAW0000110** Revision No: **1** 

This is to certify: That the Wire/Gas combination

with trade name Magmaweld MG3 / M21

Manufacturer Oerlikon Kaynak Elektrodlari ve Sanayi A.S. Manisa, Turkey

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

Grade	III YMS
Current	DC(+)
Approved diameter	0.8 mm - 1.6 mm
Positions	All, including vertical-down
Remarks	For Gas metal arc welding (GMAW)

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

Issued at Hamburg on 2020-03-30

This Certificate is valid until **2021-02-24**. DNV GL local station: **Istanbul** 

Approval Engineer: Hans-Joachim Vogt



for DNV GL Digitally Signed By: Hachmoeller, Ludger Location: DNV GL Hamburg, Germany Signing Date: 2020-03-30 , on behalf of

#### Thorsten Lohmann Head of Section

Revision: 2016-12

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