INERTFIL & INERTROD

OERLIKON

# STAINLESS STEEL MIG & TIG WIRES

Premium products
for highest performance and quality

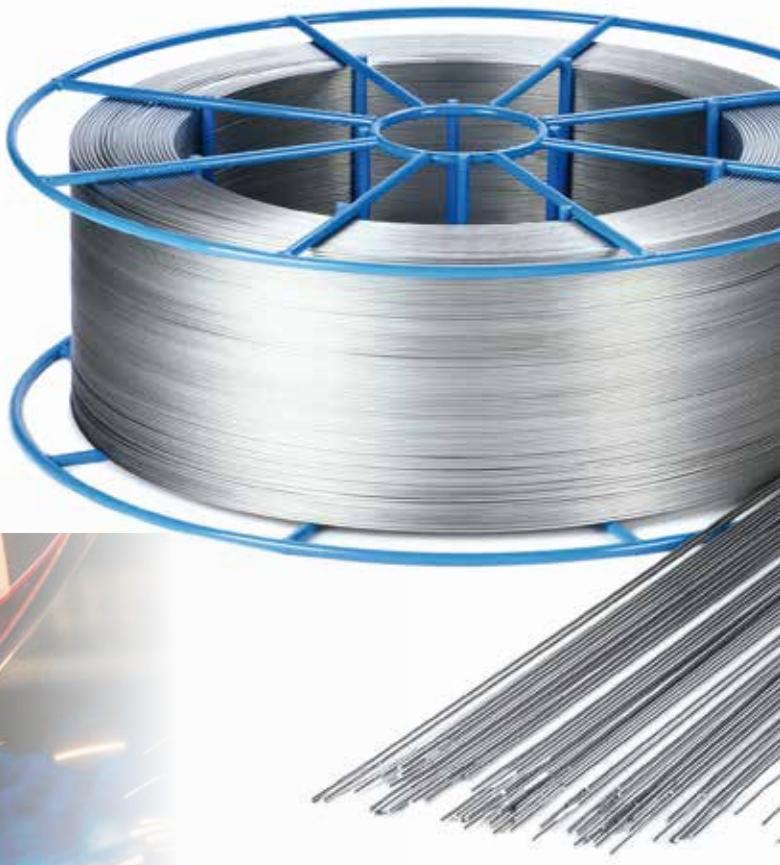
www.oerlikon-welding.com

# STAINLESS STEEL MIG & TIG WIRES

## CUSTOMER REQUIREMENTS

Our customers are expecting the highest quality of products to satisfy their technical requirements in their respective segment / application. We are constantly innovating in order to bring you as a customer the highest added value according to your specific needs :

- **Perfect feedability and arc stability**
- **Consistent wire performance ensuring Spatter Free High Quality Welds 24/7**
- **Total Process Productivity Solutions**



## WE PRODUCE OUR STAINLESS STEEL SOLID WIRES

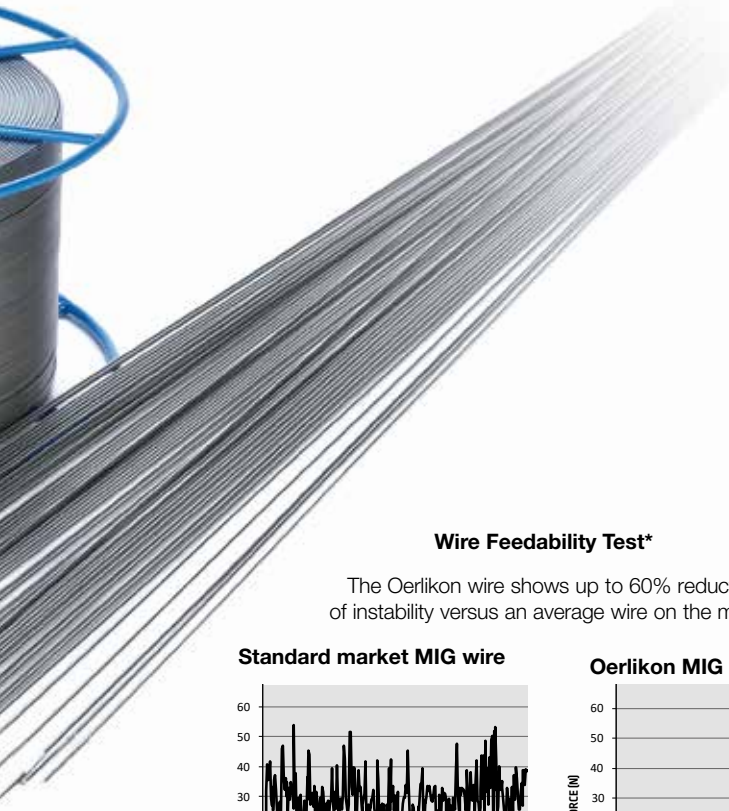
*Made in Netherlands*

Our factory in Nijmegen in the Netherlands has over 70 years of experience producing world leading quality electrodes, cored and solid wires. We have invested in a state of the art fully automated production facility which manufactures best in class stainless steel MIG, TIG & SAW wires.

Narrow product specifications combined with the industries most extensive production and quality control guarantees the unparalleled welding performance and consistency of Oerlikon's unique stainless steel solid wires.

# HOW DO WE ENSURE THAT WE PRODUCE & DELIVER A WELDING WIRE THAT SUITS OUR CUSTOMERS NEEDS?

*High performance process TOPTIG*



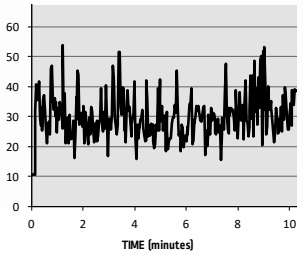
## CAREFUL SELECTION OF ROD-WIRE CHEMISTRY

The combination of Lincoln Electric vast experience, deep technical knowledge, and close partnership with the best steel manufactures allows Lincoln to optimise and tightly control 18 chemical elements in the rod wire. This tight control guarantees our customers a welding wire with the highest performance, quality and absolute consistency while also delivering optimal mechanical properties.

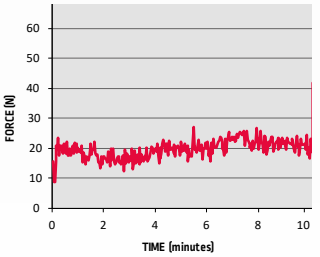
**Wire Feedability Test***

The Oerlikon wire shows up to 60% reduction of instability versus an average wire on the market

**Standard market MIG wire**




**Oerlikon MIG wire**




**Test to define the variation of force needed to feed the wire.*

## ULTRACLEAN WIRE SURFACE

Our unique production process gives a perfectly clean wire.
This ensures a superior welding performance which is required in certain critical **TIG** applications, reducing risk of micro-porosity due to impurities on the rod surface.
In **MIG** welding the ultraclean wire surface will guarantee **a superior wire feed stability**, which results in a perfect arc stability and excellent feedability in all welding positions.

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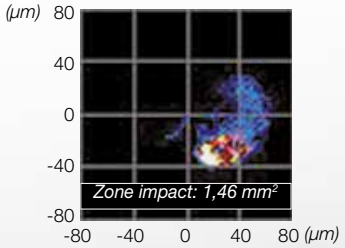
## BEST IN CLASS WIRE PLACEMENT

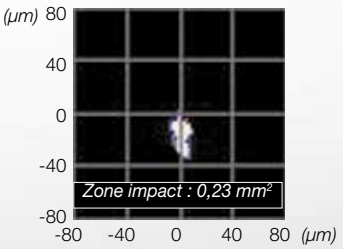
Our innovative production process combined with the superior performance of our wire and our MIDPAC drum provides unparalleled **wire placement**; delivering better productivity and **higher first pass welding quality** in robotic applications.

**Wire Placement Accuracy Test***

**Standard market MIG wire**




**Oerlikon MIG wire**




**85% reduction**
of wire deviation
with Oerlikon wire


**Test measuring the wire placement area during 10 min of welding.*

# OVERVIEW OF THE RANGE

| MIG CLASS | EN ISO 14343-A | AWS A 5.9 |
|---|---|---|
| **INERTFIL 308LSi** | G 19 9 L Si | ER 308LSi |
| **INERTFIL 309LSi** | G 23 12 L Si | ER 309LSi |
| **INERTFIL 316LSi** | G 19 12 3 L Si | ER 316LSi |
| **INERTFIL 307** | G 18 8 Mn | ER 307 |

| TIG | EN ISO 14343-A | AWS A 5.9 |
|---|---|---|
| **INERTROD 308L** | W 19 9 L | ER 308L |
| **INERTROD 309L** | W 23 12 L | ER 309L |
| **INERTROD 316L** | W 19 12 3L | ER 316L |
| **INERTROD 307** | W 18 8 Mn | ER 307 |

| MIG CLASS | Mechanical Properties (typical values) All Weld Metal | | | | Approvals | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yield Strenght | Tensile Strenght | Elongation | Impact ISO-V | | | | | | | | |
| | (N/mm²) | (N/mm²) | (%) | (J) | CE | DB | TUV | ABS | CWB | DNV | LR | BV |
| **INERTFIL 308LSi** | ≥350 | ≥520 | ≥35 | ≥32 (-120°) | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| **INERTFIL 309LSi** | ≥350 | ≥520 | ≥30 | ≥32 (-120°) | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| **INERTFIL 316LSi** | ≥350 | ≥510 | ≥30 | >32 (-120°) | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| **INERTFIL 307** | ≥420 | ≥590 | ≥40 | >32 (-120°) | ✔ | ✔ | ✔ | - | - | - | - | - |

| TIG CLASS | Mechanical Properties (typical values) All Weld Metal | | | | Approvals | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yield Strenght | Tensile Strenght | Elongation | Impact ISO-V | | | | | | | | |
| | (N/mm²) | (N/mm²) | (%) | (J) | CE | DB | TUV | ABS | CWB | DNV | LR | BV |
| **INERTROD 308L** | ≥350 | ≥520 | ≥35 | ≥40 (-196°) | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| **INERTROD 309L** | ≥350 | ≥520 | ≥30 | ≥32 (-120°) | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| **INERTROD 316L** | ≥350 | ≥510 | ≥30 | ≥32 (-196°) | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| **INERTROD 307** | ≥420 | ≥590 | ≥40 | ≥32 (-120°) | ✔ | ✔ | ✔ | - | - | - | - | - |

› You will find a much broader range of specialty stainless steel wires within the **OERLIKON** brand.

Visit our dedicated website:
**www.oerlikon-welding.com**



› Our global solutions for welding stainless steel includes complete robotic installations as well as our unique **TOPTIG** process.

For more information, visit
**www.lincolnelectriceurope.com**

## CUSTOMER TESTIMONIAL

*« I have visited several of key account customers including Tier 1 manufacturers who have tested our new stainless steel wire under the most demanding conditions. They are all impressed by the excellent welding performance, consistency and quality that our products demonstrated from spool to spool and drum to drum. Our high performance wire combined with our Accutrac (drum) is providing these customers the increased efficiency and deposit quality that they have been look for.»*

**Patrick Wahlen**
*Vice President, Consumables*

**BEST WIRE PLACEMENT**

**CLEAN SURFACE WITH SMOOTH FEEDABILITY**

# STAINLESS STEEL MIG & TIG WIRES

**MADE IN NETHERLANDS**

**ADAPTED PACKAGING**


**EXCELLENT ARC STABILITY**

OERLIKON

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TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company® is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.eu for any updated information.

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