

THOUGHT-LEADER IN STEEL PROCESSING AUTOMATION

## SUPERIOR MACHINERY SYSTEMS XXL WELDING APPLICATIONS FOR LARGE SHEET METAL WELDING PROCESSES



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# **XXL PLATE LINES**

#### WELDING LINES FOR THE PRODUCTION OF NON-FORMED SHEETS

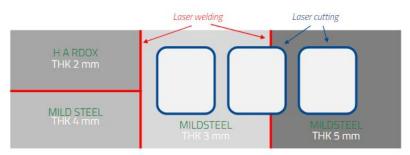
#### **General Overview**

A custom or custom-welded sheet (also called Tailor-Welded Blank or TWB) is a sheet made up of steel parts of different strength or thickness, joined by laser welding.

The main advantage is the opportunity to place the optimal thickness and strength of the steel where they are most needed, thus optimising the weight and consequently reducing the production cost. The same line can also be set up to cut the panel creating windows, passages, doors.

#### Applications

- Railway
- Service Centres
- Road Transport
- Naval



#### LASER WELDING TECHNOLOGY IS THE BEST CHOICE FOR NO BULKY WELDING BUMPS AND HIGH-QUALITY JOINTS

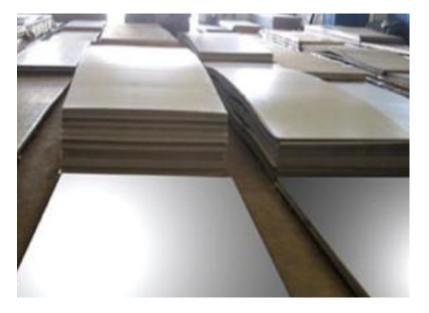


# **XXL PLATE LINES**

#### WELDING LINES FOR THE PRODUCTION OF NON-FORMED SHEETS

Advantages and specifications of customised welding and laser cutting lines for non-format sheet metal

- Large dimensions (no theoretical limit, neither in width nor in length) .
- Materials: carbon steel, stainless steel, HSS, Docol, Domex, Hardox
- Thickness: up to 25 mm with thickness change
- Welding technologies:
  - Autogenous 0
  - Cold wire 0
    - Hybrid (HLAW)
- 0 Online joint tracking .
- Possibility to perform non-linear welding (robotic solutions)
- Off-line programming
- Fully integrated material management system (from warehouse to finished products)





## **LASER WELDING**

#### FLEXIBILITY OF LASER WELDING TECHNOLOGY





# **TWL, TWC AND TWCe SERIES**

### TRANSVERSAL WELDING LINES







# TWL, TWC AND TWCe SERIES

### TRANSVERSAL WELDING LINES

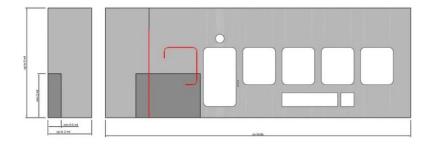




# **TWL, TWC AND TWCe SERIES**

### TRANSVERSAL WELDING LINES

The TWL, TWC and TWCe series have been designed to simplify the production of railway carriage walls starting from rectangular sheets of standard (commercial) dimensions. The result is a large sheet of metal complete with all the windows, doors and openings necessary for its use. The width of the final sheet normally varies between 3 and 6 meters, while there are no limits in length!

















# **LWC AND LW SERIES**

### LONGITUDINAL WELDING LINES







# **LWC AND LW SERIES**

### LONGITUDINAL WELDING LINES

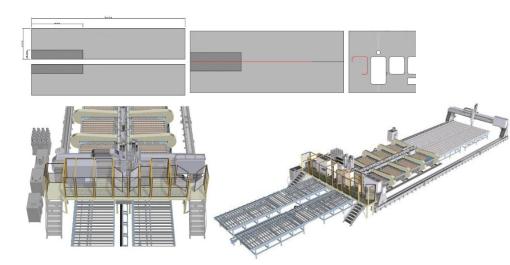




# **LWC AND LW SERIES**

#### LONGITUDINAL WELDING LINES

Specially designed to allow longitudinal welding of long sheets, the application can vary considerably depending on the actual needs of the end user. Typically designed with the Boomerang clamping device which makes the solution well known and recognised in the market.











### **EXTRA-LONG TRANSVERSE WELDING LINES**







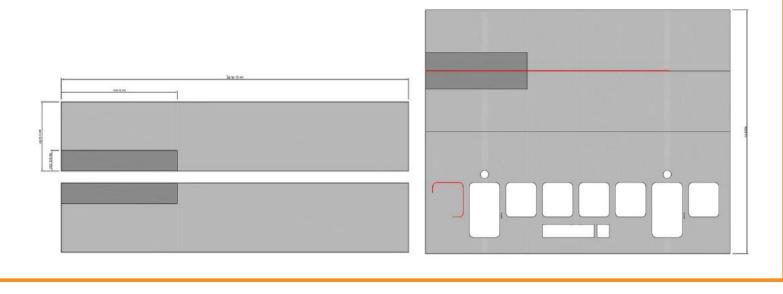
### **EXTRA-LONG TRANSVERSE WELDING LINES**





#### **EXTRA-LONG TRANSVERSE WELDING LINES**

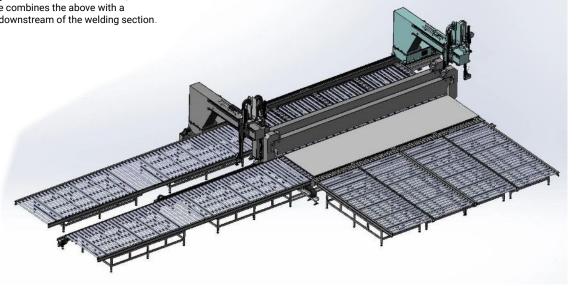
These lines are designed to produce sheets/panels of large width and without length limits. Typical uses of this solution are shipyards or Service Centers equipped with large CNC machines.





#### **EXTRA-LONG TRANSVERSE WELDING LINES**

The XW line typically operates with sheets of length between 8 and 16 meters, obtaining a very large welded panel. The XWC line combines the above with a dedicated cutting solution installed immediately downstream of the welding section.





### **RVP SERIES** ROBOTISED SOLUTIONS



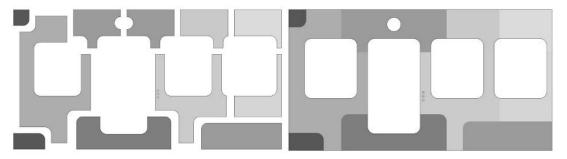


# **RVP SERIES**

#### **ROBOTISED SOLUTIONS**

**Flexibility at its limit!** The RVP solution allows the production of complete sheets by applying the right material (material, thickness, treatment) in the right place. The machine is designed to weld a "puzzle" or a "patchwork" of sheet metal they are normally already pre-cut.

The result is a very high-performance solution which guarantees the optimisation of the weight and robustness necessary for the design of the high-speed trains. This is the ultimate technology for Rail Vehicle Production lines







# **WHY CHOOSE CASTELLINI**

Founded in 1949 by Giuseppe Castellini as a mechanical workshop for reconverting warfare residues for industrial use, over the years the company has undergone several transformations depending on emerging industrial opportunities. By virtue of its continuous investments in human capital, production facilities, and research and development activities, as well as its clear-cut corporate policy, Castellini has evolved into a well-organised company with an expert design and production team, a modern mechanical workshop, and state-of-the-art assembly department.

Nowadays, Castellini is a trusted partner of major steel producers and steelworks constructors but also in the Energy, Hydroelectric, and Shipbuilding sectors.

#### **Sustainability**

"Our commitment is to leave to future generations a sustainable and innovative project centred on the ability to adapt itself to the continuous and the increasingly challenging changes."

Low-impact site

- 30% production area, 70% green area
- Geothermal conditioning
- 40% of energy needs self-generated with solar system 500 kW
- New solar system + 500 kW (end 2024)
- Workshop lighting with natural light
- Attention to work life balance

#### Social Responsibility

• Continuous support to no profit entities





#### **HISTORY AND FUTURE** 2022 WELDING LINES 1980 2001 for SSAB, GOECKE and FOUNDATION OF SPRAY NOZZLES FOR FINCANTIERI 2016 PELTON TURBINES TTM LASER COIL PREP. LINE 2020 WITH COIL-TO-LASER SCRIBING LINE COIL LASER WITH COIL-TO-COIL WELDER WELDER for Marcegaglia for NLMK 1995 1949 STEEL 2023 2018 2021 FOUNDATION 2015 2015 SECTOR SALES OF COIL PREP. LINE WITH LASER LASER ROBOT WELDING 1985 TTM LASER SCRIBING COIL-TO-COIL LASER SCRIBING **ITER STATION** for NLMK and to Bystronic WELDER NUCLEAR POWER for ThyssenKrupp for ASG APERAM for ARVEDI STATIONS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1990 1998 2002 2021 1960 2010 PAPER TECH. CERN ACQUISITION MOTORS FOR ALLUMINIUM HSS SHEAR OF RESTELLINI THE LARGEST AND BINDING TUNNEL LAMINATION 2020 For PRIMETALS 2022 TELESCOPE **CREATION OF** TWIN SKIN PASSES IN THE WORLD 1970 2 BUSINESS For NUCOR (FIVES) 2000 UNITS: HYDROELECTRIC ACOUISITION SECTOR OF RONCONI MACHINING 2017 AND 2022 SOLUTION NEW PIPE RESIZER and MANUFACTURING PIPE SIZING MACH. CENTRE For TENARIS



# **CASTELLINI FACILITY**

AREA	62.000 sqm + 10.000 sqm
WORKSHOP	22.000 sqm + 7.500 sqm
OFFICES	3.000 sqm + 800 sqm
MAX. HOISTING CAPACITY	250 tons
HOISTING HEIGHT	17 mt
MAX. BORING FIELD	24 mt
SPECIALTIES	Heavy boring and milling machines / Horizontal and vertical turning lathe / Hydraulic pressure testing rig

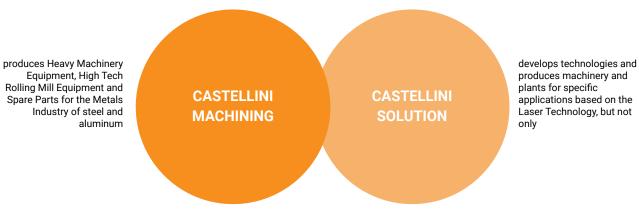




# **MACHINING AND SOLUTION**

#### TWO SOULS, ONE IDENTITY

Machining and Solution are the complementary souls of Castellini that share the same identity, which has been constructed over years of work by virtue of shared experience, values, and objectives.



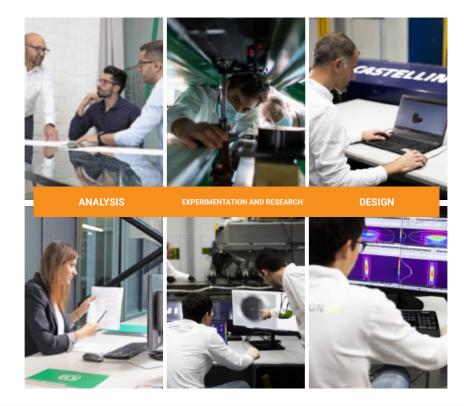


## THE CASTELLINI SOLUTION APPROACH

### DEEPEN INTO TECHNOLOGY FOR A CONTINUOUS IMPROVEMENT OF KNOW HOW

The customers' needs are the driving force of Castellini activities. Castellini solutions are developed in the knowledge that productivity and reliability are always the primary requisites, reachable only through a scientific path.

Following this continuous scientific research of the know how, exploiting the SOLUTION LAB, Castellini is daily developing innovative and performing processes intended for the steel manufacturing world.





# **SOLUTION LAB**

#### THE IDEAL PARTNER TO DEVELOP YOUR PROCESS

SOLUTION LAB by Castellini is designed to allow a wide range of possible tests with Laser technology (and not only), such as Laser Paint Stripping and Cleaning, Surface Treatments, Laser Scribing, Laser Cutting and Welding, Laser Cladding.

SOLUTION LAB is developed to perform tests on Stainless Steel, Carbon Steel, High Strength Steel, Grain Oriented Electrical Steel, Non-Grain Oriented Electrical Steel, Aluminium. SOLUTION LAB is equipped with two completely customised, high-performance units capable of simulating different conditions the actual operation and processes performed in the industrial solution.

The CASTELLINI SOLUTION R&D team is highly specialised in customising tests, simulation and analysis to meet the highest expectations of customers, both in terms of research and development than in the search for the most suitable applicable solution.







## **PARTNERSHIPS**

#### THE RIGHT PARTNER LEADS TO A COMMON SUCCESS

Castellini Solution, driven by a strong passion for innovative technologies, cooperates with customers, suppliers, universities and research institutes, conscious that sharing know how is the most important booster to reach successful innovations.

Castellini scientific and technologic main partners are:





## **CASTELLINI WORLDWIDE PRESENCE**

C) More than 70% of Castellini turnover comes from international markets. Castellini products are installed in manufacturing plants located all over the world. 228 EUROPE SSAB **■**Tenaris ASG voestalpine DANIELI 28 OARC ASIA ② 沙钢集团 TATA STEEL P John Gockerill ISW MGDOCO 5 NORTH AMERICA PRIMETALS AcciaieriaArvedi RUMA (NLMK) fives r8: tesla ANSAL DO OHYDROALP FINCANTIERI Arcelor/Miltal CHINASTEEL AFRICA 9 SOUTH AMERICA







# LOOKING TO BUY PRE-LOVED MACHINERY?

Specialist Machinery Sales offer second-hand or used structural steel processing machinery from Kaltenbach, Gietart, Haeusler, SLF and more.

Generally, the machines that SMS has access to are from trading for new machines offered from the machine tool builders to clients of SMS in Australia and New Zealand. Most machines are between 5 and 15 years of age with full-service history available. Some machines can be inspected under power or in their shipping packing ready for immediate delivery to Australasia.

#### LEARN MORE HERE









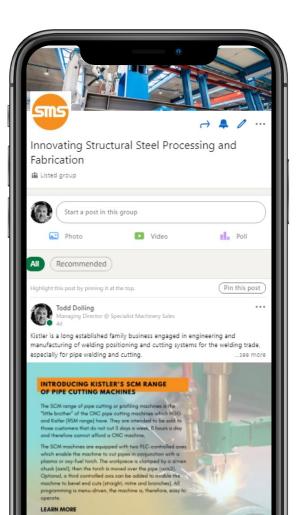
# **READY TO SELL YOUR PRE-LOVED MACHINERY?**

Selling your pre-loved machinery may appear to be a simple process but it might be more complicated than you think. Selling pre-loved machinery involves equipment liens, resale certificates and financing a buyer. BUT DO NOT WORRY!

Used Structural Machinery (USM) is here to partner with you. At USM, we are your ideal channel to take your equipment and place it in the right hands, with the security and confidence that characterises us. Review our checklist below to help you understand when to retire your machine and how USM can help you sell it off efficiently and effectively.

#### LEARN MORE HERE





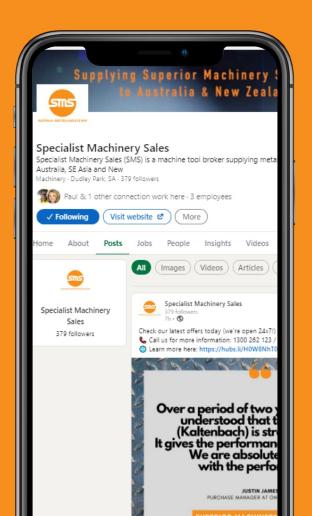
# JOIN OUR EXCLUSIVE AND GROWING LINKEDIN GROUP

Join our growing and exclusive LinkedIn Group -Innovating Structural Steel Processing and Fabrication Group.

In this group, we bring in thought leadership content, topics, trends and challenges within the steel industry and steel processing automation. We encourage everyone to share your business challenges and solutions that you have encountered and how steel processing automation had helped achieved your business objectives.







# HATE MISSING OUT?

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