

ENSURING ALUMINUM QUALITY

### Inspecting rolled aluminum products to meet customer quality specifications



#### Part of an integrated production chain

Based in Italy, **Laminazione Sottile S.p.A.** is a manufacturer of rolled aluminum products. These include rigid, semi-rigid and flexible packaging, HVAC-R, automotive parts, cookware, and general engineering components.



**Laminazione Sottile**

It is part of the Laminazione Sottile Group, which has more than 90 years of experience in aluminum transformation, and operates eight companies in an integrated production chain.

The plant has four lines for surface treatment and degreasing, operating at speeds ranging from 200 m/min up to 800 m/min.

#### MEETING INDUSTRY QUALITY DEMANDS

To meet increasing market demands and customer specifications, Laminazione was looking for an inspection system that would provide an extended and objective overview of coil quality in real time in order to quickly understand the root causes of relevant defects, providing surface quality information to support the process.

In addition, the system would become a quality control gate for the direct sale

of coils to the customer and further processing by the Laminazione Sottile Group subsidiaries. To achieve this, it would provide continuous process and quality control, drastically reducing customer quality claims, both from inside the group and from external customers.

Human-eye inspection was not able to deliver the level of objectiveness and reliability required, so an automated inspection system was essential.

The new system had to be able to inspect 100% of the material, recording the results so that appropriate decisions could be made. It also had to reliably detect relevant surface defects for immediate action without causing false defect (false positives) alarms.

These flaws included a range of metallurgical defects that could arise from hot to cold rolling and surface treatment processes, such as inclusions, open and closed shells and scratches.

Improve your quality, reliability, and speeds:  
[www.ameteksurfacevision.com](http://www.ameteksurfacevision.com)  
or contact us at: [surfacevision.info@ametek.com](mailto:surfacevision.info@ametek.com)

**AMETEK**<sup>®</sup>  
SURFACE VISION

Inspecting aluminum surfaces that go on for further processing such as coating was important to prevent quality claims and prevent the expense of processing defective material.

It was also essential to detect physical damage, particularly for food packaging, which has very high customer requirements. Any

defects that could cause damage to the containers after getting stamped are critical, since they could affect the quality of the packed goods.

### A PROVEN, CAPABLE SOLUTION

To provide the required level of inspection capability, AMETEK Surface Vision installed inspection systems on the critical surface treatment lines, ensuring only inspected material is further processed and brought into the market.

The systems, installed over a four-year period, used the SmartView® 7.0 system in Brightfield configuration, including in-line inspection and Streaming Video.

The AMETEK Surface Vision solution provided a proven capability to detect and correctly classify defects with sample studies.

In addition, Laminazione is currently implementing an automatic defect information data transfer, using the open data transfer interfaces and reporting solutions SmartView is able to provide.

**Marco Saitta, Sales Account Manager at AMETEK Surface Vision, said:** *"Inspected materials can be selected according to the end customer's requirements. The process takes advantage of the knowledge about the current surface quality and provides the ability to correct any process upsets. Process improvements can now be planned and measured based on objective data."*

### EFFECTIVE RESULTS DELIVERED PRODUCTIVELY

The SmartView system has enabled Laminazione to keep a high level of materials quality, which is key for the market. By using a "goalkeeper" system, final customer satisfaction has improved, resulting in significantly reduced customer quality claims.

**Stefano Mauro, Process Manager at Laminazione Sottile S.p.A., said:** *"We were highly satisfied with the commissioning service from AMETEK Surface Vision. Any issues were quickly*

*resolved by AMETEK in a productive way, through remote or on-site support.*

*"The training provided by the team in Karlsruhe allows effective administration of the system, minimizing the need for on-site assistance. For example, the defects classification, through the Smartlearn Classification engine, is totally under control of the systems administrator."*

The highly flexible user interface displays all the relevant data to the operators. A readable and configurable

defect map (or more maps in parallel) clearly displays the distribution of the defects.

**Laminazione Sottile S.p.A.'s Finishing Department Manager, Pierpaolo Panza, said:** *"The software is easily used by the operators. The system is very reliable and maintenance-friendly. Our co-operation with the AMETEK Surface Vision team has proven to be a highly beneficial partnership."*

### ABOUT AMETEK SURFACE VISION

AMETEK Surface Vision is a world leader in automated online surface inspection solutions with a broad product portfolio optimized for web and surface inspection and monitoring and process surveillance applications.

Its product portfolio includes two distinct product lines: SmartView® systems and SmartAdvisor® systems. Each product line uniquely enables customers to inspect the surfaces of materials processed in a continuous fashion across the metals, paper, plastics, nonwovens and glass industries. Learn more by visiting [ameteksurfacevision.com](http://ameteksurfacevision.com).

AMETEK Surface Vision is a unit of AMETEK Process and Analytical Instruments, a division of AMETEK, Inc., a global manufacturer of electronic instruments and electromechanical devices with annual sales of approximately \$5 billion.



Improve your quality, reliability, and speeds:  
[www.ameteksurfacevision.com](http://www.ameteksurfacevision.com)  
or contact us at: [surfacevision.info@ametek.com](mailto:surfacevision.info@ametek.com)

**AMETEK®**  
SURFACE VISION