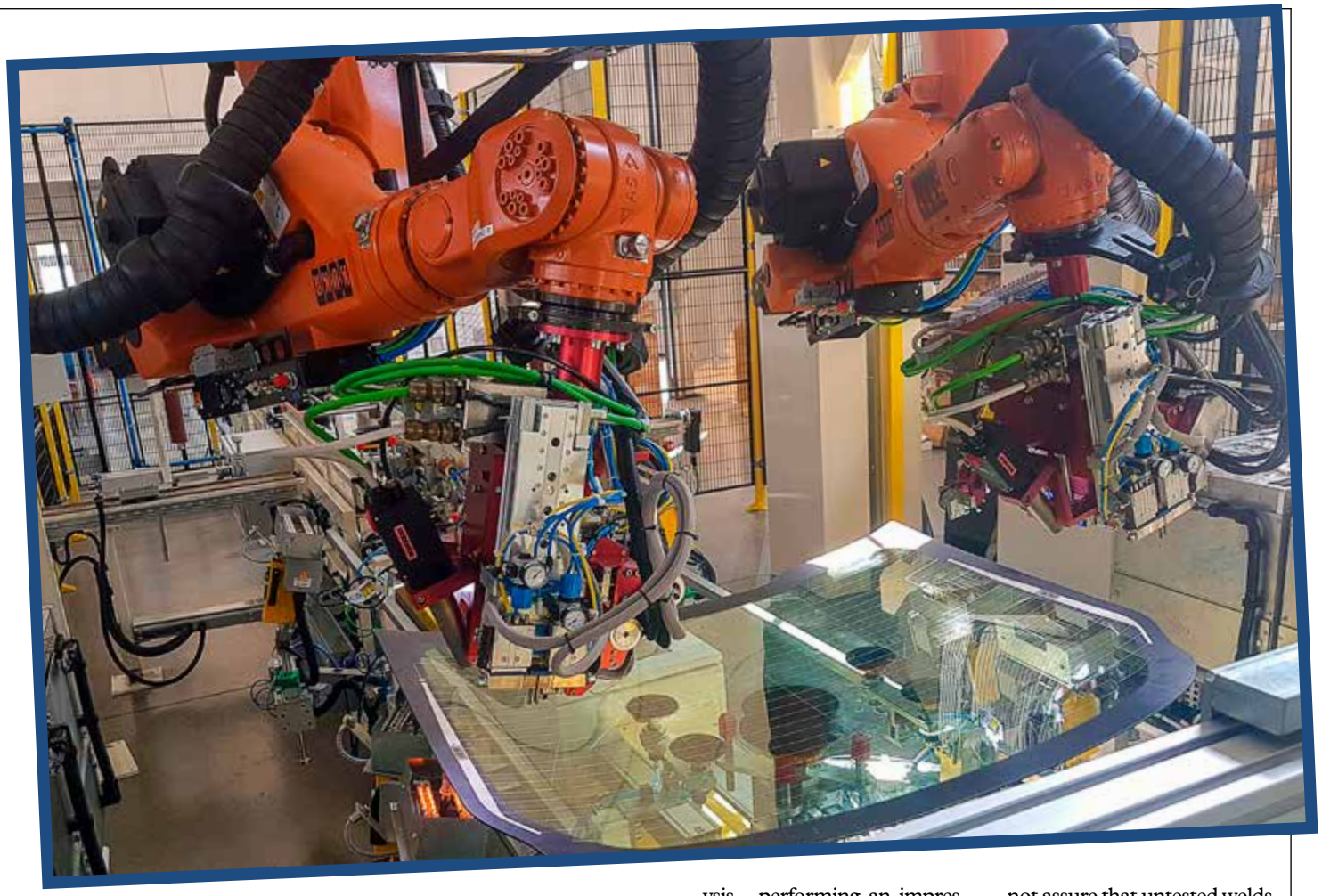
A soldering paradigm reset as EASY AUTOMATION makes waves

A prominent player in automotive glass solutions since 2000, EASY AUTOMATION is set to debut its groundbreaking SDEA-AI soldering system at Glasstec 2024. This AI-driven innovation revolutionizes quality control, performing 100,000 real-time checks per second, thereby ensuring flawless soldering without traditional tests. A system that improves efficiency, reduces costs, and elevates production reliability.

Founded at the turn of the millennium, Easy Automation has prized itself ever since in its synergies of individuals with decades of experience in the automotive glass automation sector. Here the person who particularly represents the soul of the company more than any other is its founder, Augusto Vincenzi - one who has untiringly set the direction towards innovative solutions by which customers can improve and optimize their production processes. Providing solutions that are as standard and turnkey as possible while keeping the attention trained upon customer customization, has allowed the company to grow steadily. For Easy Automation, the most important events are always linked to new developments. It's no surprise that, instead of paintings, the company's walls are proudly adorned with notifications of its patents, which currently span the globe. The company head office is situated in Pomezia, a production area in central Italy near Rome. Its core business is that of producing



machines for the automotive glass sector - in particular all-round solutions for glass soldering for the application of components on all types of glass and filaments on PVB with drums as well as table and cutting machines for PVB. Turnover is 90 percent from the automotive glass sector. As Glasstec 2024 approaches, the entire Easy Automation team is especially excited as it anticipates two live demonstrations: its multifunctional table and the SDEA-AI. The table incorporates cutting capabilities and the application of various filament types. Alongside the table, the SDEA-AI showcase will feature the company's new Artificial Intelligence-enhanced soldering feature, which is a very interesting development that the founder will be pleased to describe in greater detail.

A TRACK-RECORD OF EXCELLENCE

Easy Automation has long been recognized for its highly-efficient soldering systems, particularly in fully-automated production lines. In its continuous pursuit of excellence, Easy Automation has developed its SDEA-AI with a special focus on enhancing manual soldering processes. This proprietary Artificial Intelligence model pushes the boundaries of soldering analysis - performing an impressive 100,000 checks per second. The SDEA-AI is based on an original algorithm and is seamlessly integrated into the company's SDEA-C soldering station - revolutionizing both process and quality control. The system's capability to analyze and classify 100 percent of soldering in real-time is truly remarkable. It can instantly identify substandard soldering, enabling their immediate removal from production without resorting to destructive random pulling tests. This advancement represents a paradigm shift from conventional quality control procedures, which are costly, time-consuming, generate unnecessary waste and do not assure that untested welds meet quality standards. By incorporating SDEA-AI, the company's soldering stations evolve into self-monitoring units that consistently deliver superior quality. Here the benefits include cost savings, improved efficiency, reliability and safety in production. The system provides standardized, objective evaluations - minimizing human error and ensuring comprehensive weld traceability.

GLASSTEC 2024

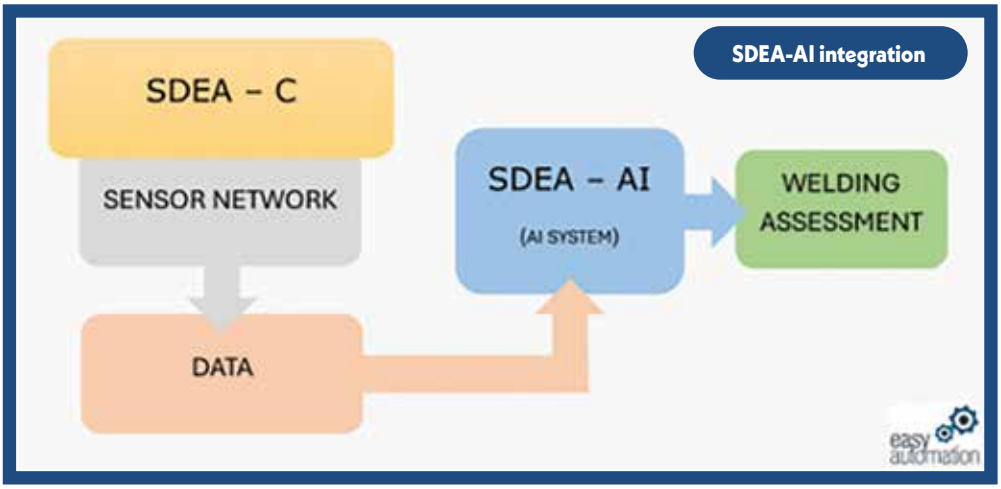
Already the team is excited to premiere the SDEA-AI at GLASSTEC 2024, even though the system is already in production with some of its clients. In in-

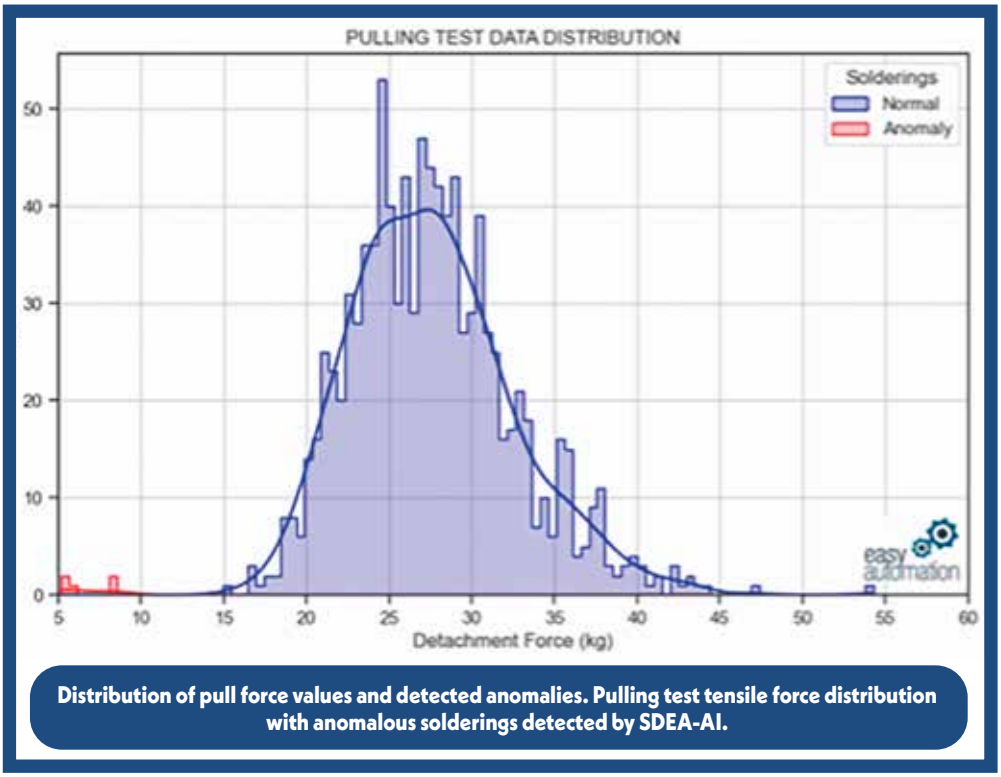
dustries where precision is non-negotiable, even minor soldering defects can lead to severe consequences. Recognizing this critical need, the company developed a system that not only matches but also surpasses human capabilities in defect detection. To illustrate SDEA-AI's contribution, it can be helpful to envision it as an indefatigable, ultra-precise quality control expert. It vigilantly monitors every microsecond of the soldering process, making real-time assessments and immediately flagging any potential issues.

The systems innovative approach to quality control employs a sophisticated, multi-layered sequence:

1. Data Collection: Integrated sensors capture comprehensive data throughout the soldering process.
2. Feature Extraction: The system identifies key characteristics indicative of weld quality.
3. Pattern Recognition: Advanced algorithms compare these characteristics against specific complex patterns.
4. Decision Making: Based on this thorough analysis, the system predicts the pull force value, determining whether each weld meets the preset quality standards.

SDEA-AI significantly reduces costs and greatly improves product reliability for clients. It enables smarter, more efficient production, yielding safer and more dependable products. Easy Automation continues to refine this technology, leading the AI-driven manufacturing revolution that's setting new industry standards.





Distribution of pull force values and detected anomalies. Pulling test tensile force distribution with anomalous solderings detected by SDEA-AI.

easy automation
Via Sassuolo
00071 Pomezia RM
ITALY
Tel.: +39-06-52364774
info@easyautomation.it
www.easyautomation.it

Visit us at Stand 15 F56

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