

NOVATRONIK

EMS & DESIGN-IN SOLUTIONS

MASTERS GROUP

DISTRIBUTION OF ELECTRONIC COMPONENTS



INSTALLATION AND SALES OF PHOTOVOLTAIC INSTALLATIONS



CONTRACT DESIGN AND MANUFACTURING





ABOUT NOVATRONIK

- Over 25 years of experience
- 2 automatic SMT lines
- SMT efficiency: 80,000 elements/hour
- 100+ active customers
- 50+ employees
- 1000+ orders per year
- 5000+ m2 of warehouse and production space



Range of applications



HOME AUTOMATION



**FIRE PROTECTION
SYSTEMS**



**POINT OF SALES
SYSTEMS**



**PROTECTION
SYSTEMS**



**AUTOMOTIVE
INDUSTRY**



**MEDICAL
INDUSTRY**



**REMOTE READINGS
SMART METERING**



**EMERGENCY
LIGHTING**



CONTRACT MANUFACTURING



BUSINESS MODEL

AT NOVATRONIK, WE OFFER COMPREHENSIVE SERVICES OF DESIGN AND PRODUCTION WITHIN ONE ORGANIZATION. WE SOLVE ALL CHALLENGES TOGETHER WITH A CUSTOMER TO ENSURE TIMELY AND EFFECTIVE MARKET AVAILABILITY OF A SPECIFIC PRODUCT.

By using the latest technologies, we offer full service from the moment of submitting an inquiry, through the quotation process, supply chain management, to order realization and warranty service.

Our advantage is high flexibility in building the most tailored cooperation formula:

- dedicated cooperation and payment model adapter to every customer's needs and capabilities,
- storage of finished products for our customers, shipment of indicated quantities to a specific address, logistics of warranty and post-warranty service of a customer's products,
- possibility of settling R&D works in the production service.



R&D SERVICES

DESIGNING

Many years of experience in comprehensive design of electronic devices in the field of mechanics, electronics and programming.

Design of testing devices
(hardware, software).

PROTOTYPING

We offer technical and product support, PCB assembly, testing and other processes required to achieve a customer's goal.

TESTING

We have experience in performing electrical, optical and environmental tests. There is a possibility to perform other tests at a customer's request.

CERTIFICATION

We work according to the international ISO standards: 9001:2015, 14001:2015, 45001:2018 and meet other standards related to specific industries.



CONTRACT MANUFACTURING

CONTRACT MANUFACTURING

We offer comprehensive electronic module assembly services using our own or entrusted components:
2 automated production lines,
prototype assembly park,
AOI 3D and X-Ray control.

ASSEMBLY / ADDITIONAL SERVICES

The offer includes additional services such as: testing, packaging, mechanical assembling, applying protective coatings, programming, packaging.

NEW PRODUCT IMPLEMENTATION

As a part of a new product implementation process, we verify and assess risks and model production process in order to achieve the highest quality, efficiency and the lowest possible price.

TECHNICAL ASSISTANCE

Each client's project is treated individually.
The R&D team advises optimal solutions for a specific project at every stage of the product life cycle.

TRACEBILITY

TRACEBILITY REFERS TO THE ABILITY TO TRACK AND RECONSTRUCT THE HISTORY, ORIGIN, COURSE OR RELATED INFORMATION IN A SPECIFIC SYSTEM OR PROCESS. IN PRODUCTION, IT CONTRIBUTES TO BETTER PROCESS CONTROL, MINIMALIZING RISK, IMPROVING QUALITY

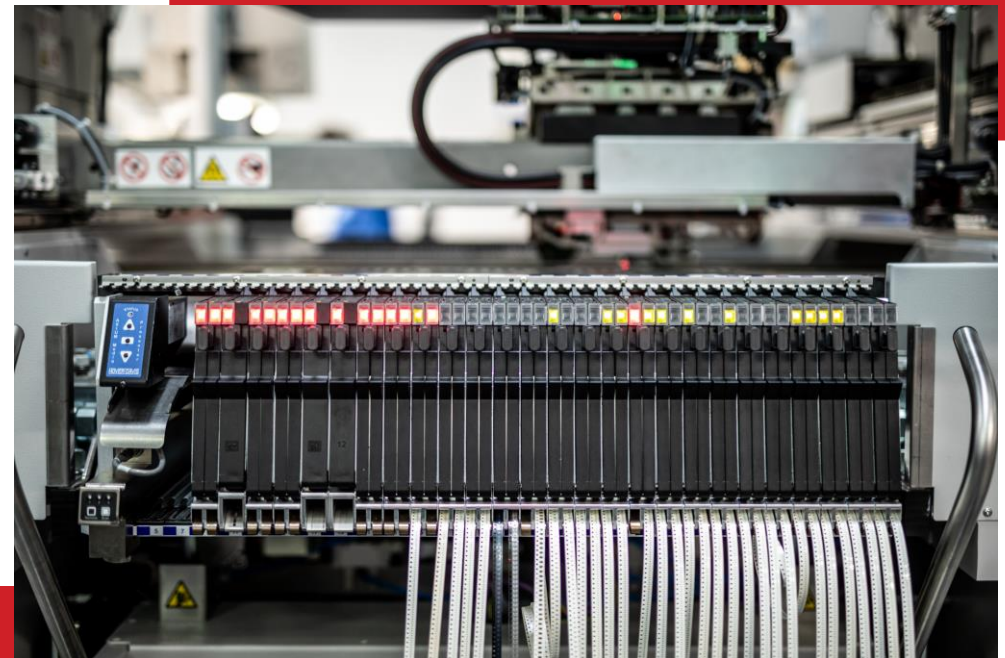
AND PRODUCTS SAFETY AND INCREASED OPERATIONAL EFFICIENCY.

The traceability at Novatronik is implemented through:

- tracking components at the stage of receipt into the warehouse, release to the SMT and THT production departments and their use during and after the production process (by means of the dedicated software),
- tracking electronic modules during the passage through individual production processes using proprietary MES software.

Advantages of traceability:

- product safety,
- identifying and solving problem,
- quality management,
- responsibility and compliance with regulations,
- process optimization,
- risk management.

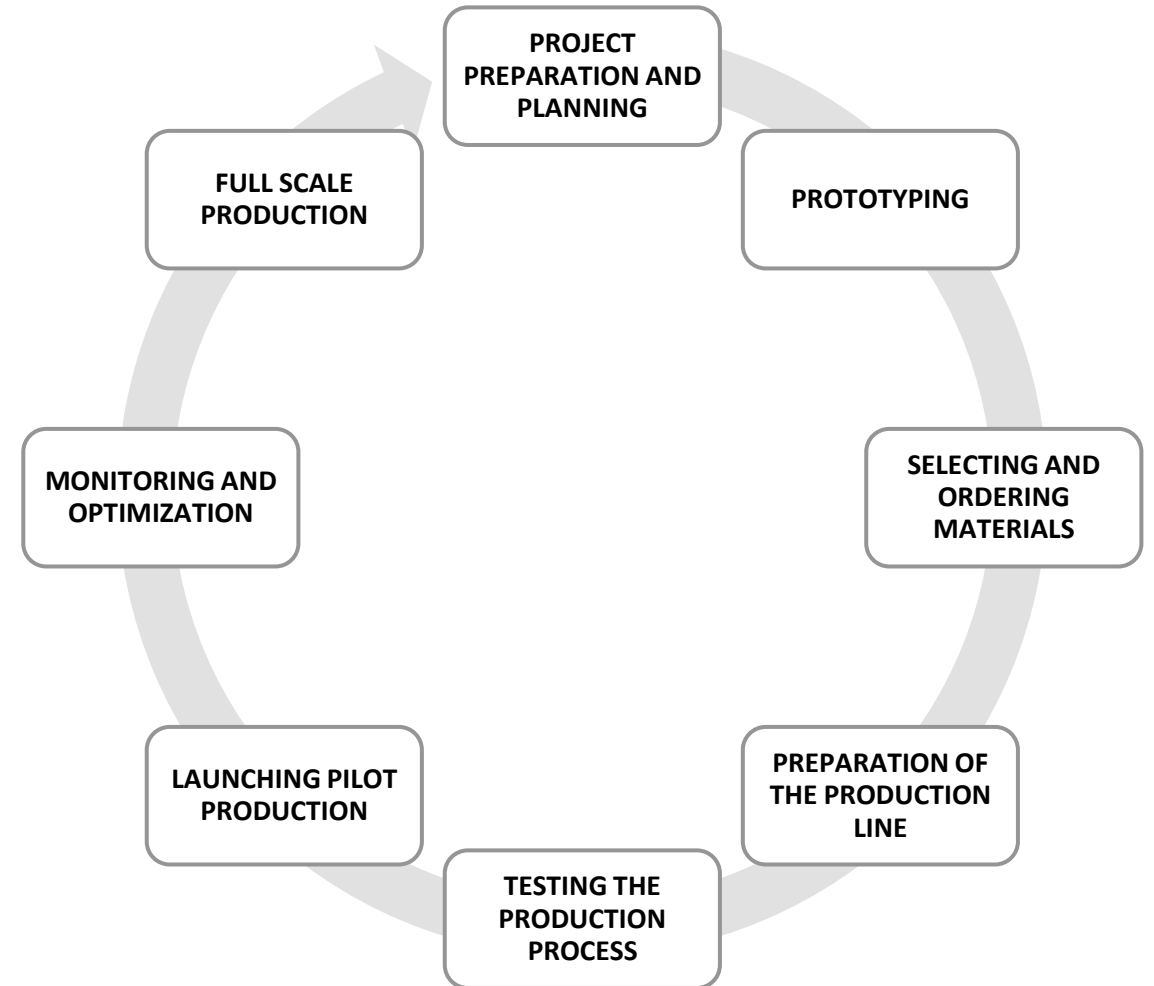


IMPLEMENTATION

The process of implementing a product into the production is a sequence of activities and stages that are undertaken to prepare a specific product for mass production.

This process aims to ensure that the product is ready for industrial scale production, meets specified quality standards and is prepared to meet the market demand.

The process of implementing a product into the production is complex and requires the cooperation of many departments of the company, such as the R&D, engineering, purchasing, production and quality. Correct realization of this process is crucial for the product's success on the market, minimizing risk and ensuring high quality and efficiency of production.





ASSEMBLY, COMPONENTS

HIGH MIX LOW/MEDIUM VOLUME

Internal Production Department specializing in small and medium-sized batches of great diversity for low- and high-volume production in the Pb and Pb-free technology.

MATERIAL

Production from own or entrusted material, purchases directly from the manufacturer.

BGA & QFN 01005

Experience in advanced, complex and technologically demanding production.

TECHNICAL ASSISTANCE

A team of highly qualified and experienced specialists.

SHORT LEAD TIME (LT)

Effective delivery scheduling and effective optimization and production planning.

PRODUCTION OF TESTING DEVICES

Design and construction of electrical and functional testers.



FINANCE, AVAILABILITY, LOGISTICS

LOGISTICS

Management of forecasts, frame orders, component purchases and inventories. Multimodal transport and logistics tailored to the cooperation model and customer's requirements.

AVAILABILITY

A wide range of rotating elements provides effective access to a wide range of alternatives or substitutes.

PRICES

Competitive prices of services.

COST REDUCTION

Optimization of project costs by selecting substitutes and adapting production processes.

FLEXIBILITY

The ability to quickly respond to customers needs thanks to the tools and resources that allow for flexibility in production planning.

LONG-TERM CONTRACTS

Long-term contracts and long-term cooperation with producers ensuring production continuity.



PRODUCTION RESOURCES

MACHINERY PARK

TWO FULLY AUTOMATED SMT LINES

Performance and precision parameters of each line:

- ability to assemble of up to **200** different components,
- **40 000** items per hour,
- extension of assembly possibilities with the **01005** components,
- possibility of full **traceability**.



AUTOMATIC OPTICAL INSPECTION (AOI)

Detecting more complex defects such as convex or concave surfaces that may be difficult to see using traditional 2D inspection methods. Thanks to this, the quality of the inspected product can be improved.

Greater precision allows for accurate analysis of three-dimensional structures and complex elements such as solders on printed circuit boards. This enables precise detection of imperfections and defects leading to better quality control.

Greater reliability thanks to three-dimensional analysis. This technology is less susceptible to errors resulting from lighting, shading and perspective.

Higher efficiency thanks to automation of the inspection process. Scanning and analyzing a large number of products in a short time increases production efficiency.

Ability to analyze data that enables the collection and interpretation of information from the inspection process. To improve production quality and efficiency, you can identify trends, analyze performance and take preventive actions.

Advantages of AOI 3D:

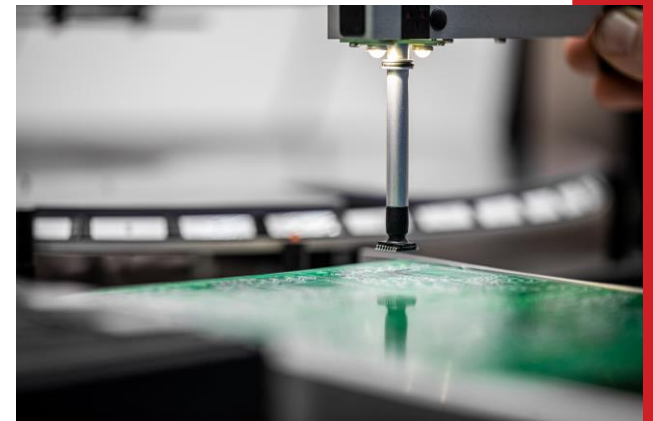
- 3D visual control,
- effectiveness,
- time,
- precision of verification of assembly correctness.



AOI 3D OMRON VT - S530

MACHINES FOR PROTOTYPES ASSEMBLY

- Comprehensive and fast online pricing of a finished prototype.
- Short order processing time.
- Possibility of using incomplete packaging in prototype batches.
- Dedicated production process for prototype series.



THT ASSEMBLY, SMD/BGA ASSEMBLY AND DISASSEMBLY

THT ASSEMBLY – MACHINE PROCESS

- Soldering precision – selective and lead-based soldering.
- Reduction of assembly time.

Devices: Soltec Delta X wave

THT ASSEMBLY – MANUAL PROCESS

30 manual assembly stations.

SMD/BGA ASSEMBLY AND DISASSEMBLY

- Service as a part of production capabilities.
- The Recco RS300 device enables work with CHIP, SO, QFP, PLCC, BGA components (non-contact assembly and disassembly of fine raster elements and BGA with hot air).

BINDING AND FORMING THROUGHOUT ELEMENTS

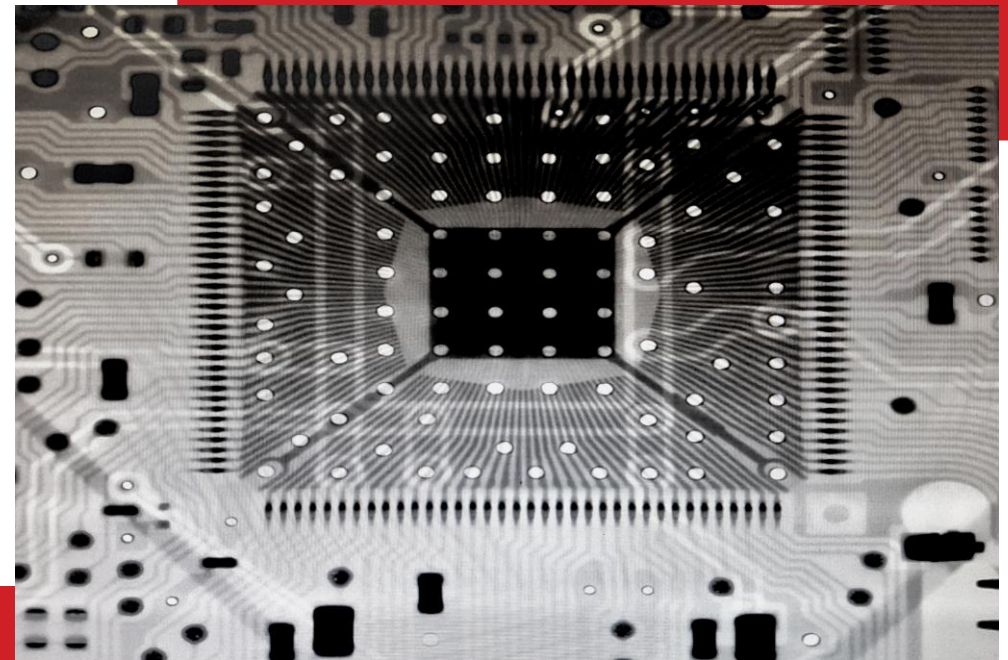
- Preparation of THT items for production.
- Reduced assembly time and greater flexibility.
- Devices: Ebsomat E33-1, Ebsomat E-40-2, Olamef TP-TC4.



X-RAY INSPECTION

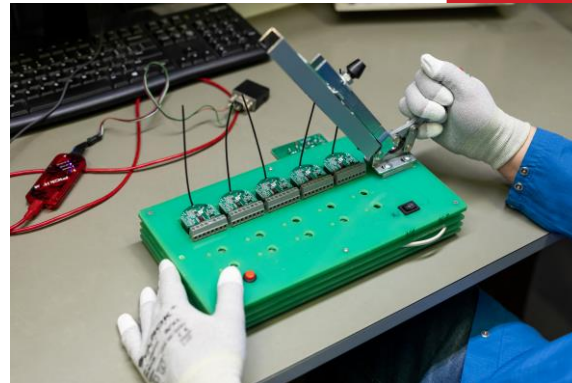
The Seamark X660BM X-ray inspection device allows you to observe hidden connections under the housing, protective varnish or heat sink. The machine is irreplaceable when verifying the correct assembly of the modern BGA and CSP systems.

- Verification of originality of components.
- A device with the ability to automate the verification process.
- Enables verification of the soldering process for the BTC (Bottom Terminated Components) elements.
- It supports the process of the first-piece control and validation of the SMT process parameters.
- Quality confirmation during order realization, process corrections - sampling.
- Assessment of compliance of the wave soldering process.
- Checking the effectiveness of manual assembly of prototypes and after their rework.



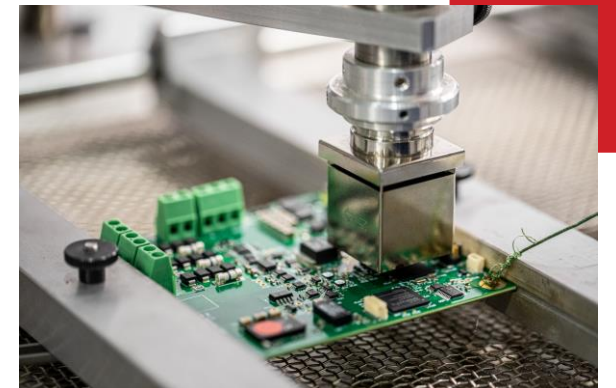
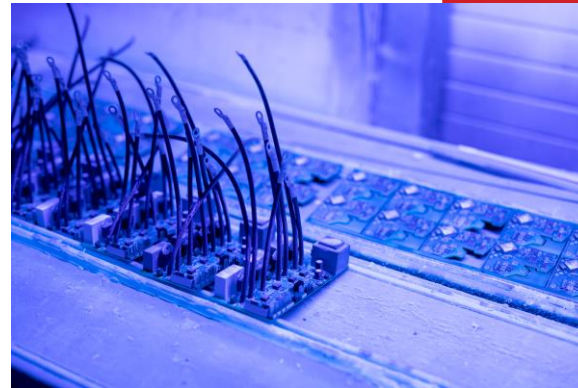
TESTING AND PROGRAMMING

Programming microprocessors, designing testing solutions, functional tests using a customer's or the Novatronik's devices, other tests performed on request (ICT, FT).



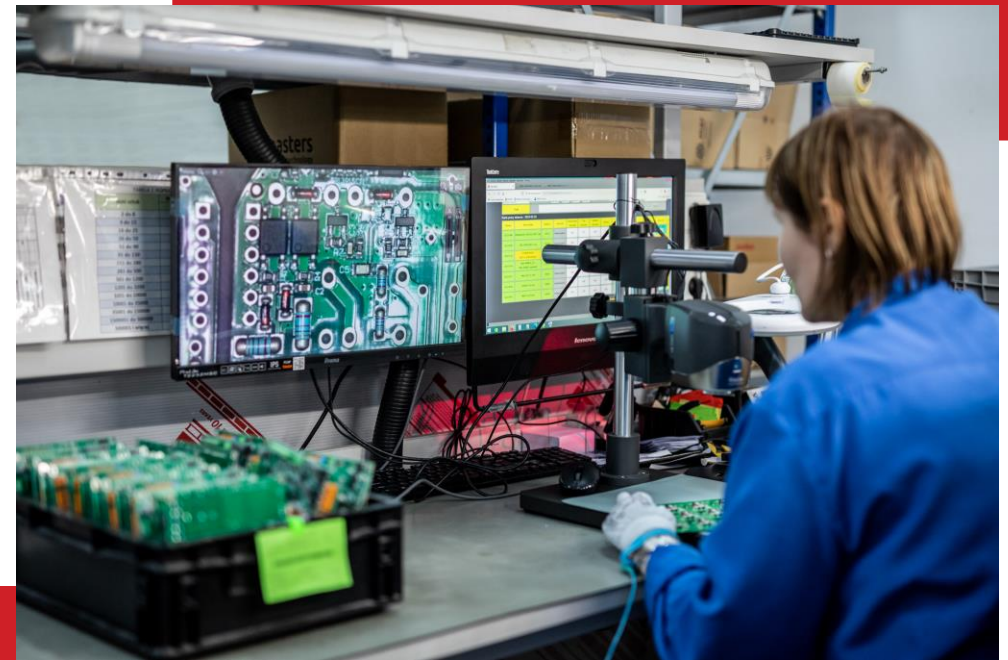
ADDITIONAL SERVICES

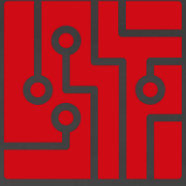
- Application of insulating and protective coatings
- Varnishing
- Washing
- Complete mechanical assembly
- Packaging
- Storage and dispatch



QUALITY ASSURANCE

- Process and product risk analysis (FMEA, PHA),
- CP quality control plans,
- Supervision of measuring and control instruments,
- Supervision of MSL storage conditions,
- Verification of EPA zones and ESD protection effectiveness,
- Inspection of deliveries,
- Inspections during the production process in accordance with the CP: traceability, AOI,
- UV verification of paint coatings,
- Electrical/functional test





STANDARDS

We work according to the standards of the Integrated Management System ISO 9001:2015, ISO 14001:2015, ISO 45001:2018.



Our employees have been trained to work according to the IPC 610 and 7711/7721 standards.

The devices manufactured for our clients are subject to supervision and periodic audits carried out by international certification authorities:

- Intertek,
- DEKRA.

Intertek



Our production meets the standards:

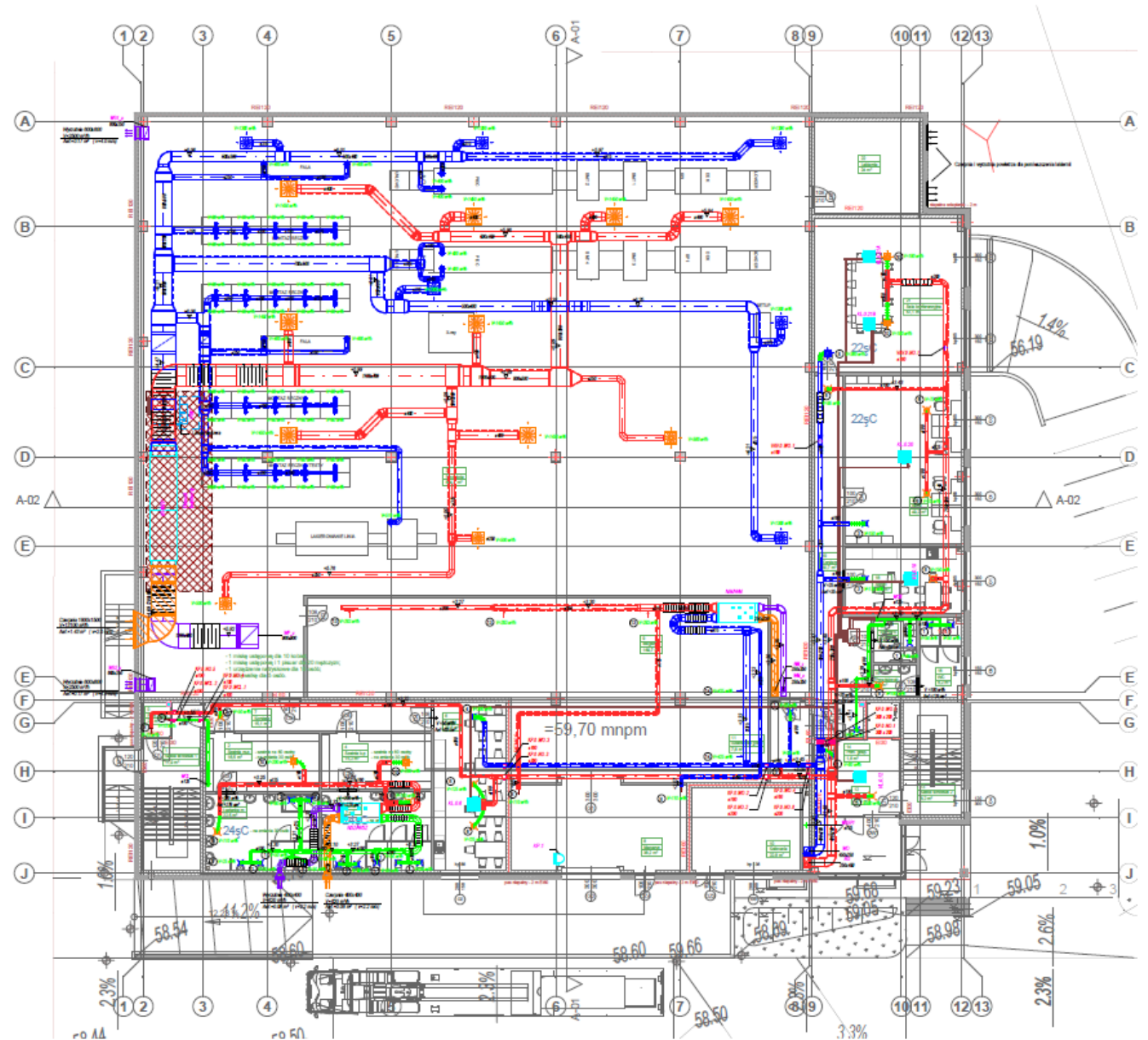
- IRIS of the railway industry,
- UL electronic standards for the USA and Canada.





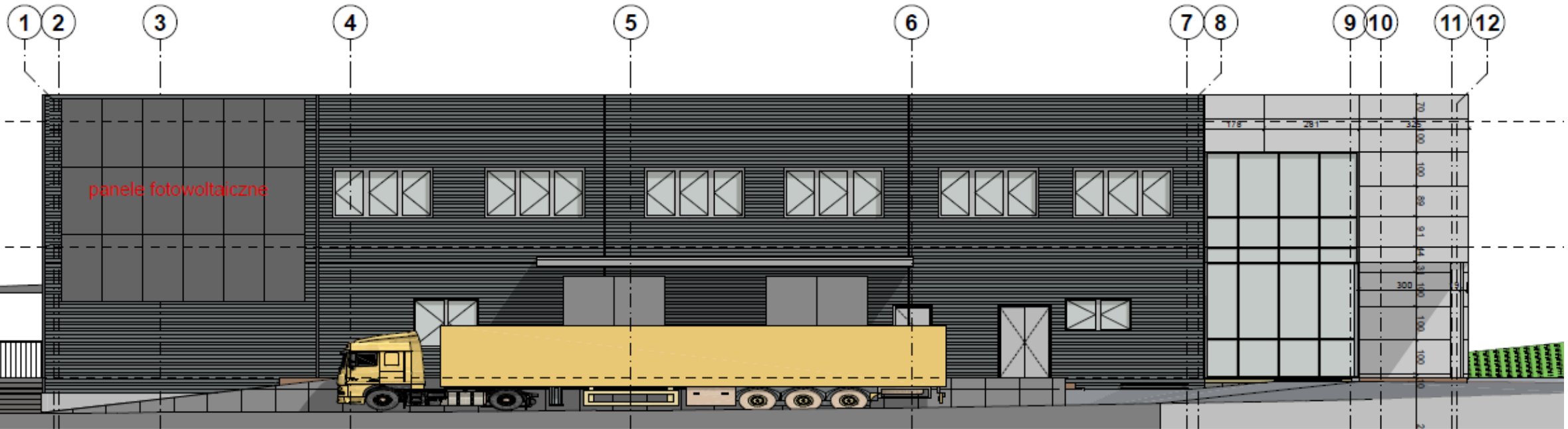
NEW MANUFACTURING HALL - PROJECT

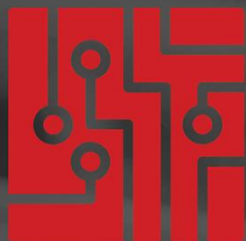
- manufacturing area of over 1000 sqm
- warehouse area
- loading ramp
- space for new processes : paint facility, workshop, R&D laboratory





NEW MANUFACTURING HALL - PROJECT





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