



Our projects

# Business case

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# Our products are applicable in the following fields:

01



Sorting of waste items at waste recycling plants

02



Control of geometry of rubber profile of automobile tire cord layer

03



Welding. Real time control of position of joints

04



Counter on conveyORIZED line of broiler chicken semi-finished products

05



Scanning of railway wheels using robots

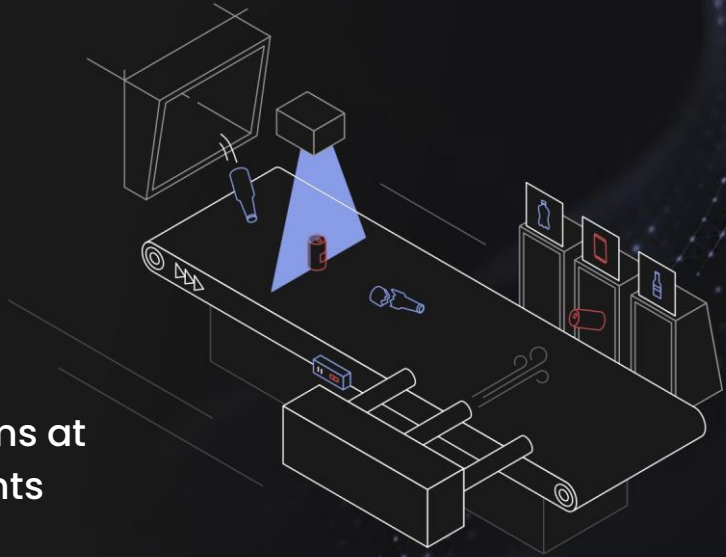


# 01



## Sorting of waste items at waste recycling plants

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# Sorting of waste items at waste recycling plants



The system of sorting of plastic bottles by color through intelligent video cameras with built-in algorithms of machine vision.

01



The bottles of various colors, forms, contamination pass on conveyORIZED tape.

02



Video camera installed above the tape, finds out an object, verifies and classifies it.

03



Then, with the aid of pneumatic system, the bottle is blown off to the appropriate container.

04





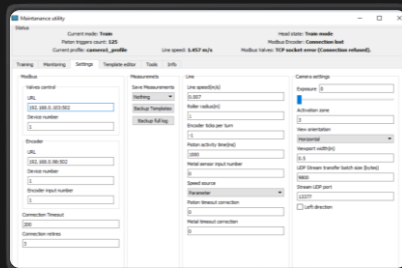
# Sorting of waste items at waste recycling plants



System allows bottles sorting by color taking into account labels on caps on the bottles.



System is being constantly improved with data accumulation.



# Opportunities:



Recognition of metal objects



Speed of conveyORIZED tape about up to 6 m/sec



Editing of templates on the spot



# 02



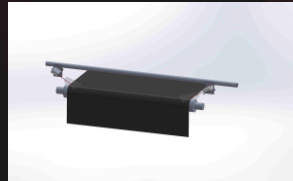
Control of thickness and width of  
roofing materials / Ruberoid

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# Control of thickness and width of roofing materials / Ruberoid

- Laser 3iScan 1 scanner is installed on the production line of roofing materials manufacturing and packing.
- The scanner settles an estimation of the material width and thickness as well as performs a search of minimum and maximum values of material thickness.







# Features of the system:



The time of calculation is up to 1 second

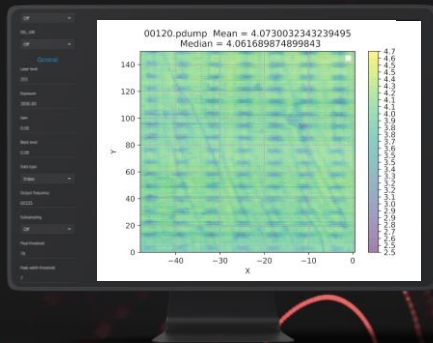


Scanning of Ruberoid with various dressings



Frequency of updating of indications up to 60 Hz

Scanned data is integrated into the production IT environment



# 03



Welding.

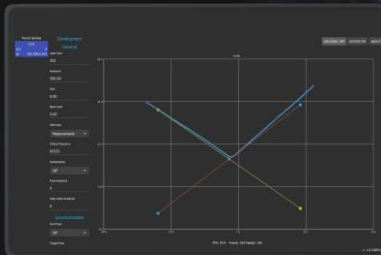
Real time control of position of joints

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# Welding. Real-time joint position control

The scanners are steady to external light flares and work stable on lustrous objects. It makes possible using laser scanners directly during welding for updating the location of welding tool.

The scanners are capable to calculate the needed location on the profile and pass this information to welding device.



# Welding. Real-time joint position control

## Scanning of parameters of weld joint (the model of the joint)

After welding is done, the scanners can be used to control the laser joints and for developing of three-dimensional model of the joints to analyse their forms.

## Control of the joint position on self-propelled welding tractors

Scanners are integrated into self-propelled welding devices. An additional option of scanners - the presence of a CAN interface allows the integration of scanners with many welding tractors.

## Control of the joints position on welding robots

As the first projects of our company, we developed the technology for controlling the position of the welding tools of welding robots.



# 04



Counter on conveyORIZED line of broiler  
chicken semi-finished products

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# Counter on conveyORIZED line of broiler chicken semi-finished products

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Laser 3iScan 1 scanner for calculation of broiler chickens on the conveyor.

The scanner allows to calculate the amount of commercial broiler carcasses and to define the volume of each of them separately.



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# Solutions Opportunities:

As well it is possible to apply the laser in the following production facilities:



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Slaughter lines for  
broilers



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Lines for the  
broilers carcasses  
cutting



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Sausage  
manufacturing  
departments



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Cheese  
production



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Food  
production



# Specifications of system:

Speed of the line: up to 10 m/sec

Size of control objects: 20..1200 mm

Frequency of measurements: up to 500 Gc

Frequency of updating the given calculations: up to 100 Gc

Data communication Interfaces: Ethernet (100Mbs, 1Gbs)





# 05



Scanning of railway wheels  
using robots

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# Scanning of railway wheels using robots

Bracket with three laser scanners robot is positioned above the wheel on the line of wheel turning.

Robot movements are synchronized with laser scanners which allow to scan three-dimensional image of the wheel and to calculate all necessary parameters of the profile of it with high accuracy.

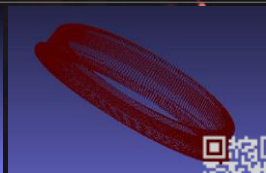
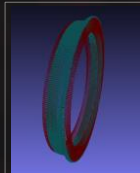
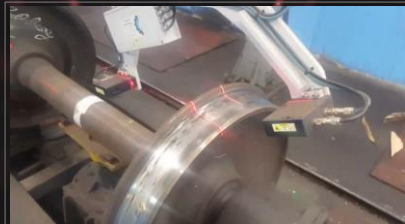
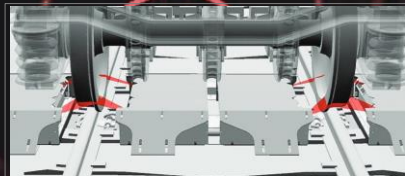
## Opportunities:



Calculation of parameters of the profile of one wheel – up to 1 minute

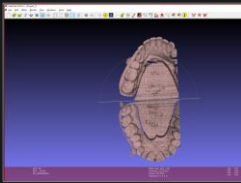
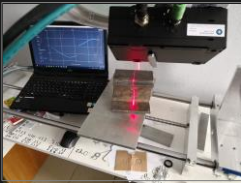
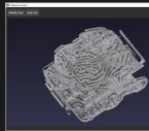
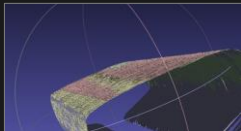


Additionally, the geometry of the axle box and the axis of the wheel set are calculated



# Other projects

- Powder metallurgy
- Plastic molding control
- Dental prosthetics
- Control of stamps
- Measurements of railroad rails
- Control of the height of transparent materials
- Measurement of aluminum profile dimensions





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to the next level

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