

**CAD Mech Ltd.**

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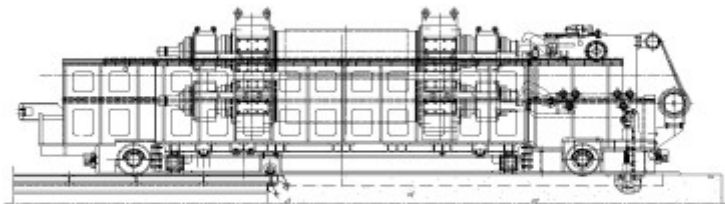
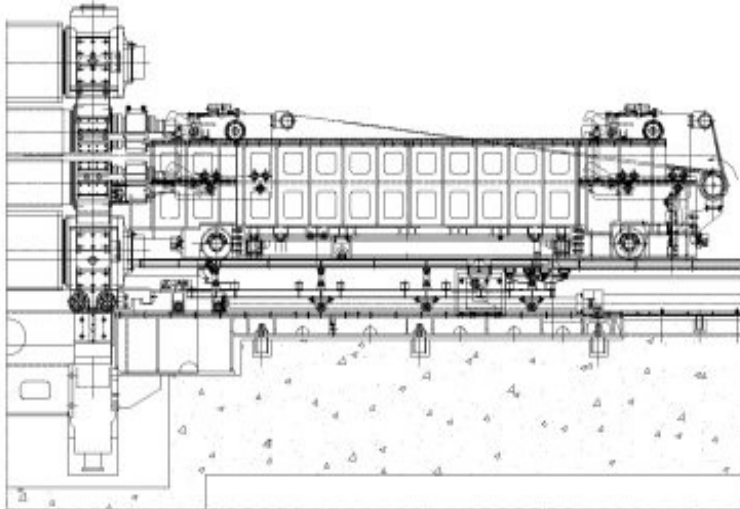
**main projects & references**

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e-mail: [cadmech@cadmech.pl](mailto:cadmech@cadmech.pl) , [office@cadmech.com.pl](mailto:office@cadmech.com.pl)

# Rollers: development



**Project location:**

Borcelik, Turkey  
Outocumpu Z-High, Finland  
Outocumpu Skin Pass, Finland

**Client:**

Danieli & C., Italy

**Task:**

Conception and basic design

**Execution:**

Conception and workshop drawings,  
parts and order lists. Installations:  
pneumatics, hydraulics, lubrication.

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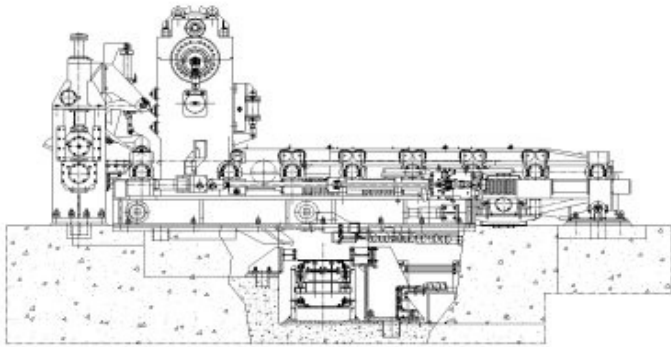
**Task:**

Conception and basic design

**Execution:**

Conception and workshop drawings,  
parts and order lists. Installations:  
pneumatics, hydraulics, lubrication.

# "Flying Shear"



**Project location:**

Cutting machine for steel sheet  
"Flying Shear" - IPSCO2, USA

**Client:**

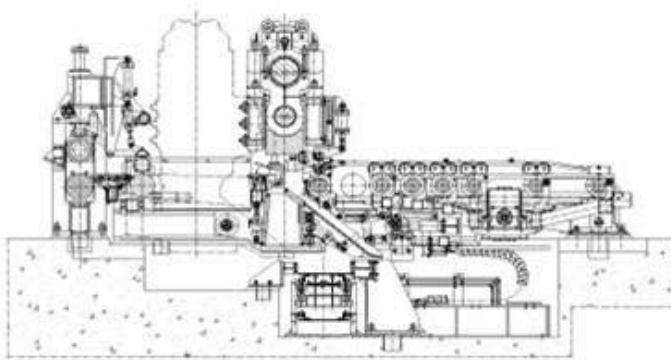
Danieli & C., Italy

**Task:**

Design "Flying shear"

**Execution:**

CAD drawings, parts and order lists,  
assembly drawings. Installations:  
pneumatics, hydraulics, lubrication.



# "Flying Shear"



**Project location:**

Cutting machine for steel sheet  
"Flying Shear" - IPSCO2, USA

**Client:**

Danieli & C., Italy

**Task:**

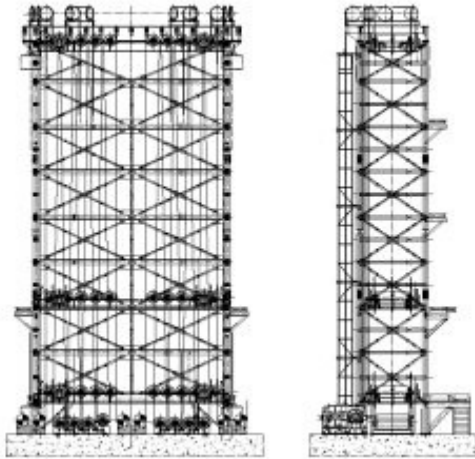
Design "Flying shear"

**Execution:**

CAD drawings, parts and order lists,  
assembly drawings. Installations:  
pneumatics, hydraulics, lubrication



# Accumulator for continuous sheet metal rolling & galvanizing line



**Location:**

Magnitogorsk, Russia  
Ispat Karmet, Kazakhstan  
Ruma, Estonia



**Client:**

Danieli & C., Italy

**Task:**

Conception and design

**Execution:**

CAD drawings, parts and order lists, static and dynamic calculations.

# **Accumulator for continuous sheet metal rolling & galvanizing line**



**Project location:**

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Ispat Karmet, Kazachstan  
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**Client:**

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**Task:**

Conception and design

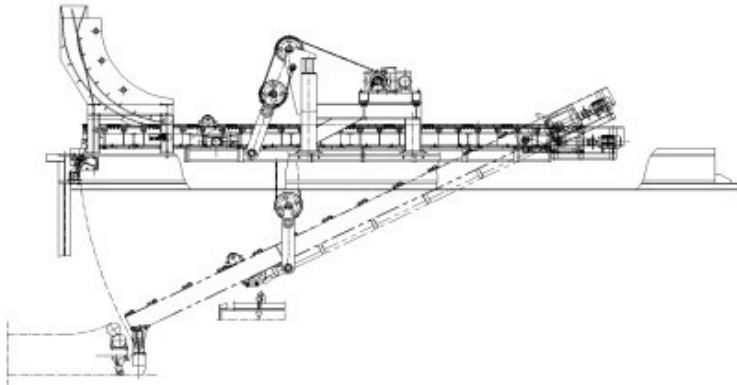
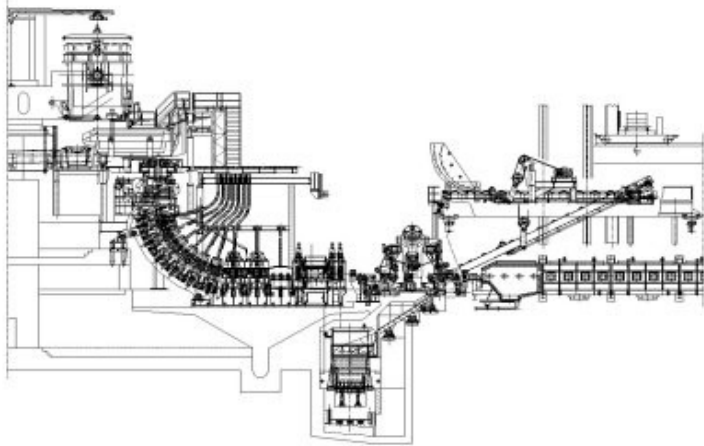
**Execution:**

CAD drawings, parts and order lists,  
static and dynamic calculations.





# Continuous steel casting line



**Project location:**

EZZ, Egypt  
Tung-Ho, Taiwan  
Sidmar, Belgium

**Client:**

Danieli & C., Italy

**Task:**

Conception and design

**Execution:**

Static and dynamic calculations,  
workshop drawings, parts and order lists,  
assembly drawings. Installations:  
pneumatics, hydraulics and water cooling.

# Continuous steel casting line



**Project location:**

EZZ, Egypt  
Tung-Ho, Taywan  
Sidmar, Belgium

**Client:**

Danieli & C., Italy

**Task:**

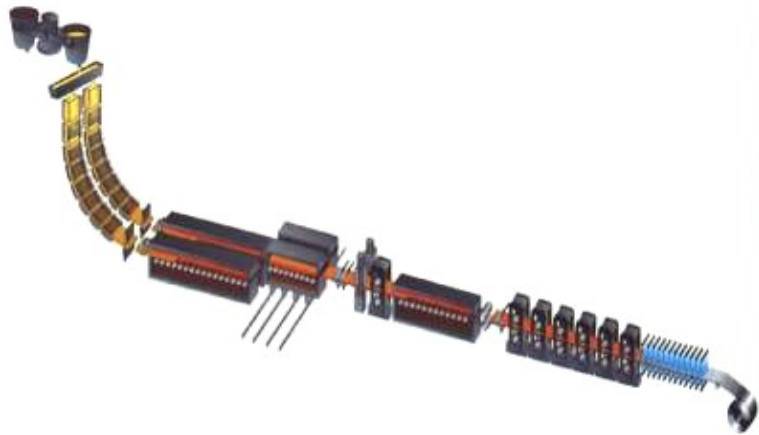
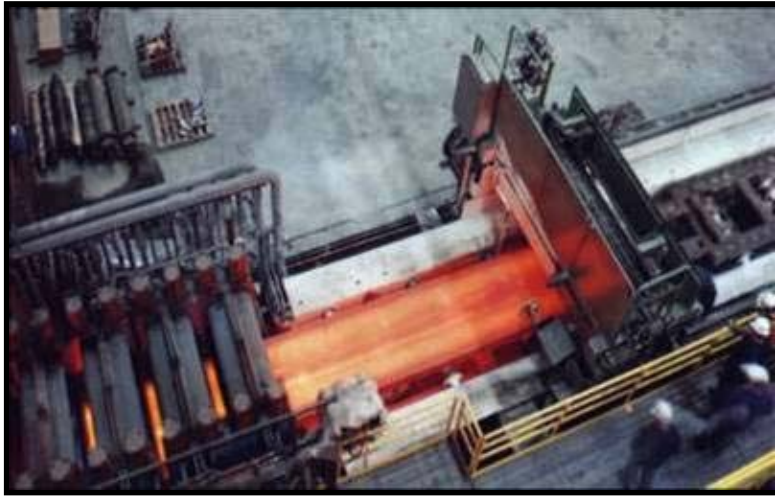
Conception and design

**Execution:**

Static and dynamic calculations,  
workshop drawings, parts and order  
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Installations: pneumatics, hydraulics  
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Tung-Ho, Taywan  
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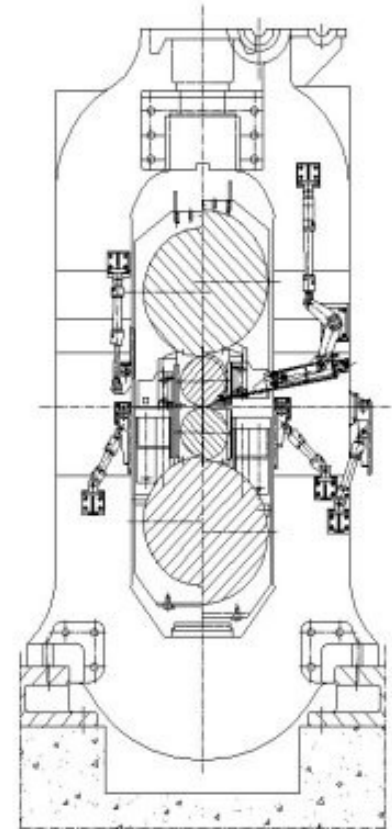
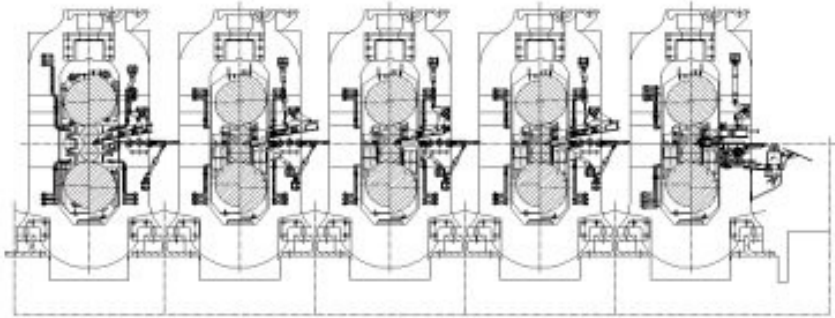
**Task:**

Conception and design

**Execution:**

Static and dynamic calculations, workshop drawings, parts and order lists, assembly drawings. Installations: pneumatics, hydraulics and water cooling.

# **Roller Line Modernisation**



**Project location:**

Cordigliano, Italy

**Client:**

Danieli & C., Italy

**Task:**

Conception and design

**Execution:**

Static and dynamic calculations, workshop drawings, parts and order lists, assembly drawings. Installations: pneumatics, hydraulics and water cooling.

## **Power stations**



**Project location:**

Boxberg, Lippendorf  
Neckar2, Leverkusen

**Client:**

Steinmüller – modernisation & development  
of power stations

**Task:**

Creation of giant gas flue  
Filters and electrofilters  
Steel supporting structures

**Solution:**

Static and dynamic calculations, workshop  
drawings, parts and order lists, assembly  
drawings

# Power stations



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Boxberg, Lippendorf  
Neckar2, Leverkusen

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Steinmüller – modernisation & development  
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**Task:**

Creation of giant gas flue  
Filters and electrofilters  
Steel supporting structures



**Execution:**

Static and dynamic calculations, workshop  
drawings, parts and order lists, assembly,  
drawings.

# Incinerating plants



**Project location:**

Böhlen, Hölz  
Boeblingen, Germany

**Client:**

Steinmüller - modernisation & development of  
incinerating plants

**Task:**

Creation of giant gas flue  
Filters and electrofilters  
Steel supporting structures

**Execution:**

Static and dynamic calculations, workshop  
drawings, parts and order lists, assembly  
drawings.

# Incinerating plants



**Project location:**

Böhlen, Hölz  
Boeblingen, Germany

**Client:**

Steinmüller - modernisation & development of  
incinerating plants

**Task:**

Creation of giant gas flue  
Filters and electrofilters  
Steel supporting structures

**Execution:**

Static and dynamic calculations, workshop  
drawings, parts and order lists, assembly  
drawings.



# Starting motors – control station



**Client & project location:**

ELMOT Ltd. ,Poland

**Task & execution:**

Conception, design, and installation start up in the area of mechanics, automation, and control system.



**Application:**

- examination of durability and determination of basic characteristics of starting motors
- adaptability providing scope to examine all types of starting motors manufactured by ELMOT Ltd.

# Visual control system for pneumatic brakes



**Client & project location:**

WABCO Poland Ltd.

**Task & execution:**

Conception, design, and installation start up in the area of mechanics, automation, and control systems.

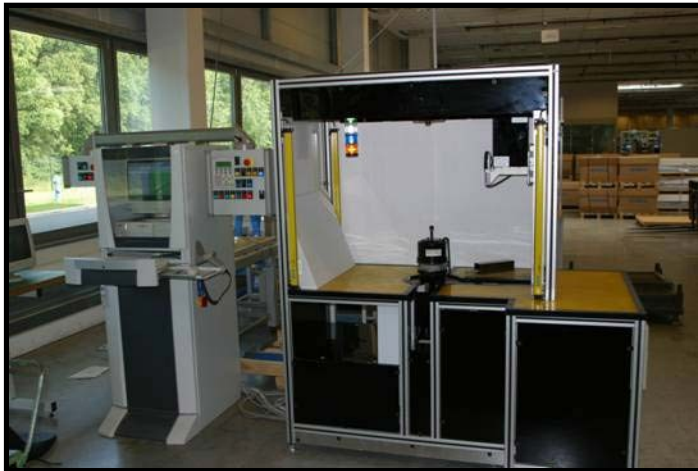


# Visual control system for pneumatic brakes

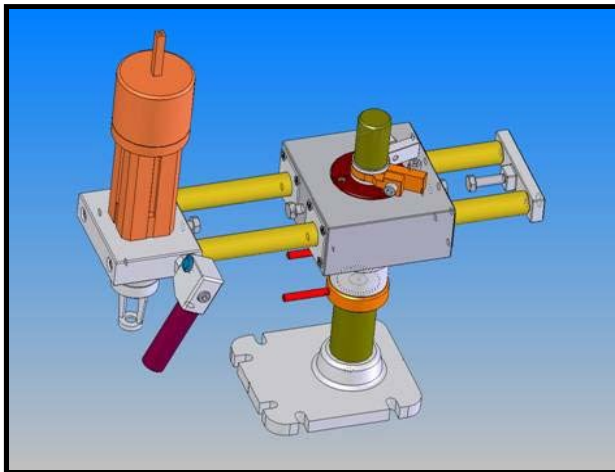
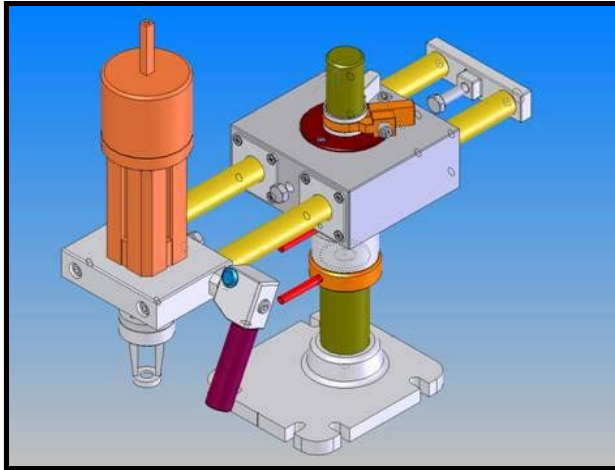


### Application:

- rigorous visual quality control of brakes manufactured by WABCO Poland Ltd.
- control station equipped with a system of 3 digital cameras, each of which independently establishes that a particular point is within specified tolerances
- each digital camera remotely fed with appropriate software updates.



# Fastening system for brake shoes



**Client & project location:**

BOSCH Ltd., Poland

**Task & execution:**

Conception, design, and installation start  
up

in the area of mechanics and automation.



## "Burning device"



### Task & execution:

Conception, design, and installation start up in the area of mechanics and automation.

### Client & project location:

CAD Mech research project under continuous development yielding ongoing improvements.

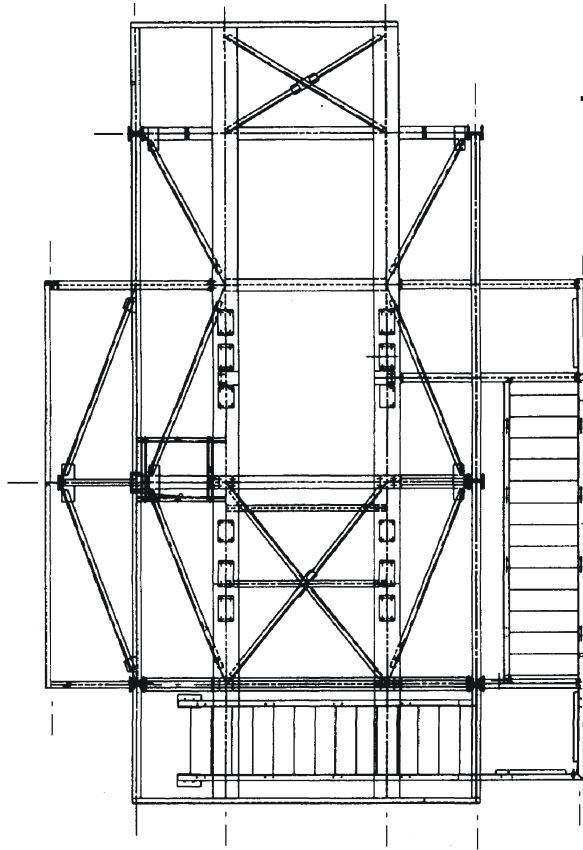
### Some technical data:

- dimensions 6 x 3 m, 12 x 3 m or acc. to client requirements
- one or two support burners
- basic software enables working without help of operator
- power consumption around 200W.
- bilaterally propelled portal
- ability to cut with use of oxygen or plasma

# **Sand & gravel production plant**

**Client & project location:**  
Allmineral Ltd., Poland

**Task & execution:**  
Engineering design of support construction  
for sifting station equipment. Documentation in AutoCAD,  
mechanical system, site drawing, parts specification.



# Device for magnetic measurement

## Client & project location:

Kuźnia Jawor, Poland. Project under continuous development and improvement.

## Application:

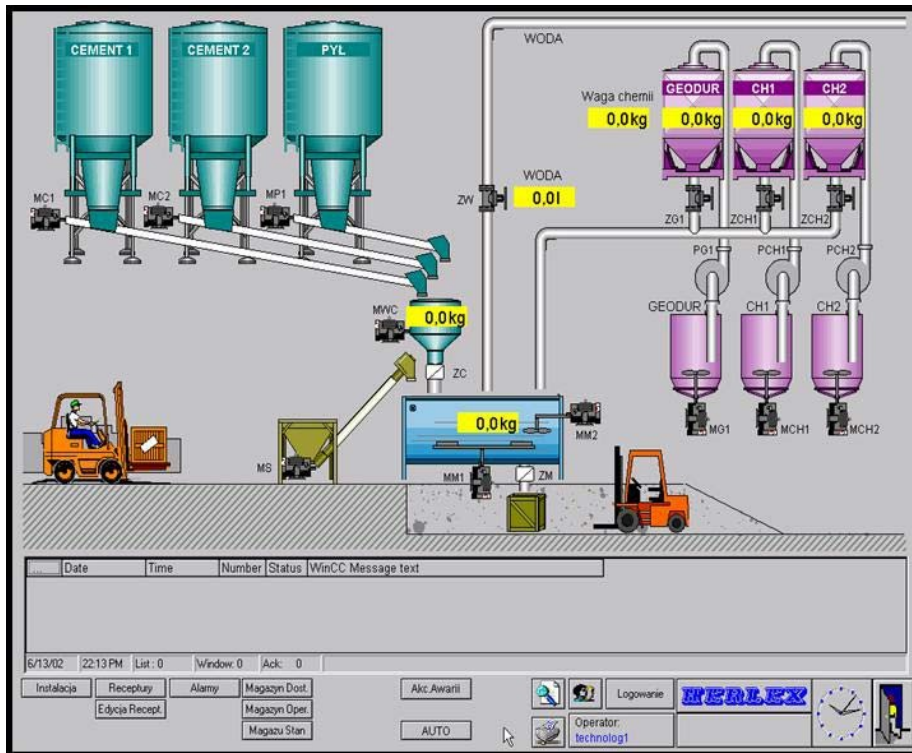
- inspection of elements produced on a mass scale
- comparison of elements' characteristic features against a known reference
- enables measuring of average hardness of each finished product. Afterwards inner structure can be specified
- should test results be returned which differ from those required, the product in question is most likely damaged, with a different inner structure or chemical composition, different shape, or other defect within the element. Any such indications will lead to a unit being marked for detailed inspection or retrial heat treatment .

## Task & execution:

Conception, design, and installation start up in the area of automation.



## Control system for production of prefabricated concrete elements



**Client & project location:**

HARLEX Ltd., Poland

**Task & execution:**

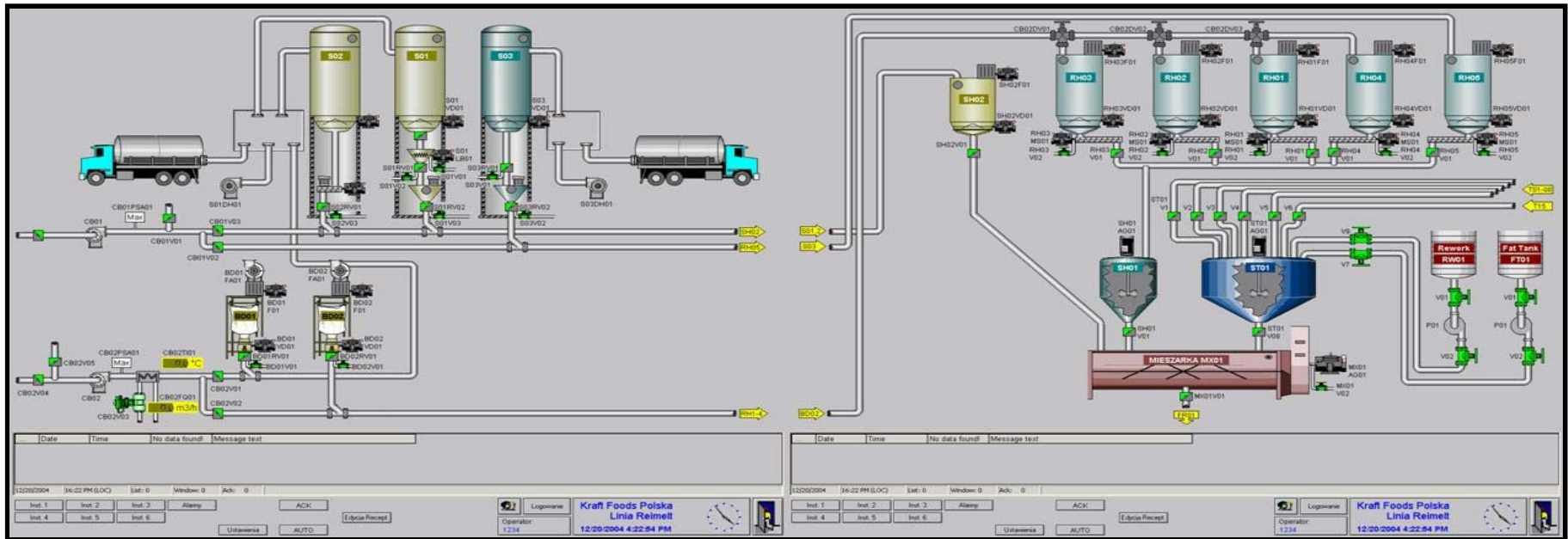
Conception, design, and installation of entire production-line control system.

**Main elements of control system:**

- production-line installation control system
- system for the administration of raw material stocks
- system for the editing and selection of production recipes
- users' administration system
- communication and alarms system



## Control system for production of prefabricated concrete elements



### Client & project location:

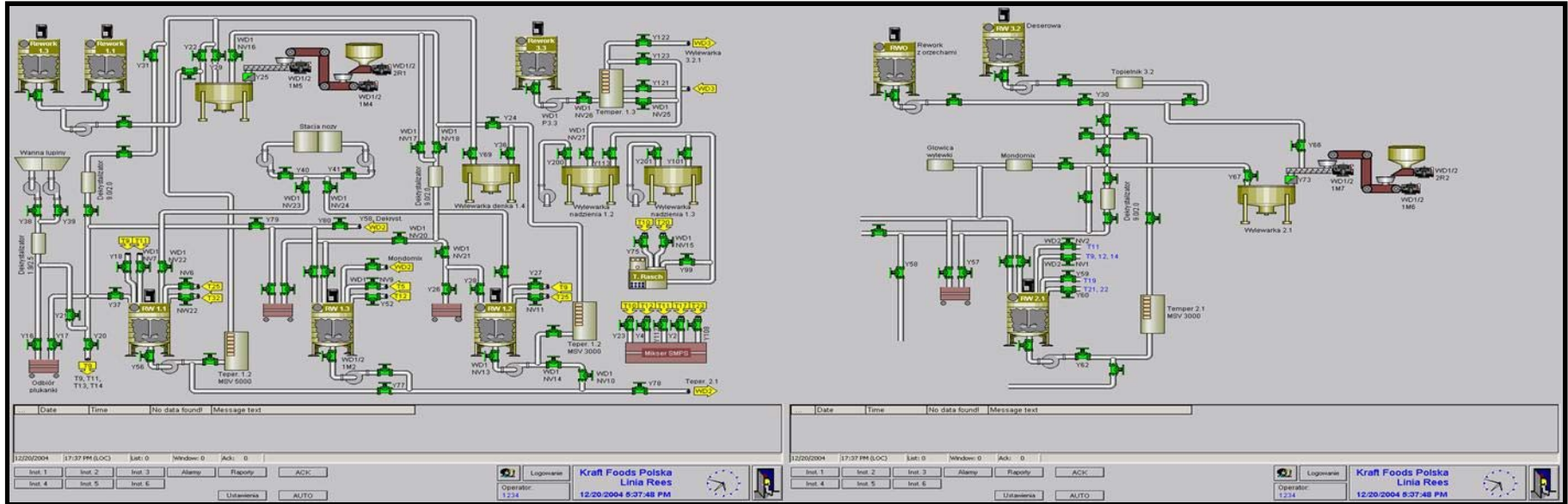
KRAFT - Food Poland Ltd.

### Task & execution:

Conception, design, and installation of entire production-line control system.

## Control system for the preparation of mass-scale production lines

Project: chocolate line production at KRAFT- Food Poland Ltd.

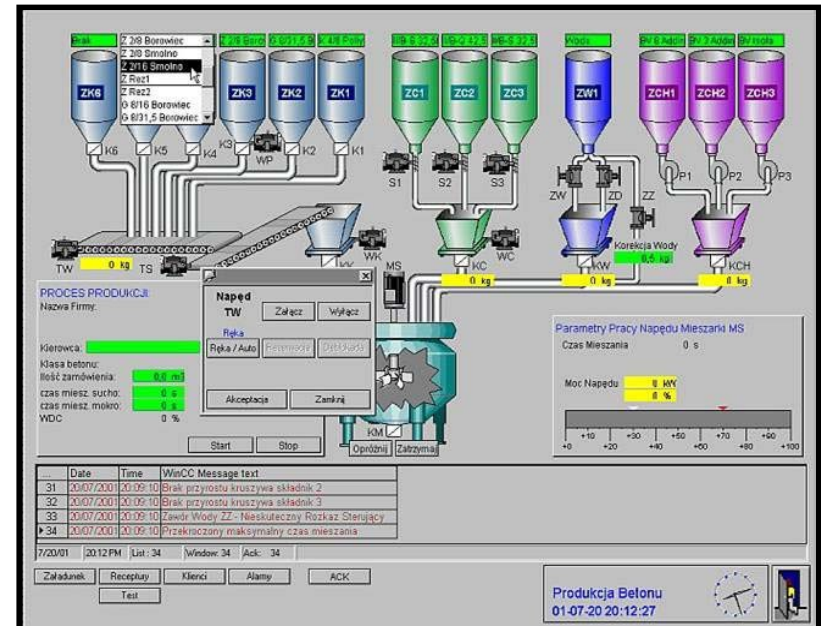
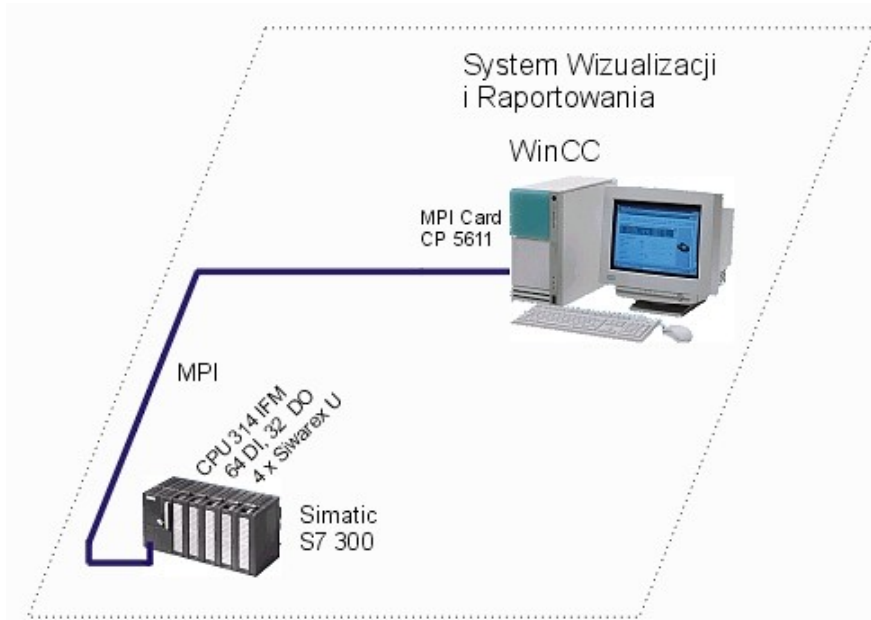


### Main elements of control system:

- production-line control system installation
- system for the administration of raw material stocks
- system for the editing and selection of production recipes
- users' administration system
- communication and alarms system

## Control system for the installation of a concrete production-line

### Selected screens of visualization system



### Configuration of the automatic system:

Operator Station: WinCC

Controller PLC: CPU S7 314 IFM

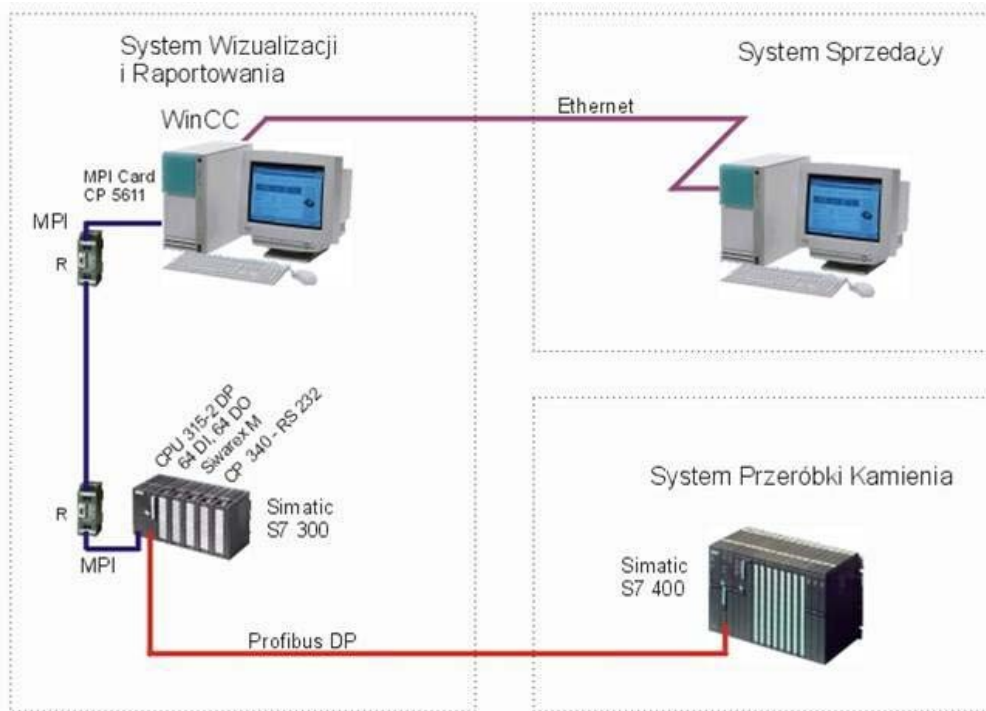
64 DI, 32 DO

4 x Siwarex U

### Task & execution:

Conception, design, and installation of entire production-line control system.

## Car loading system in "Graniczna" granite mine



**Client & project location:**

"Graniczna" granite mine, Poland

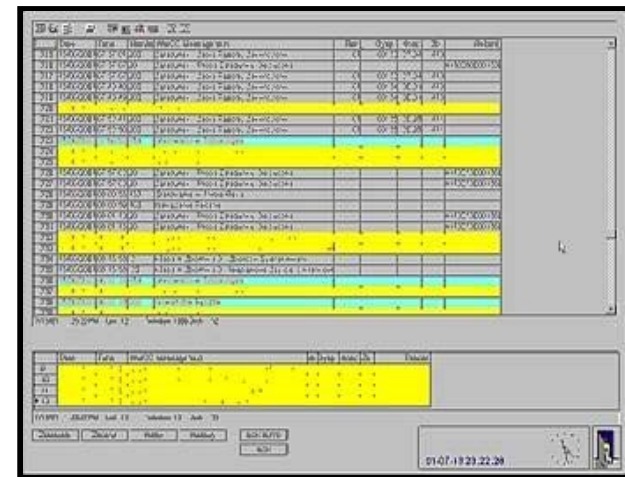
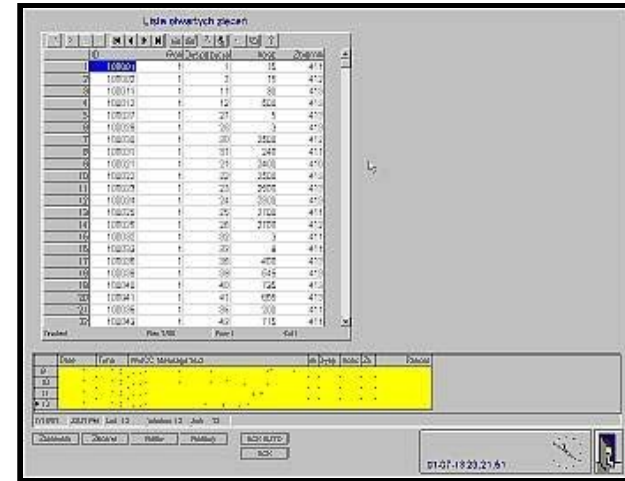
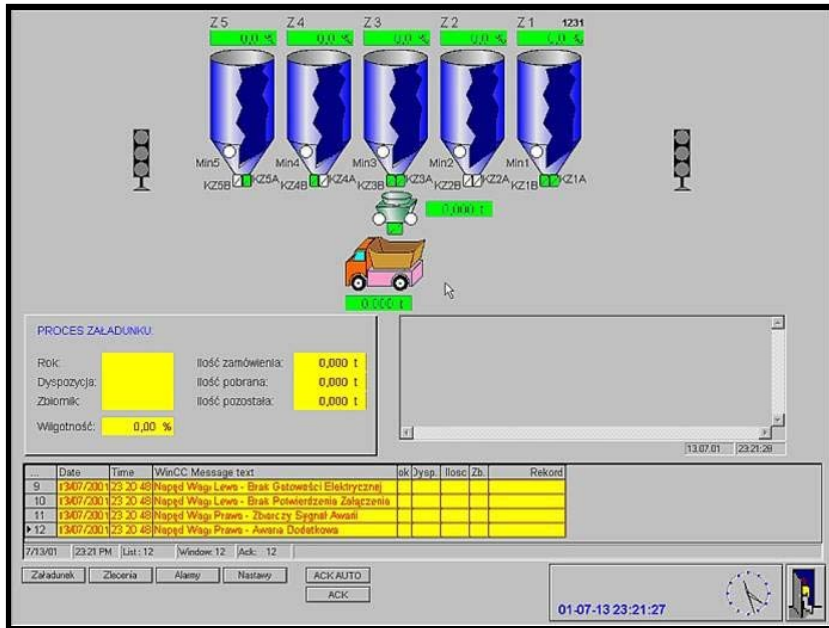
### Configuration of the automatic system:

Operator station WinCC  
cooperating with the selling system

Controller PLC: CPU S7 315-2 DP  
64 DI, 64 DO  
Siwarex M  
CP340 - RS 232 connected with  
bar code scanner

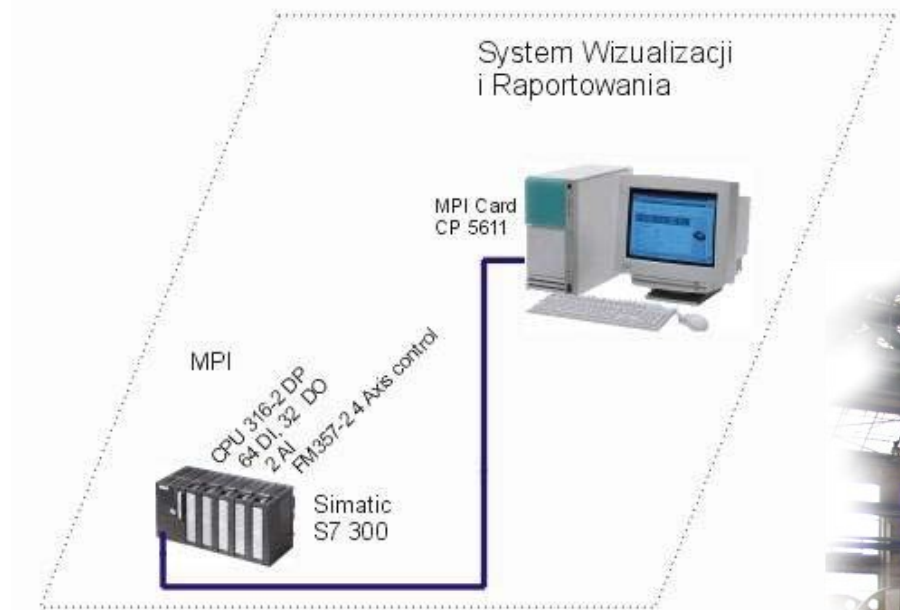
## Car loading system in "Graniczna" granite mine

### Selected screens of visualisation system



**Task & execution:**  
Conception, design, and installation of entire production-line control system.

## Welding system for locomotive side walls



**Client & project location:**  
"Bombardier" Ltd., Poland

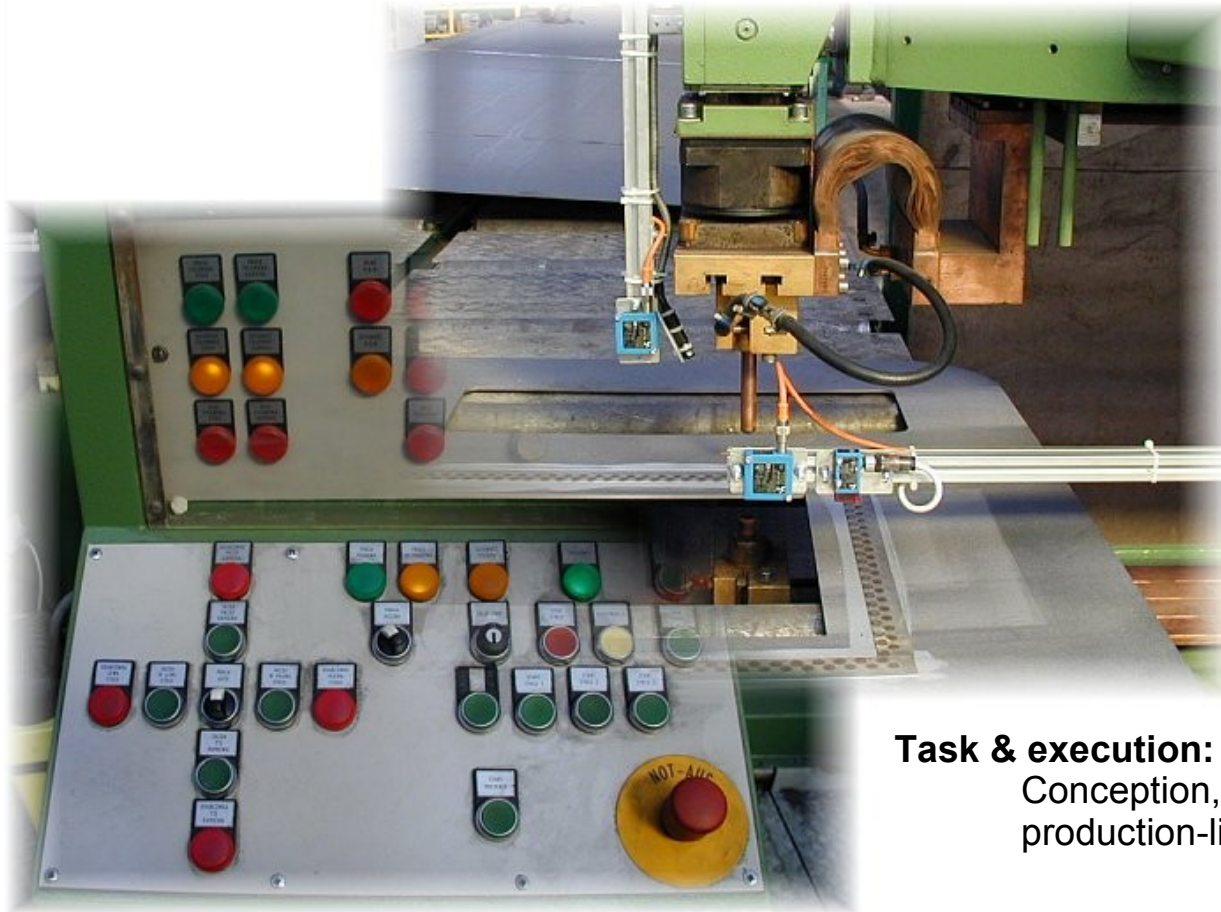
**Configuration of the automatic system:**  
Operator Station BuilderC++

Controller PLC: CPU S7 316-2 DP  
64 DI, 32 DO  
2 AI  
FM 357-2 4 Axis control



## **Welding system for locomotive side walls**

**Welding electrodes and measuring sensors**



**Console**

### **Task & execution:**

Conception, design, and installation of entire production-line control system.

**Thank you for your attention**

**For more information please contact us directly**

**Contact data:**

**Cad Mech Ltd.**

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**52-314 Wrocław, Polen**

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