



# KOFAMA KOŹLE S.A.



GRUPA ZARMEN 



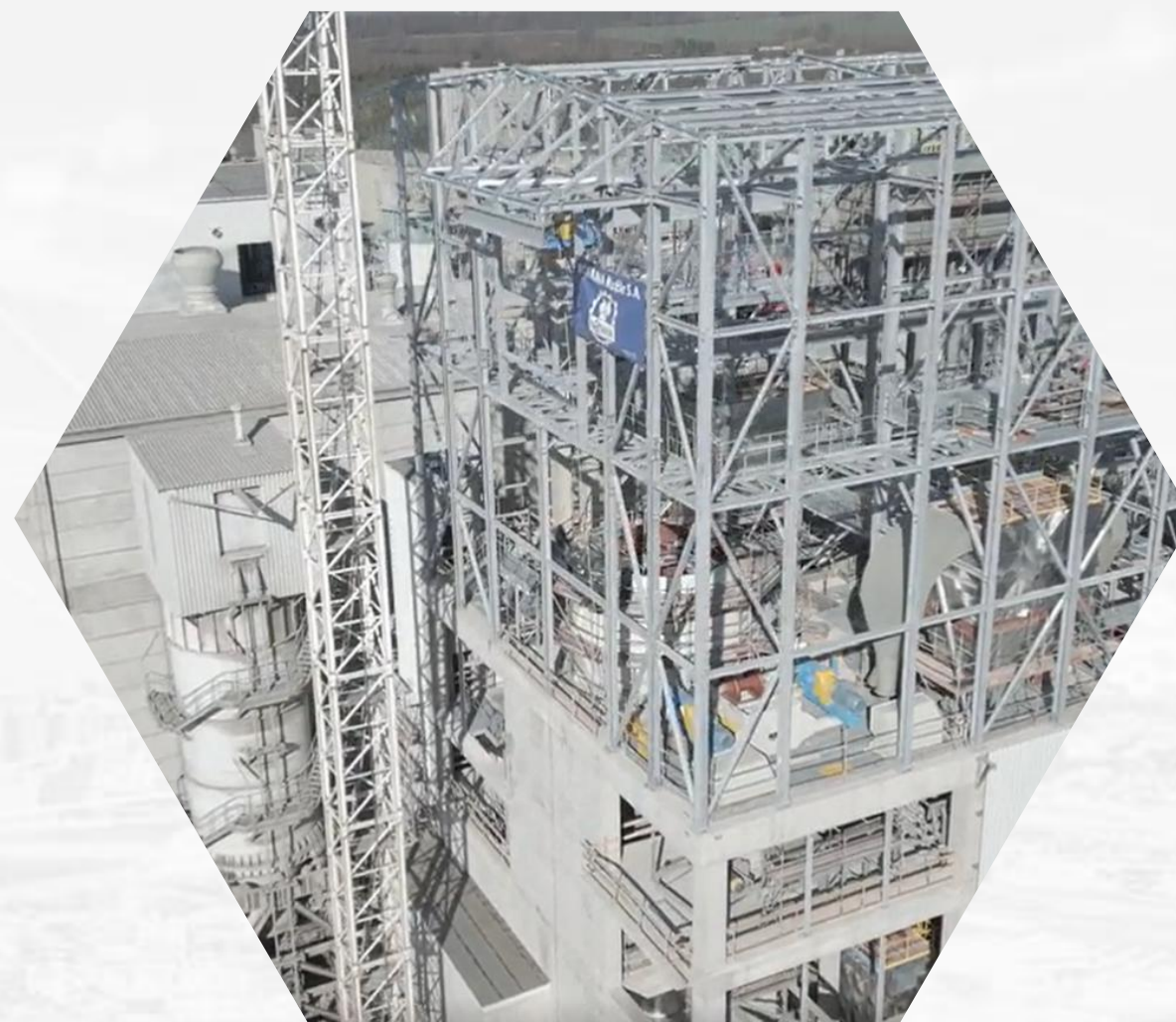
**GRUPA ZARMEN**

# Product lines



## Branch Kędzierzyn-Koźle

- machine structures
- robotic welding
- CNC machining
- industrial anti-corrosion treatment



## Branch Chorula

- maintenance at cement plants
- investments at cement plants



## Branch Żmigród

- prefabrication of pipelines
- prefabrication of skids
- steel structures

# Branch Koźle – machine structures

Prefabrication and delivery of tanks for slurry tankers

- dimensions: **6 500 mm x 2 500 mm x 220 mm**
- weight: **8 000 kg**
- material: **P265GH**





# Branch Koźle – machine structures

Production and delivery of crawler crane chassis

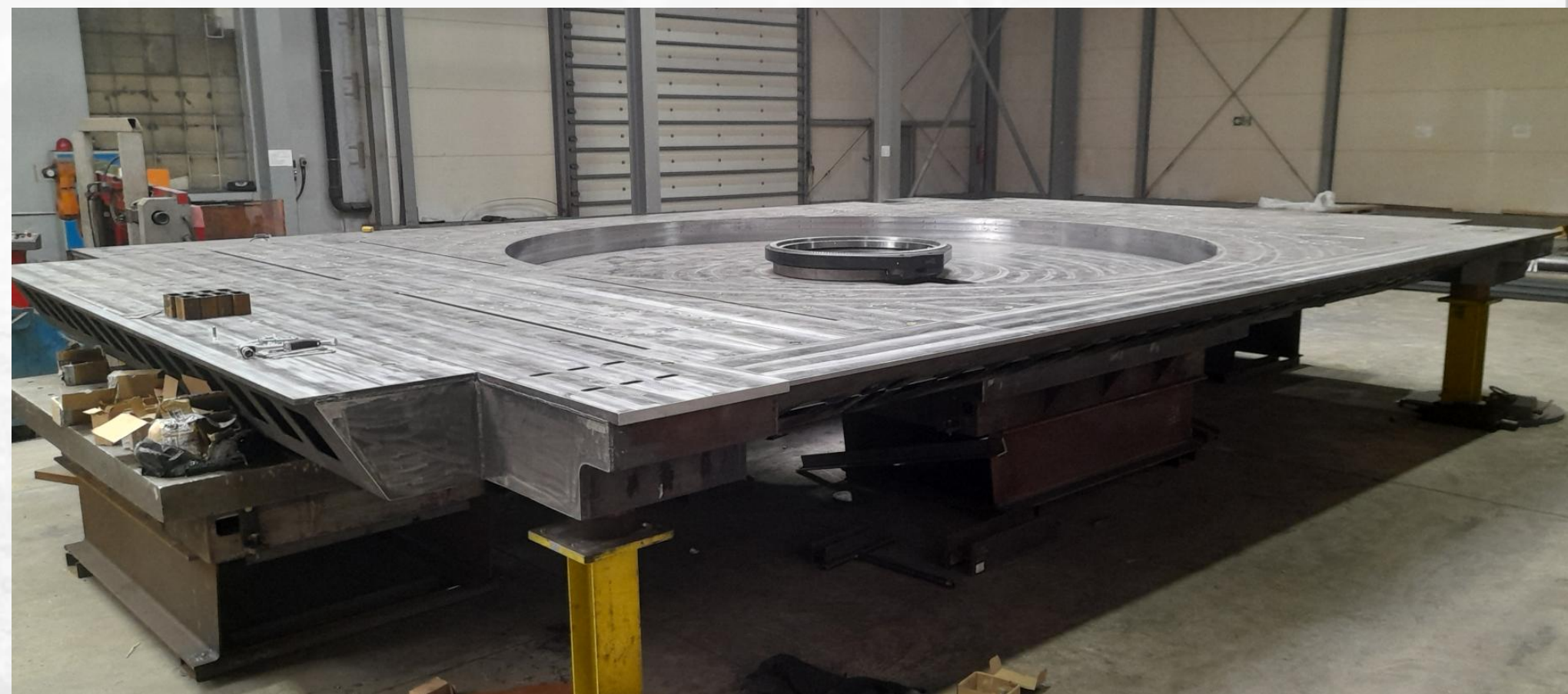
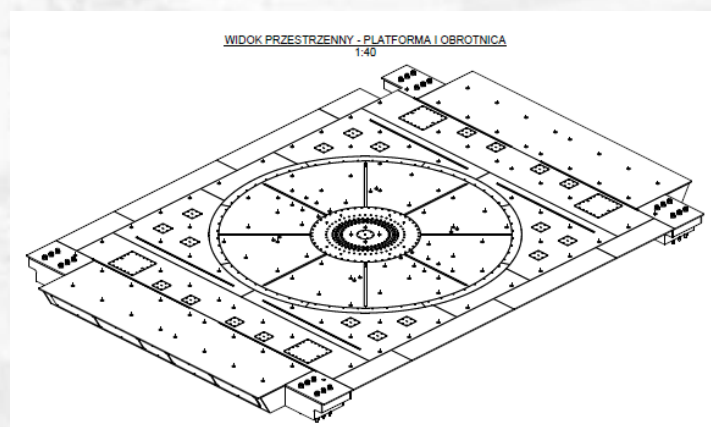
- dimensions: 5 650 mm x 2 965 mm x 915 mm
- weight: 6 338 kg
- material: S690QL



# Branch Koźle – machine structures

Rotary platform for an aerodynamic wind tunnel – aviation

- air flow velocity: **300 km/h**
- rotor diameter: **7 000 mm**

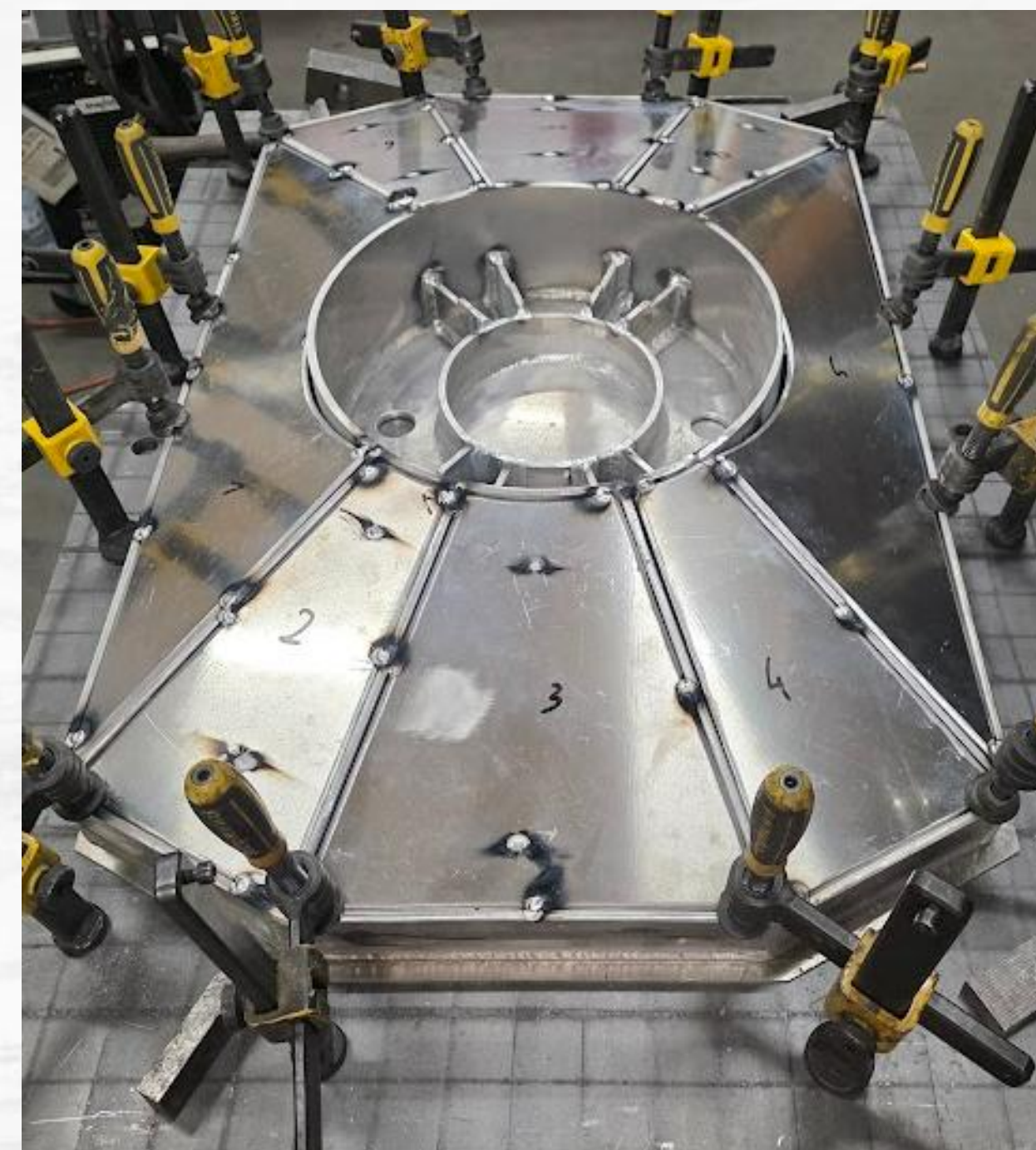


- dimensions: **8 900 mm x 6 100 mm x 350 mm**
- weight: **17 600 kg**

# Branch Koźle – machine structures

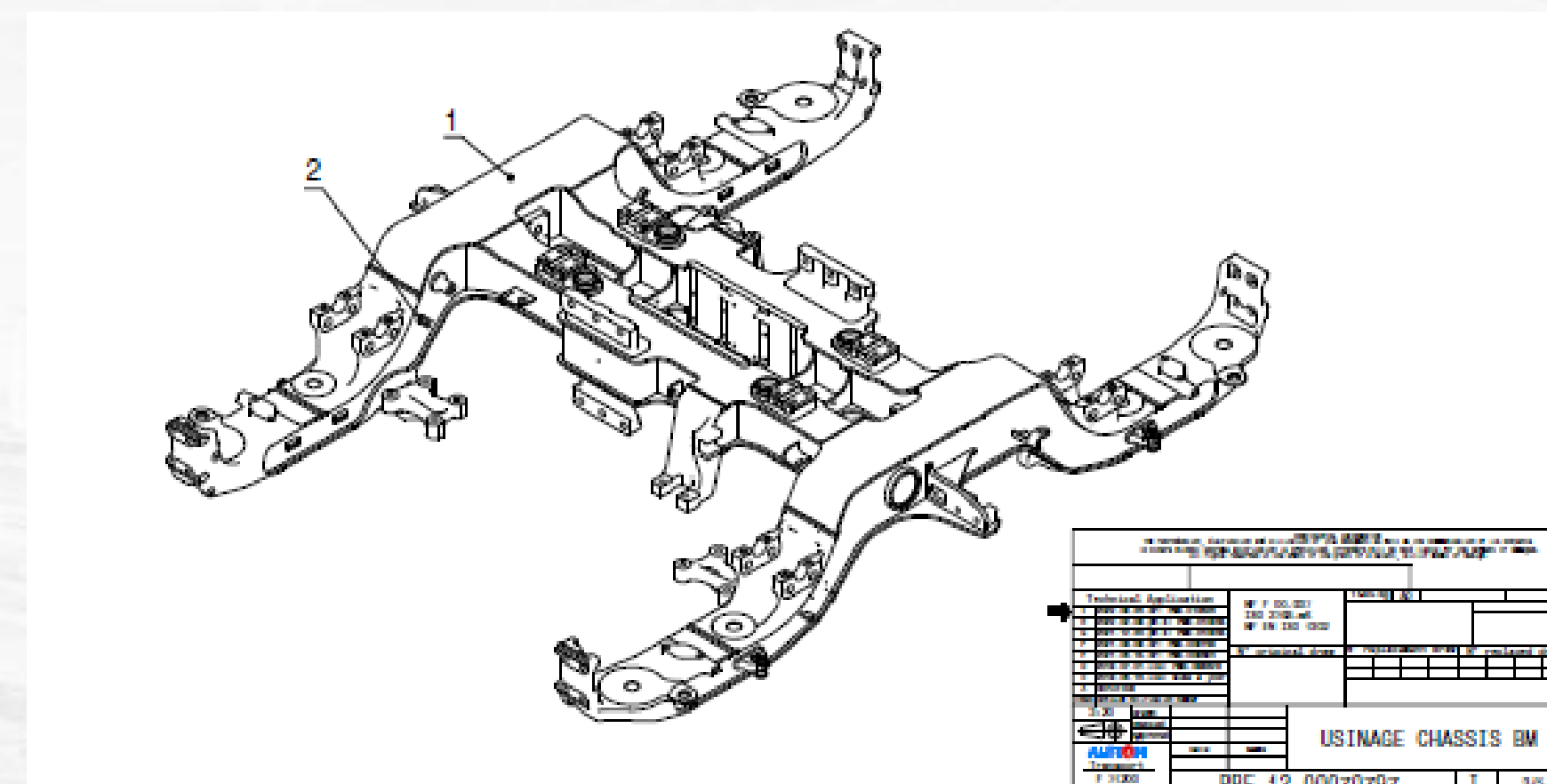
Defence industry – bridge support foot on a vehicle chassis

- dimensions: **1 150 mm x 750 mm x 158 mm**
- weight: **47.5 kg**
- material: **AW-5754; AW-6060 – aluminium alloy**



# Branch Koźle – machine structures

# Railway industry – mechanical machining of bogies



# Branch Koźle – equipment production

Vibrating screens and feeders designed for the classification of coal, ore, aggregate or coke

- capacity: **from 20 to 1000 t/h**
- granulation: **from 10 mm to 800 mm**



# Branch Koźle – production capacity

## Robotic welding



- **1-axis positioner:**  
maximum workpiece weight **15 tonnes**, workpiece dimensions smaller than a cylinder with a diameter of **3.5 m** and a length of **8 m**
- **2-axis L-type positioner:**  
maximum workpiece weight **5 tonnes**, diameter **1 600 mm**, can be converted to a larger single-axis machine with a distance between discs of **2 000 – 4 000 mm**
- **2-axis L-type positioner:**  
maximum workpiece weight **5 tonnes**, diameter **3 200 mm**
- **large-size field**  
enables the welding of parts measuring **8 m x 8 m x 3 m**

# Branch Koźle – production capacity

Kofama is a proven partner in the production and assembly of shell-and-tube heat exchangers and other pressure equipment



# Branch Koźle – production capacity

## Robotic welding



### Boring machine CNC (Fermat WF 15 R):

X = 8 000 mm  
Y = 3 500 mm  
Z = 700 mm  
W = 730 mm

### Drilling milling machine CNC (TOS Varnsdorf WHQ 13):

X = 5 000 mm  
Y = 3 000 mm  
Z = 2 500 mm  
W = 800 mm

### Drilling milling machine CNC (Microcut HBM 400):

X = 2 000 mm  
Y = 2 000 mm  
Z = W = 1 600 mm + 600 mm

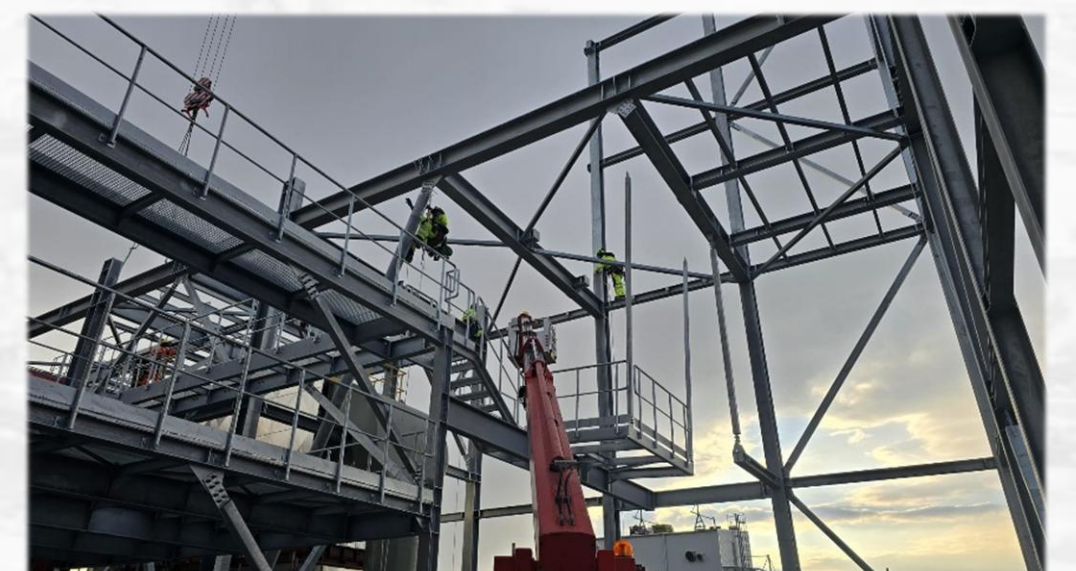
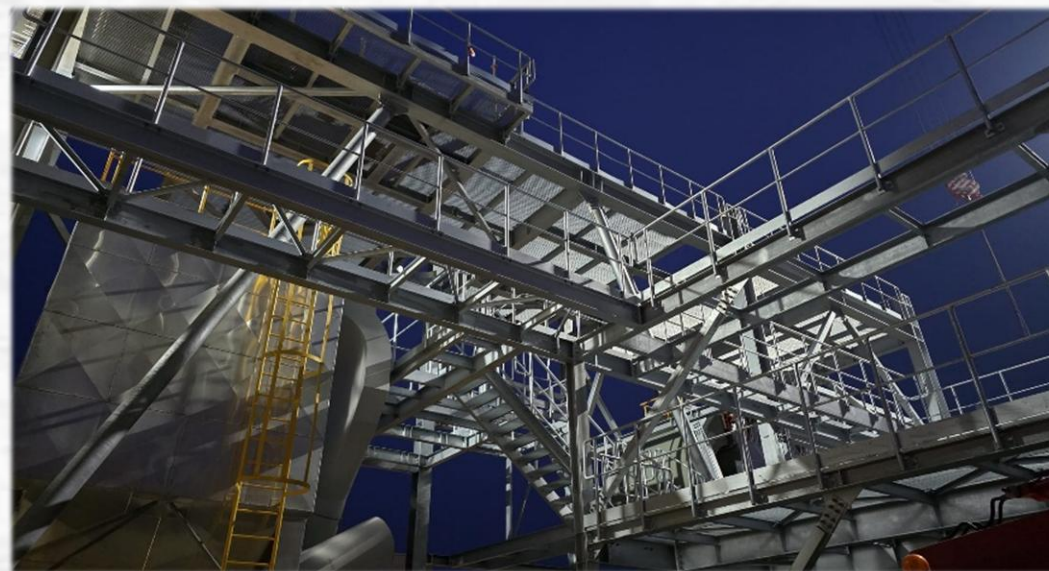
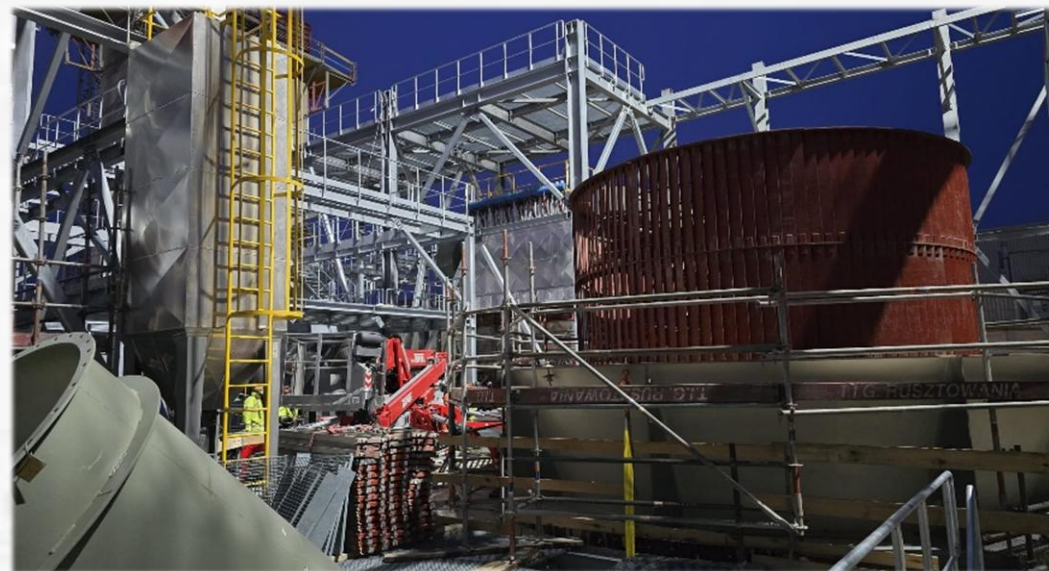
### Tool milling machine CNC (FA 40X SPECIAL):

X = 600 mm  
Y = 420 mm  
Z = 520 mm



# Branch Chorula – new investments

Project: installation of a separate grinding plant for cement production components, including silos and transport systems for cement mill installations



Scope: prefabrication and assembly of approx. **1 100 tonnes** of steel building structures



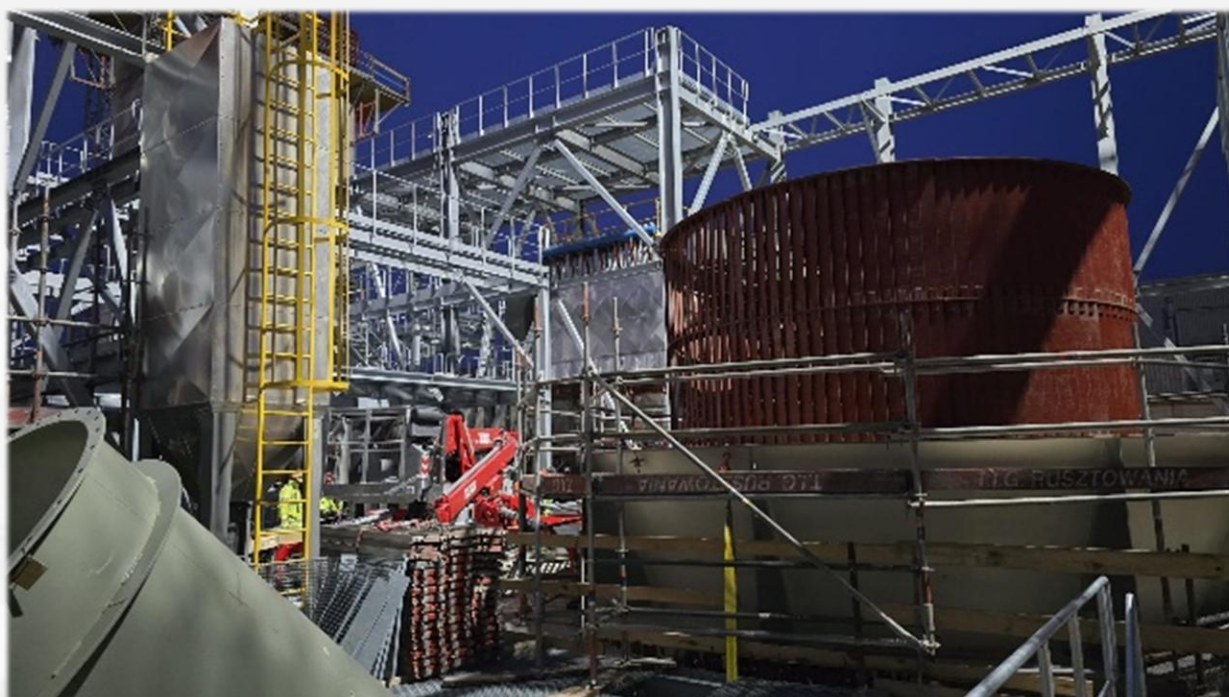
# Branch Chorula – new investments

Project: installation of a separate grinding plant for cement production components, including silos and transport systems for cement mill installations





# Branch Chorula – new investments



Scope: prefabrication and assembly of approx. **1 450 tonnes** of technological equipment and process components

# Branch Chorula – equipment repairs

Repairs and refurbishment of hammer crushers at the Górażdże and Folwark mines



- weight: ca. 39 000 kg
- length: 4 100 mm
- diameter: 2 300 mm



# Branch Chorula – equipment repairs

Parts regeneration, spare parts production – reverse engineering





# Branch Chorula – equipment repairs

Repairs and refurbishment of chain conveyors





# Branch Żmigród – welded structures

Steel structures and pipeline prefabrication



# Branch Żmigród – welded structures

## Industrial tanks



- dimensions: **dia. 5 100 mm x 25 000 mm**
- weight: **70 000 kg**



# Branch Żmigród – welded structures

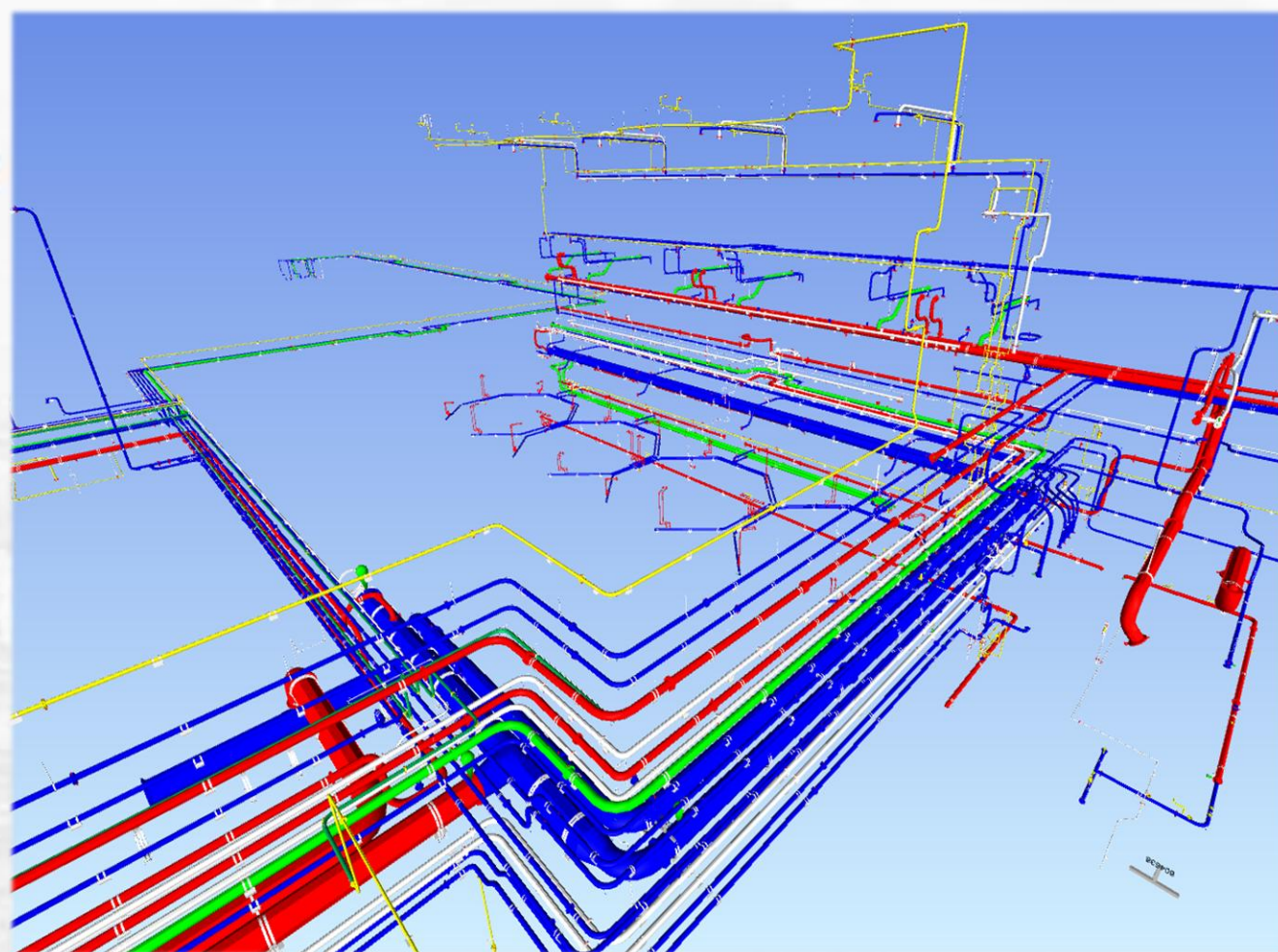
Process gas extraction and ducting for the metallurgical industry





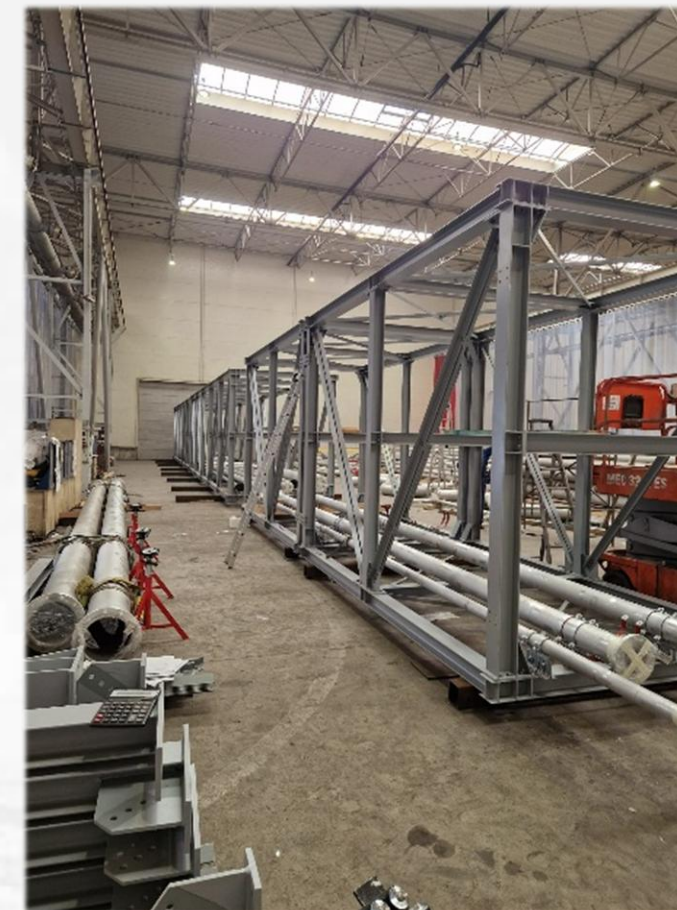
# Branch Żmigród – piping installations

Project: second-generation bioethanol production plant





# Branch Żmigród – piping installations



Design, prefabrication and installation of  
carbon steel and stainless steel pipelines: **25 km**  
Diameters: **from DN 15 to DN 1200**

# Branch Żmigród – pipelines prefabrication – pipes bending



## **AMOB CH 320 CNC**

Maximum bending capacity of the machine

OD- $\varnothing$  pipe x wall thickness:

- mild steel (450 N/mm<sup>2</sup>): **323.9 x 17.5 mm**
- stainless steel (750 N/mm<sup>2</sup>): **323.9 x 8.8 mm**

## **AMOB CH 120 CNC**

Maximum bending capacity of the machine

OD- $\varnothing$  pipe x wall thickness:

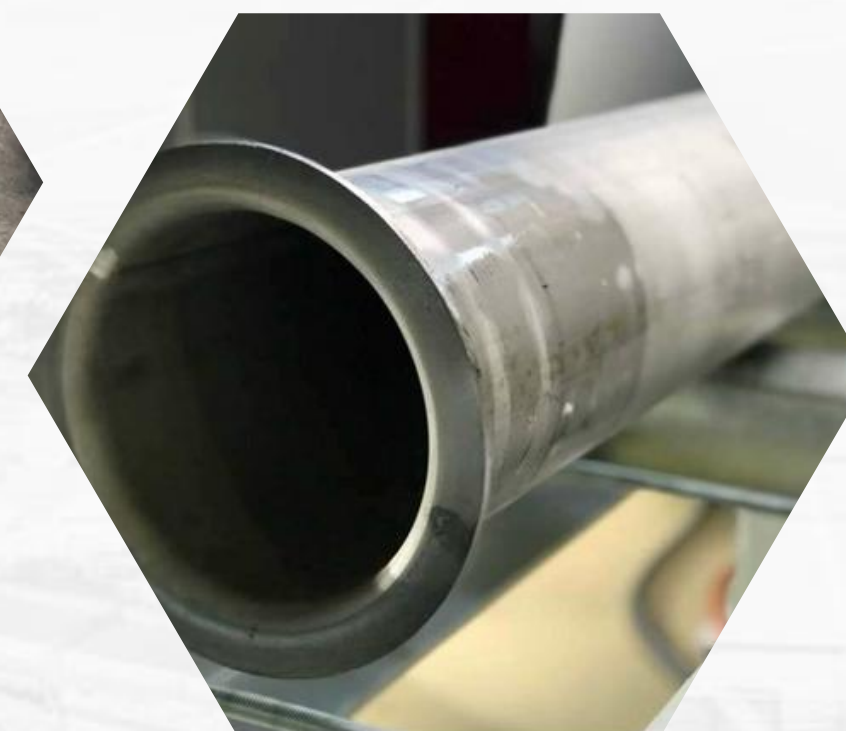
- mild steel (450 N/mm<sup>2</sup>): **114.3 x 8.6 mm**
- stainless steel (750 N/mm<sup>2</sup>): **114.3 x 4.0 mm**

# Branch Żmigród – pipelines prefabrication – collaring



- pipe diameter range:  $\varnothing$  33.7 – 406.4 mm
- wall thickness range: 1.5 – 12.7 mm
- formed neck diameter range:  $\varnothing$  33.7 – 219.1 mm

# Branch Żmigród – pipelines prefabrication - flanging



- diameter range:  $\varnothing$  33.7 – 419 mm
- maximum thickness – mild steel (450 N/mm<sup>2</sup>): 9 mm
- maximum thickness – stainless steel (750 N/mm<sup>2</sup>): 6 mm

# Branch Żmigród – pipelines prefabrication

Comparison of the use of T-DRILL machines  
with conventional manufacturing methods



10 Weld Joints



No Fittiring;  
Only 2 Joints

# Branch Żmigród – pipelines prefabrication

Benefits of using a pipeline prefabrication line:

- Number of welds in conventional construction (using fittings): **9**
- Number of welded joints when using a pipeline prefabrication line: **1 weld – pipe connection**



# Branch Żmigród – pipelines prefabrication – orbital welding

The orbital welding process is carried out using POLYSOUDE equipment:

- **MW 115-2 closed head**  
diameters:  $\varnothing$  21.3,  $\varnothing$  33.7,  $\varnothing$  48.3,  $\varnothing$  60.3
- **MU IV 25/115 AVC/OSC CW P open head**  
diameters:  $\varnothing$  25 - 115 mm
- **MU IV 114/275 AVC/OSC CW P open head**  
diameters:  $\varnothing$  114 - 275 mm
- **POLYCAR 60-2 CW self-propelled head**  
diameters:  $\varnothing$  324 mm,  $\varnothing$  406mm,  $\varnothing$  457 mm,  $\varnothing$  508 mm,  $\varnothing$  610 mm,  $\varnothing$  813 mm





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