

ULTRATECNO

FOOD INDUSTRY AND ULTRASONIC CLEANING

November, 10th 2021

Case Study

FOOD INDUSTRY





Case Study

ONE OF THE LARGEST FOOD COMPANIES

(revenue € 3.890 billion in 2020).

Case Study

- Application:
ULTRASONIC
CLEANING FOR
CONVEYOR BELT
USED FOR PASTA AND
BAKERY.



Case Study

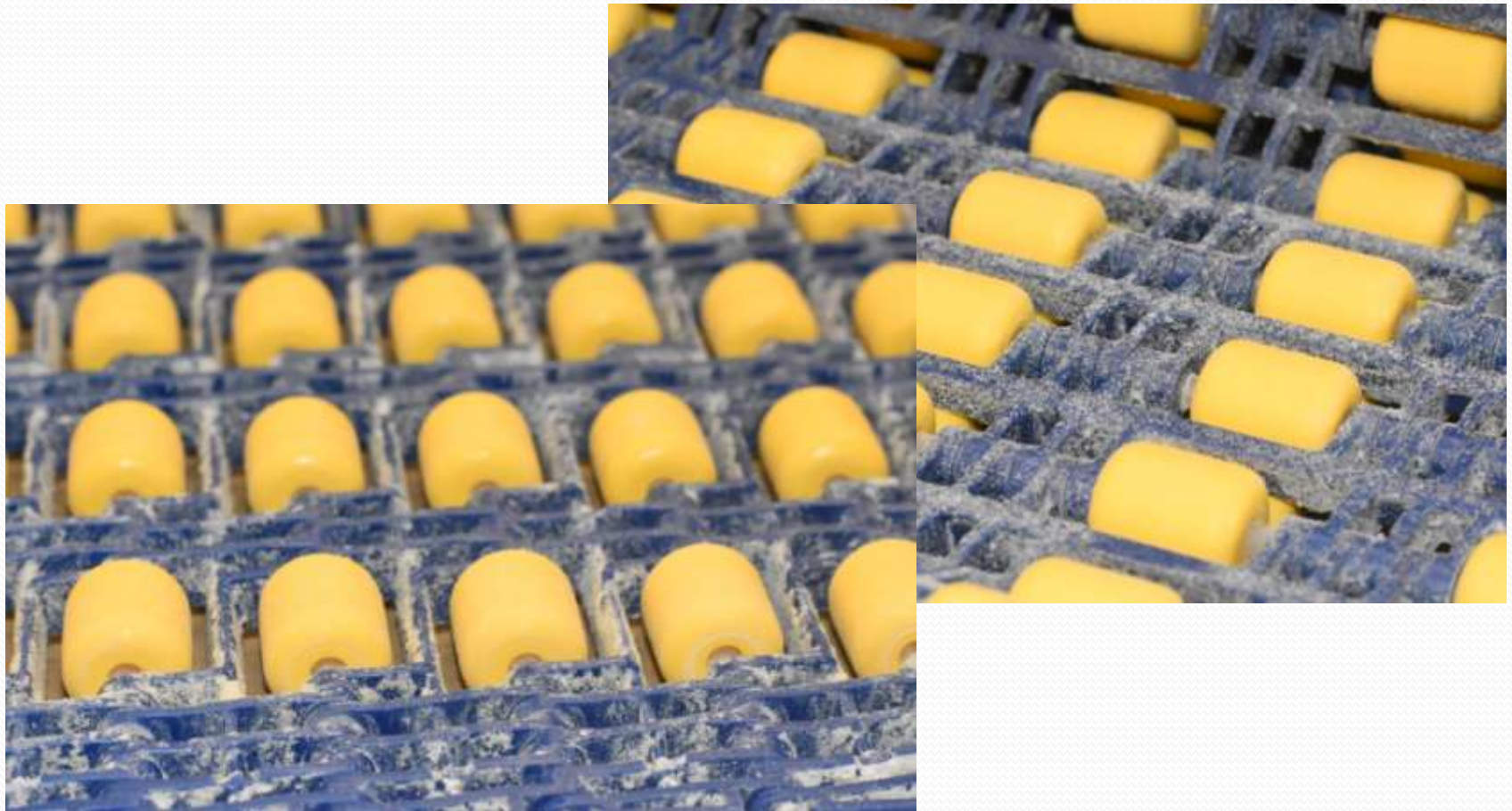
- Material to be cleaned:
PLASTIC.
- Type of dirt to remove:
**ORGANIC RESTS,
MAINLY FLOUR.**



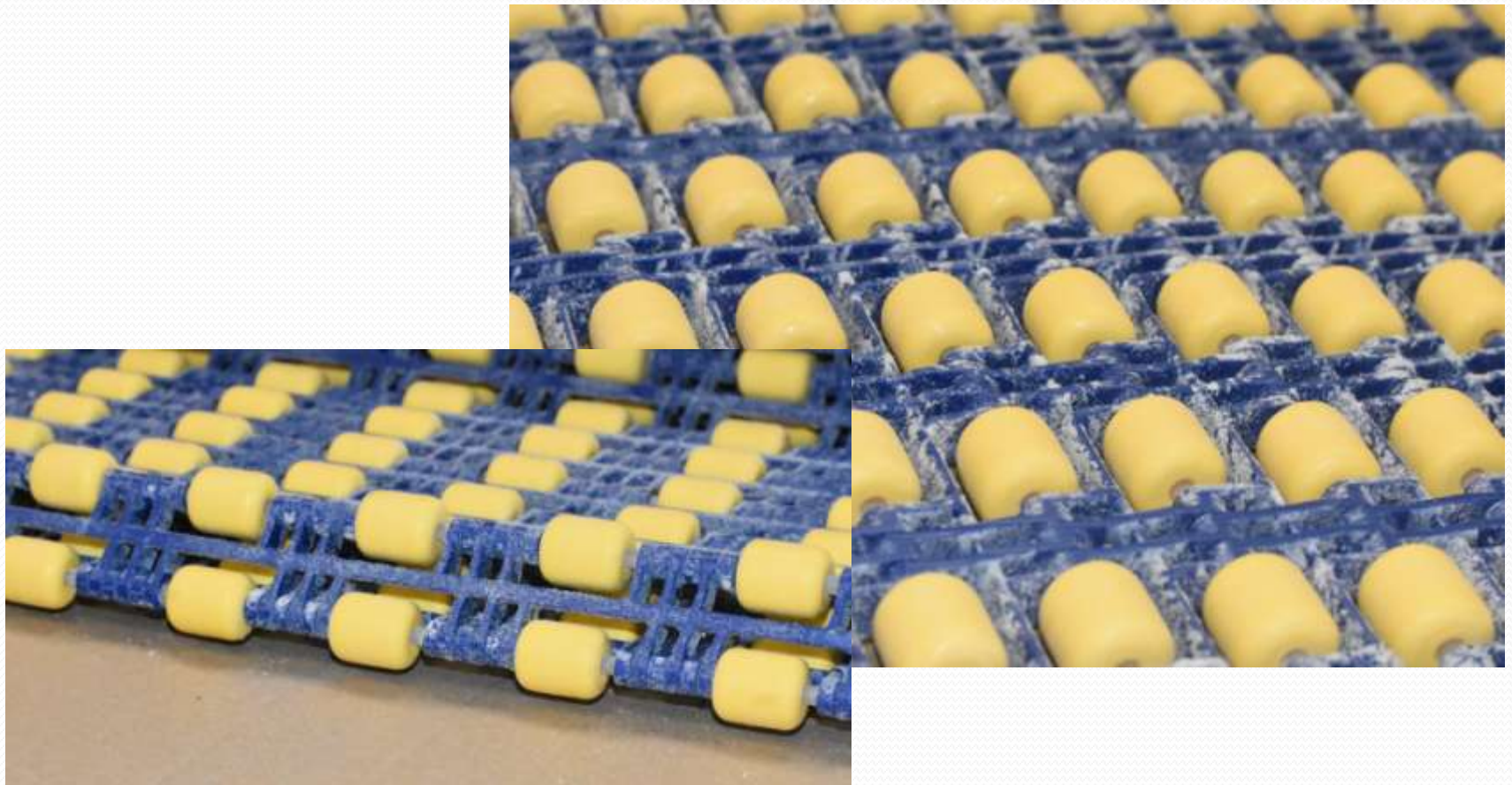
Before cleaning



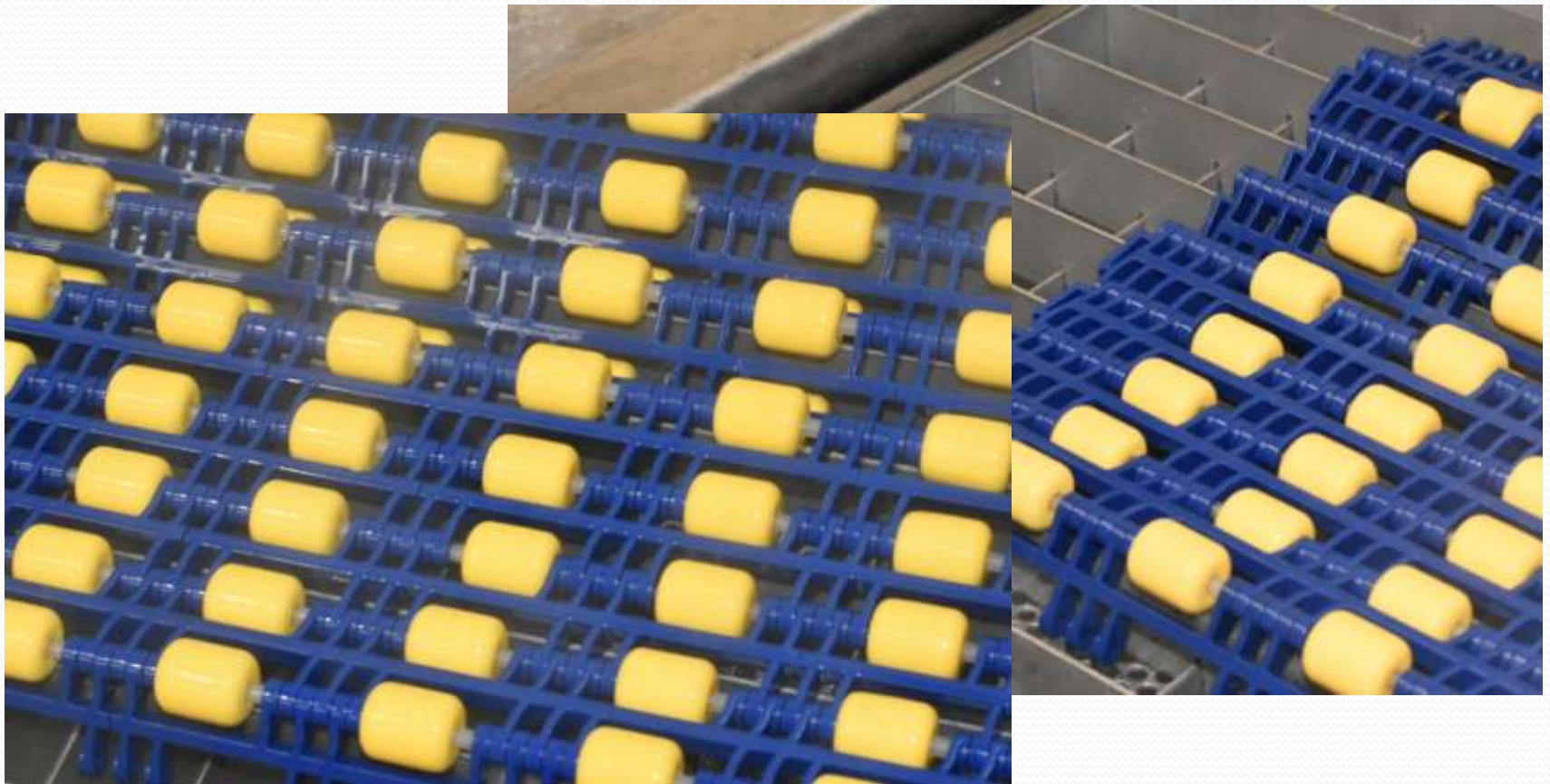
Before cleaning



Before cleaning



After cleaning results



After cleaning and rinsing



Parameters of cleaning

- Frequency: 28 kHz
- Temperature: 60° C (no more than 70° C because of plastic)
- Agitation: yes
- Detergent: PDU-45 4%
- Ultrasonic cleaning: 2 minutes
- Rinsing: tap water and air bubbling, 20 seconds

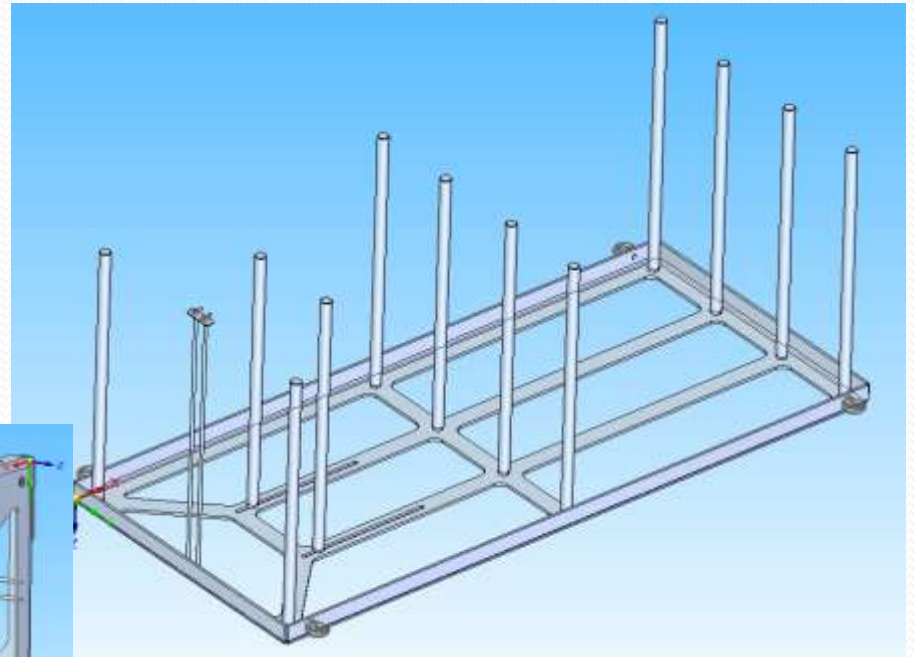
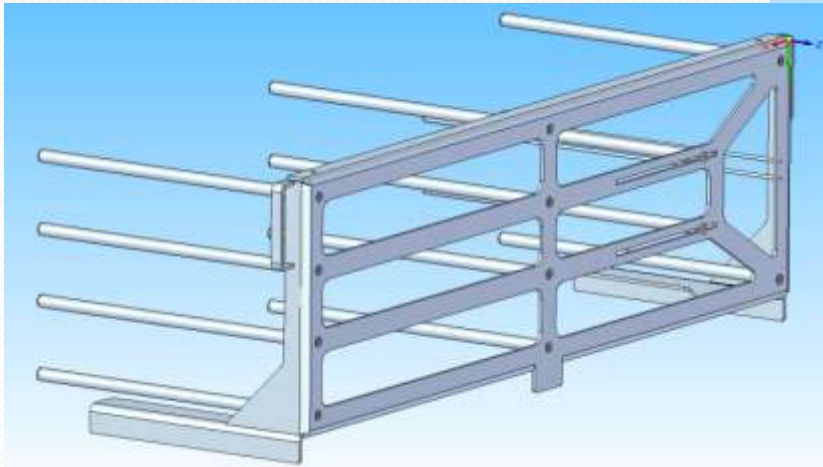
Custom made project

- Aprox 1500 liters
- Specific dimensions
- Without auxiliary tank
- Elevator platform
- Water filling system
- Bigger drain valve
- Special basket design

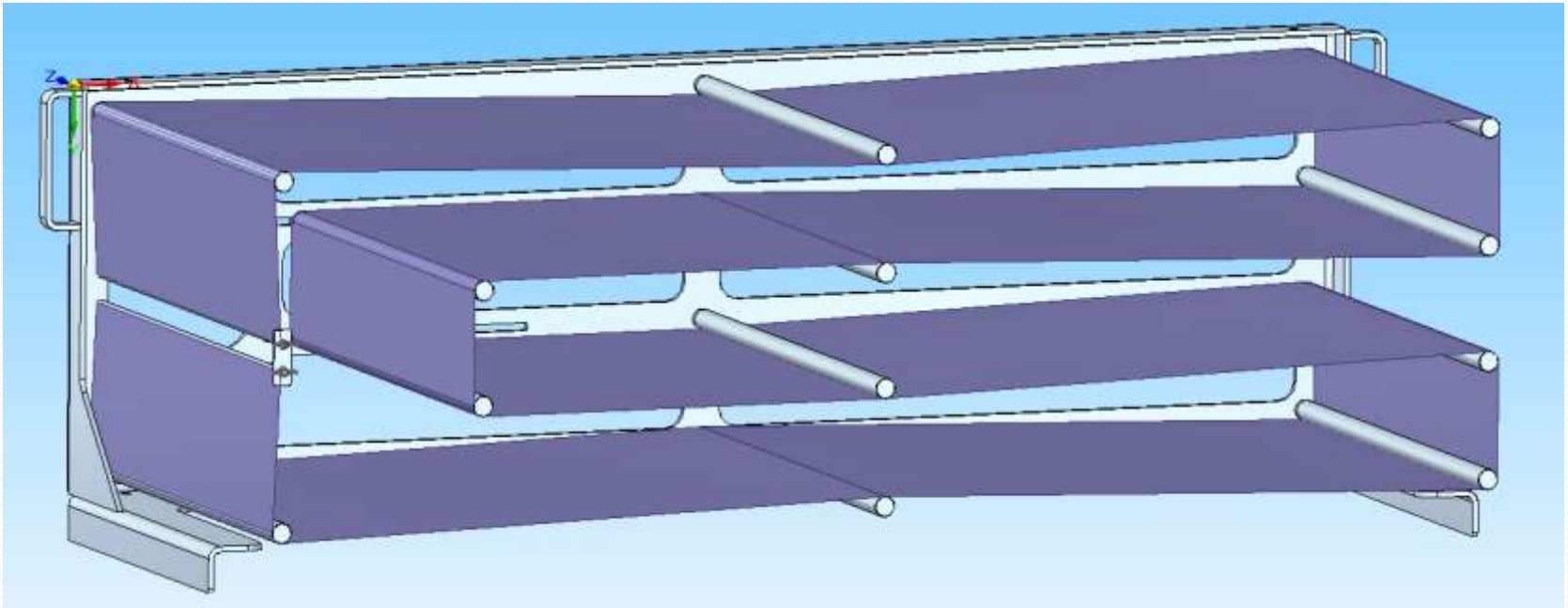


Custom made basket

- The support is positioned laterally for easy handling and then it is cleaned in a vertical position.



Line Belt placed on the basket



- The conveyor belt is wound into the basket.
- Slides to regulate the tension of the belt.

Why ultrasound in food sector?

- Ultrasound is Safe.
- Ultrasound is Green.

Why ultrasound technology is safe?

- **High power ultrasound:** allow the **inactivation of many microorganisms** (moulds, bacteria, etc). **Ultrasound kill bacteria** thanks to the wall cell disruption. They have been shown to be effective in killing bacterial spores after few seconds, because ultrasound **breaks its lipid membrane**.
- **Detergent:** even common soap diluted in water kills many types of bacteria y virus.
- **Hot water : at 80°C** is a powerful disinfectant.
- **Microscopic cleaning quality.**
- **Homogeneous results:** also in parts with complicated geometries.
- The mix of **ultrasound, detergent and high temperature** cleans and overall **DISINFECTS**.

Why ultrasound technology is safe?

- **Automatic Process:** without the presence of the operator.
- **Health Safety:** The cleaning system is safe for the operator and his working environment. Direct contact with dangerous machineries and accidents are avoided.



Why ultrasound is “green”?

- High power ultrasonic cleaning allows huge savings in terms of **chemical, energy and water**.
- Consumption of resources is important for companies because of **costs reduction**. But **nowadays** it is a must because of new legislation about **SUSTAINABILITY**. We register an increase in the demand of ultrasound cleaning technology from the companies worldwide.



Thank you.

