SUCCESS STORY

SEA PLASTICS MOVE TO TUNNEL CONSTRUCTION

OLDROYD, NORWAY

Krauss Maffei

Pioneering Plastics

SUSTAINABLE TUNNEL CONSTRUCTION
SPACERS MADE FROM RECYCLED OCEAN MATERIALS

OVERVIEW

CUSTOMER: Oldroyd AS
COUNTRY OR REGION: Norway
INDUSTRY: TEC / Tunnel construction

APPLICATION: SPACER
- Number of cavities: 1
- Shot weight: 130 g
- Material: Recycled PP and PE

MACHINE DETAILS: CX 160-750
- Clamping force: 1600 kN
- Screw diameter: 50 mm

CUSTOMER PROFILE:
With a market share of 90%, Oldroyd is the leading provider for tunnel construction in Scandinavia.
www.oldroyd.no

REQUIREMENTS:
- Safe processing of 100% recycled materials
- Changing material compositions and viscosities
- Unmanned night and weekend shifts
- Compact floor space
- Ground-level palletization with stacking height of up to 2 m

INDIVIDUAL SOLUTION:
- APCplus
- CX with self-supporting clamping unit
- LRX 250 linear robot with long vertical axle

BENEFITS:
- Sustainable closed-loop economy
- APCplus compensates for viscosity fluctuations of recycled materials
- Steady process, "ghost shifts" possible
- Maximum efficiency on compact floor space
- Flexible automation solution

Old fishing nets and plastic ropes: These are valuable raw materials for the Norwegian company Oldroyd, which uses them to manufacture products for tunnel construction on three CX 160 machines. They are more durable than steel and at the same time protect the environment. It doesn't matter if sometimes there is a faint smell of fish off them.

Anyone who has never worked on the topic of civil engineering may underestimate the number of units actually involved at Oldroyd. 300,000 to 400,000 so-called spacers alone are required for a tunnel. The curved products with grid structure create distance between stone and membrane. With its weight of 130 grams, the spacer is created in a cycle time of around 15 seconds. The diameter and height vary; there are approximately 20 different models.

But the material is unique at Oldroyd: 100 percent "sea plastic", which is roughly half PP and half PE.

The three identical CX 160-750 machines are equipped with oversized LRX robots. Thanks to the very long vertical axle, they can stack the products up to a height of two meters starting on a ground-level pallet. The sturdy design and the high availability enable the customer to produce over the weekend without any manual intervention, i.e. unmanned, in "ghost shifts".

"It is very reassuring for us to know that with the APCplus function the machine controls everything itself and we will definitely have OK parts after a weekend."

John Oldroyd Cheetham, founder of Oldroyd

The spacers in the construction of the Sandoy tunnel in the Faroe Islands.

Milestone: The Stockholm Bypass (a series of underground motorway tunnels) is currently the world's largest tunnel project.

Working together to promote sustainable tunnel construction (from left): *John Oldroyd Cheetham (founder of Oldroyd), Linda A Celin (CEO Oldroyd), Rolf Kjønnerud (KraussMaffei Agent SAXE) and Carl Kremer (Product Development/ Operator Oldroyd).*