

# WICONA®

By  Hydro



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## » PIONEERING PROJECT FOR A TRUE CIRCULAR ECONOMY

Christophe Lenderoth GmbH administration building in Bremen, Germany

The façade specialist Christophe Lenderoth GmbH has made a pioneering move in the energy efficient refurbishment of its administration building in Bremen, Germany. The original aluminium and glass façade has been dismantled, fully recycled and used to manufacture a new façade.

Focusing on the concept of the circular economy, Lenderoth has carried out a complete façade revitalization together with its partners WICONA and Saint Gobain Glass.

Firstly, the old façade was dismantled and sorted by material. The aluminium elements were transported to the Hydro recycling and sorting facility Dormagen, where they were reprocessed as part of the recycling process and subsequently extruded into new aluminium profiles. The process was similar for the collected glass.

The new façade was implemented with a WICONA WICTEC 50 HI mullion-transom construction with clamped WICLINE 75 TOP window elements, made from the aluminium alloy Hydro CIRCAL 100R. This consists of 100% recycled end-of-life aluminium and has the lowest CO<sub>2</sub> footprint in the world - with less than 0.5 kg CO<sub>2</sub> per kg of aluminium. The glazing manufactured by Saint Gobain Glass from the CO<sub>2</sub>-reduced glass ORAÉ has a low CO<sub>2</sub> footprint

of just 6.64 kg CO<sub>2</sub> equivalent per m<sup>2</sup> (with a glass thickness of 4 mm).

Thanks to the pioneering concept, the façade revitalization was carried out almost entirely from secondary raw materials - saving a total of 24.6 tons of CO<sub>2</sub>.

### PROJECT DETAILS

- Finalization: 2024
- Building owner/Planner: Christophe Lenderoth GmbH
- Façade: Christophe Lenderoth GmbH
- WICONA solutions:
  - WICTEC 50 HI – Highly thermally insulated mullion-transom façade, certified for passive houses ( $U_{cw}=0,7 \text{ W}/(\text{m}^2\text{K})$ ) by ift Rosenheim
  - WICLINE 75 TOP window system with slim appearance combined with high thermal insulation values ( $U_w$ -value  $< 0,80 \text{ W}/(\text{m}^2\text{K})$ ), highly thermally insulated multi-chamber system
- Aluminium alloy: Hydro CIRCAL 100R
- Glazing: Saint-Gobain Glass (ORAÉ)
- Total CO<sub>2</sub>-saving: 24,6 tons