

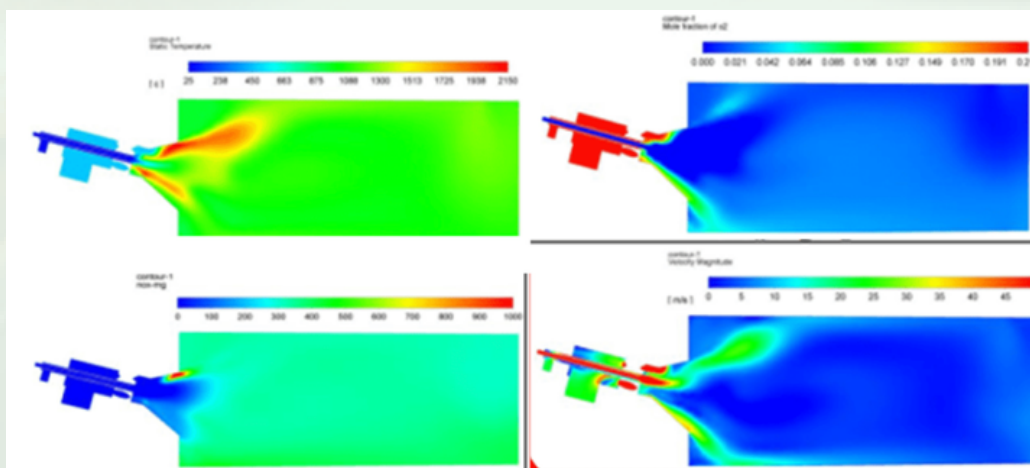


## PROJECT PROGRESS

### Design and drawings of the new burner head design in the aluminium sector

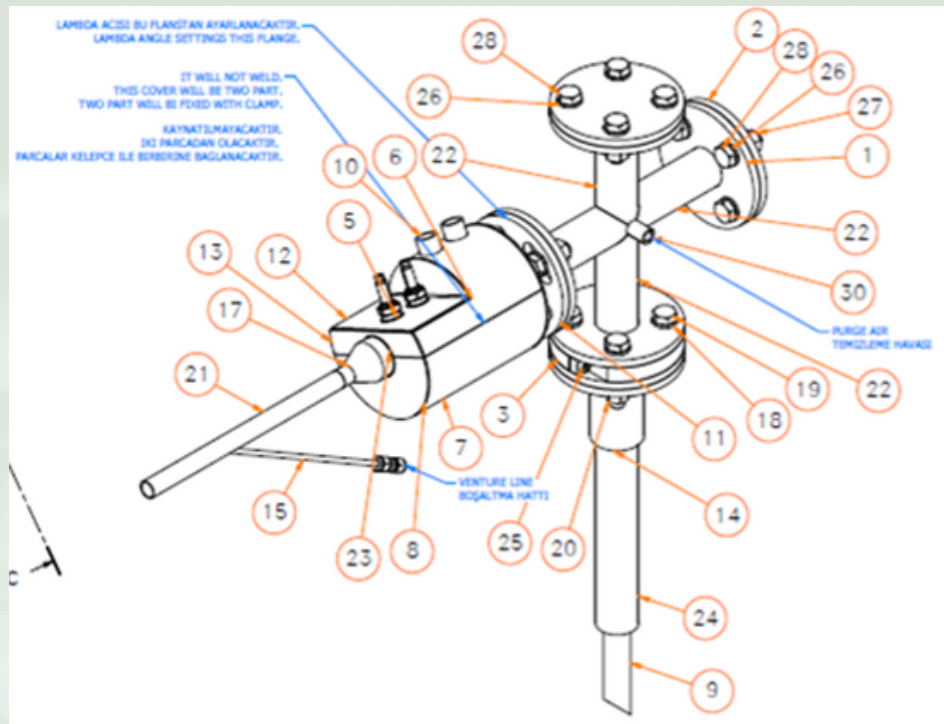
The objective of the RETROFEED project in the aluminum industry is to increase the amount of scrap aluminum in the melting furnace from 37.8% to 48% to save energy. This will decrease the CO<sub>2</sub> emission and, therefore, the carbon footprint of the process. For this reason, retrofitting solutions in the ASAS demo site are focused on the oxygen injector system, the new burner head and the delacquering drum system.

The designs done by STEK of the new burner and the oxygen level measurement to be installed in ASAS's melting/holding furnace with 25 tons capacity have been already finished. On the one hand, CFD analyses conducted by IEN for different types of burner heads helped to select the best design to enhance combustion ratio and lower NO<sub>x</sub> emission compared to existing ones.



**Figure.1** CFD analysis for head burner

On the other hand, an oxygen level measurement system was designed to adjust the oxygen level in the furnace and improve combustion.



**Figure.2** Technical drawing of the oxygen level measurement system

After all improvements including the oxygen injector, the oxygen level measurement system, the new burner head and the delacquering drum furnace, the carbon footprints of final products should decrease. For that, monitoring in the following tasks will be used for reporting the RETROFEED solutions implemented.