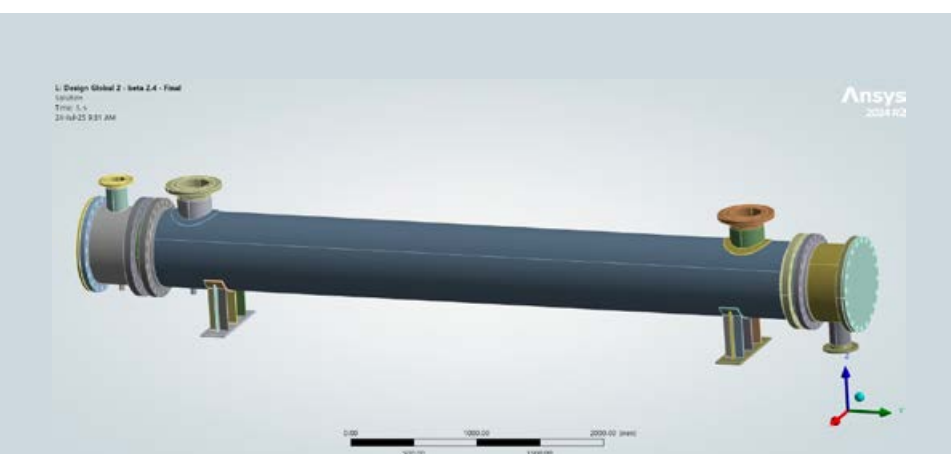
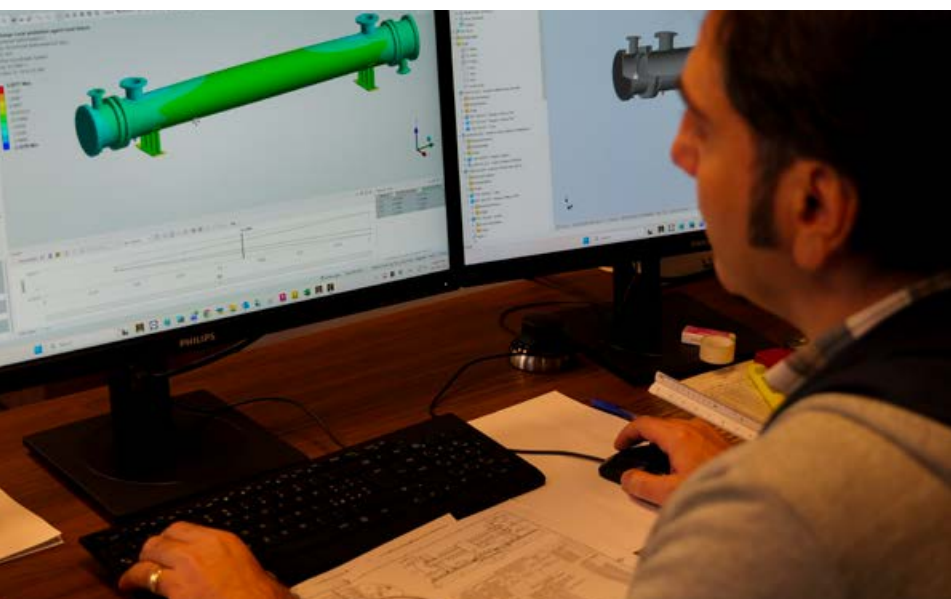


HEAT EXCHANGER DESIGN PROJECT DEFINITION

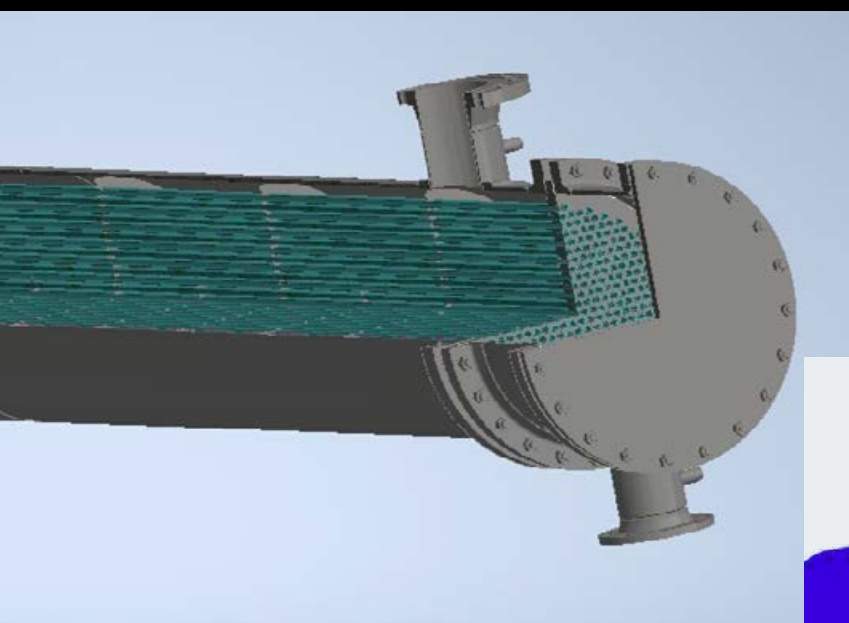
PROJECT DEFINITION

The objective of this project was to determine the maximum allowable forces and moments applicable to the heat exchanger flanges (N1, N2, N3, N4) without compromising the structural integrity of the component.



METHOD

The analysis was carried out through Finite Element Method (FEM) simulations in accordance with ASME Section VIII, Divisions 1 and 2. Simulations were performed using ANSYS 2024 R2 and included elastoplastic evaluations to ensure compliance with design codes and safe operating conditions.



RESULTS

Thanks to the FEM analysis performed with ANSYS, the maximum allowable forces and moments acting on each heat exchanger flange were successfully determined, in full compliance with ASME Section VIII, Divisions 1 and 2.