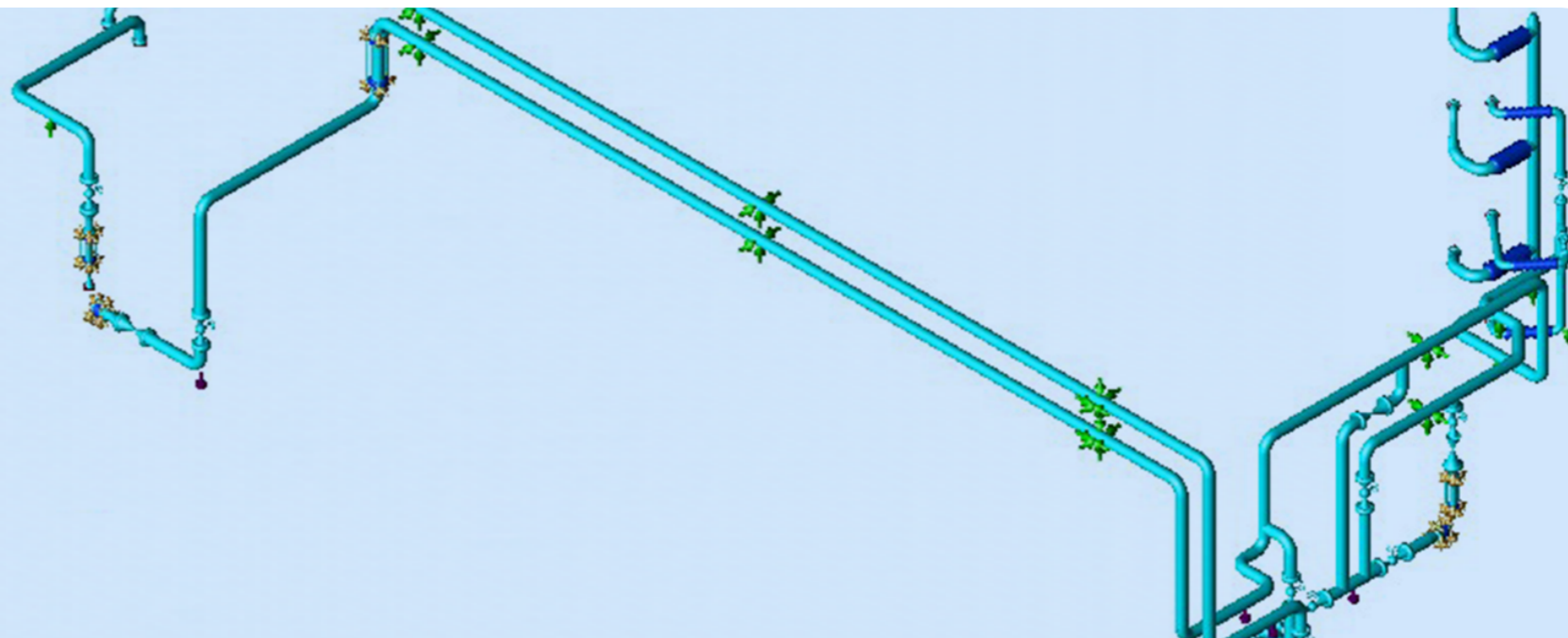


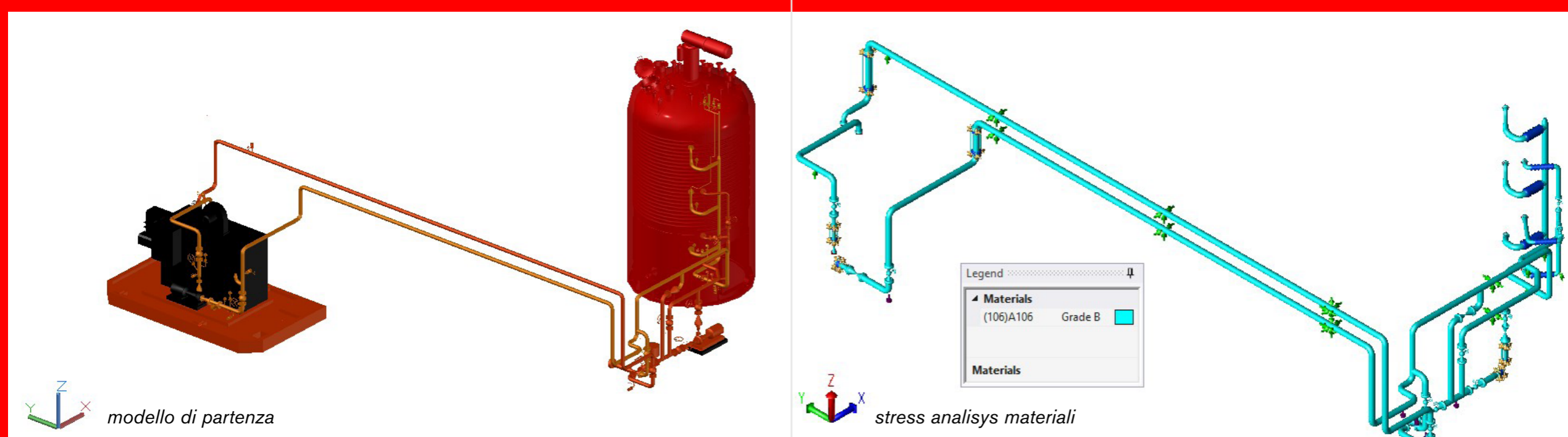
Diathermic oil circuit design



Sir Industriale is an Italian company that has been active in the chemical industry for over 60 years, the company is one of the pioneers of the Italian resin industry. New production needs required the extension of the diathermic oil circuit within the plant.

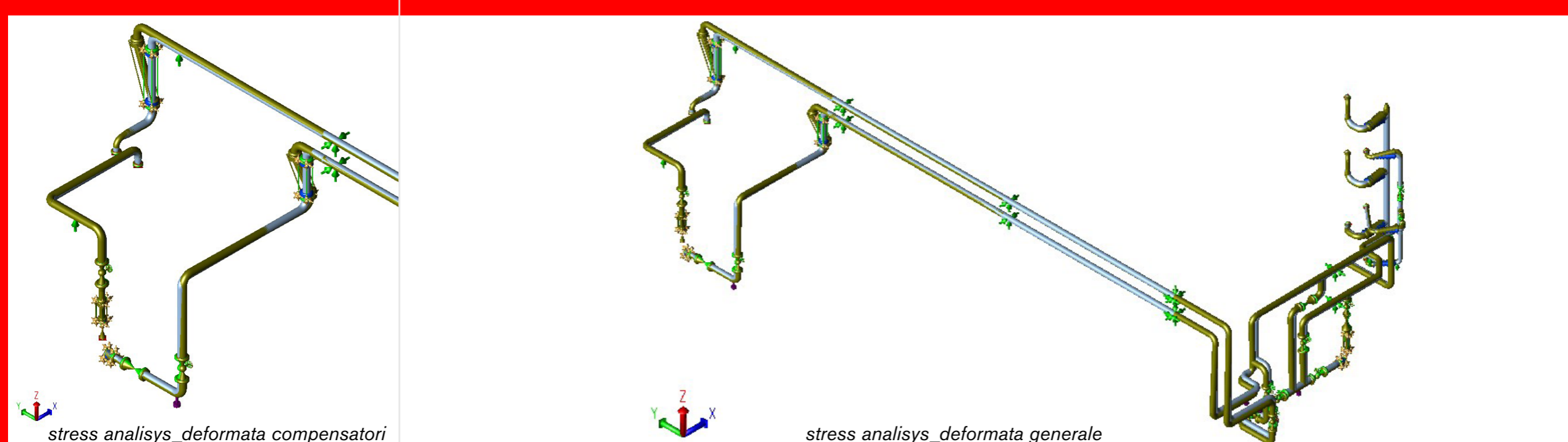
CHALLENGE GEA Engineering was contracted to carry out the production of the new diathermic oil circuit, complying with current regulations. The production of the circuit was carried out in cooperation with Giorgi Engineering.

SCENARIO First of all, we were provided with a 3D model from which to roughly derive the pipe runs of the lines. Subsequently, GEA carried out a field inspection to view the available spaces and possible criticalities in the future installation of the pipes.

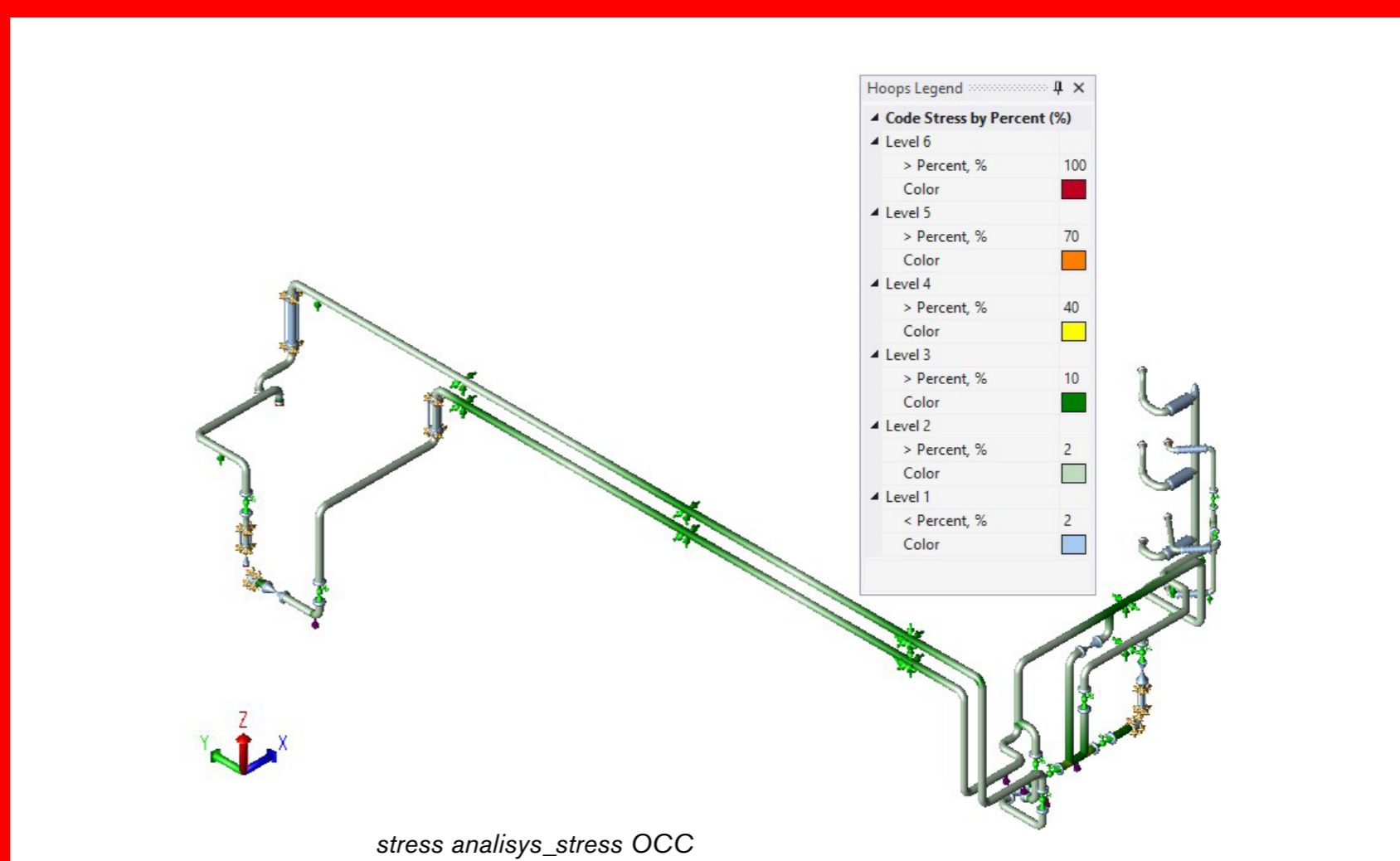


SOLUTION GEA decided to study the new diathermic oil circuit with a stress analysis using the Caesar II program in order to avoid piping failures and to analyse the flexibility of the designed routing in order to keep stresses below the permissible limits dictated by current regulations.

All input data and all devices connected to the circuit were considered.



Due to the very high stresses on the pipes, GEA had to study the positioning and type of expansion compensators to be installed, as well as the positioning of fixed points and elastic supports in order to keep the stresses within the norm so as not to create breaks during plant start-up.



CONCLUSIONS Giorgi Engineering supplied the expansion compensators, flexible hoses and variable load elastic supports required to absorb the line's expansion.

More than two years later, the diathermic oil circuit installed inside the Sir Industriale plant is working optimally without any critical functioning issues.



- SUPPLY**
- Spherical lateral compensators
 - Flexible hoses
 - Elastic supports with variable load
 - Field service during assembly to guide the customer through to commissioning of the system.