

## Use RealityLINx 5.3 (INOVx Inc.) to obtain real geometry of the process plant

In order to evaluate facility layouts result based on the real plan geometry and consider the obstacle effect or 3-dimensional risk calculation, a fire and explosion CFD software called FLACS has been suggested and was employed. However, there has been a problem of creating suspiciously low overpressures in FLACS result due to simple geometry which is lead by low obstacle density. To avoid this simple geometry problem, we suggest using RealityLINx software which enables us to have a real geometry by using a laser scanning. RealityLINx delivers a solution that supports every aspect of Asset Virtualization from the creation of precise as-built virtual models using laser scan images to management of change features for keeping the model accurate and up-to-date. In this paper, an example geometry generated by the software was connected with FLACS and is presented to show the simulation result. Fig. 1 shows the imported image from RealityLINx to FLACS to represent a process plant.

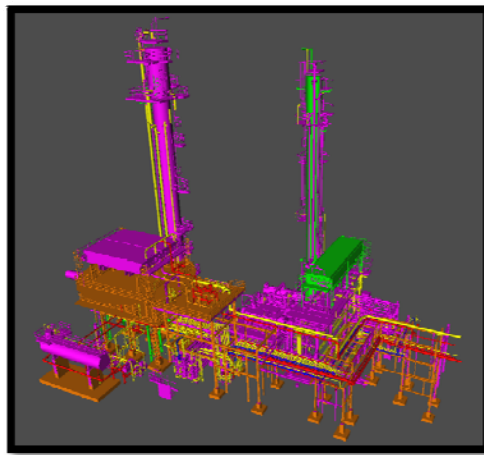


Fig. 1 Geometry of process plant in FLACS

Fig. 2 shows the maximum overpressure and temperature result around the process unit by the simulation.

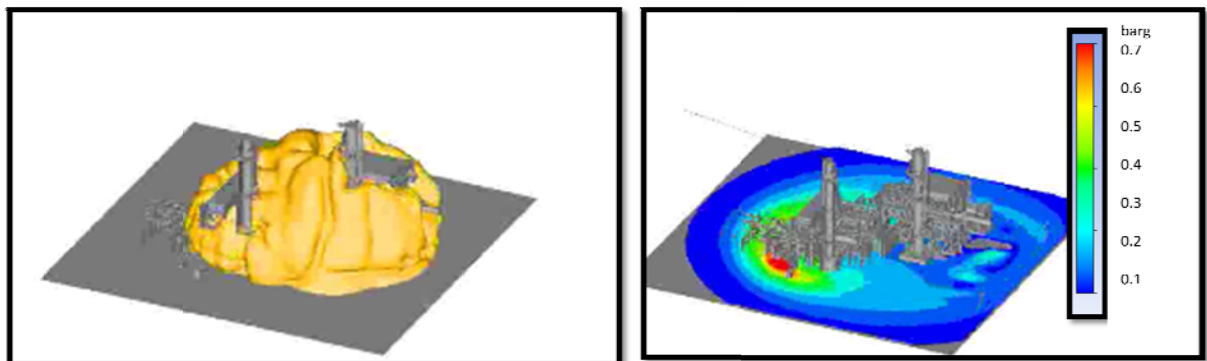


Fig. 2 3D display of the simulation result