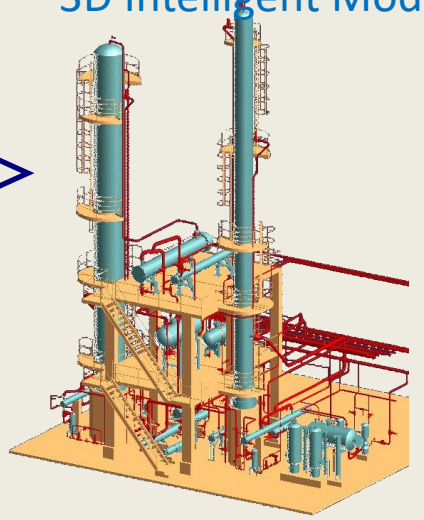
3D LASER SCANNING

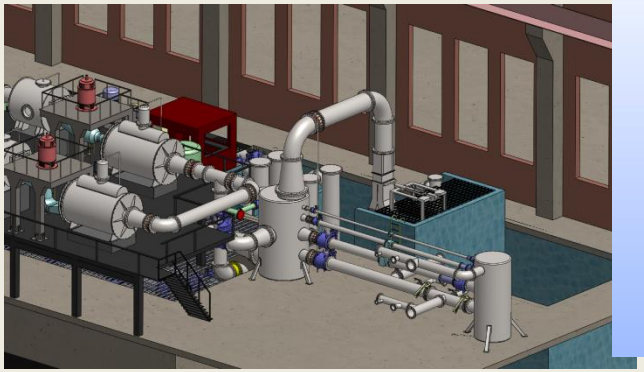
3D CAD models of

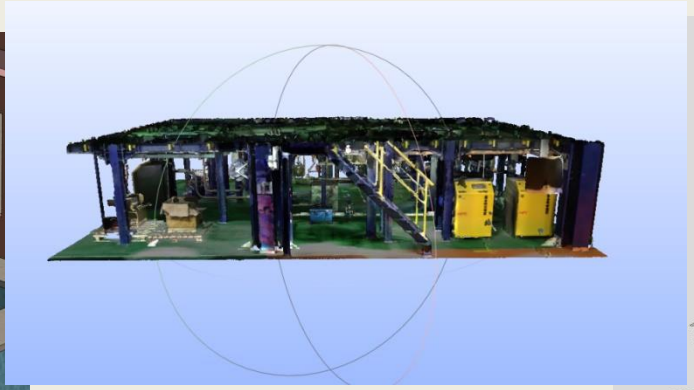
- Refineries
- Power plants
- Oil platforms
- Factories
- Water systems

3D Laser Scanning

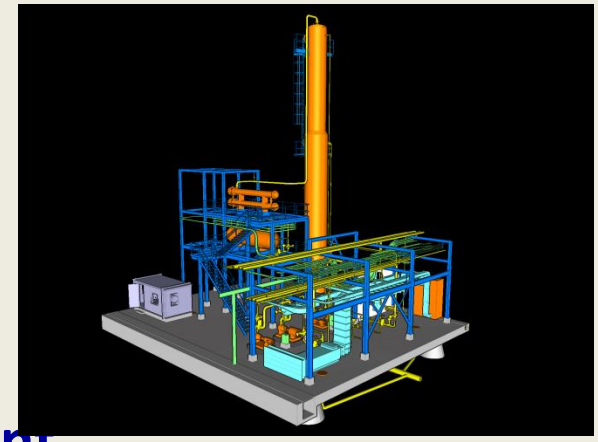
3D Intelligent Model



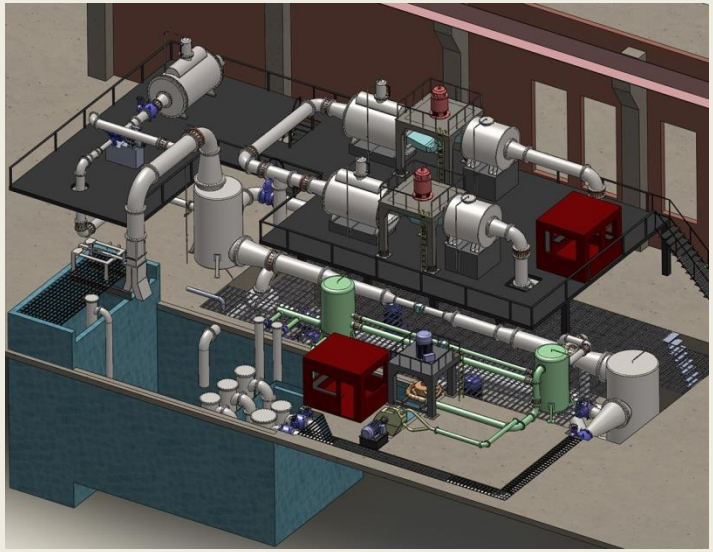




WHY 3D CAD MODELS

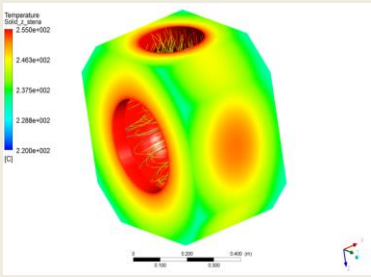


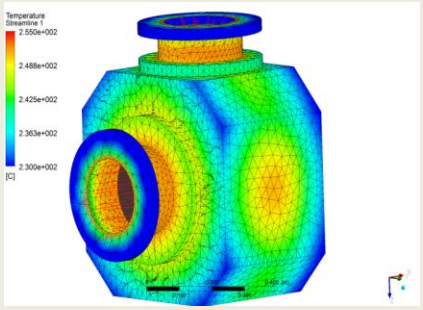
- 3D & 2D of existing design of the plant
- High accuracy of 3D design
- High efficient planning of plants modification, rehabilitation, maintenance and replacing the equipment
- Risk analyze of the equipment
- Safety analyze
- Control the deformation of the equipment and pipelines
- Virtual reality

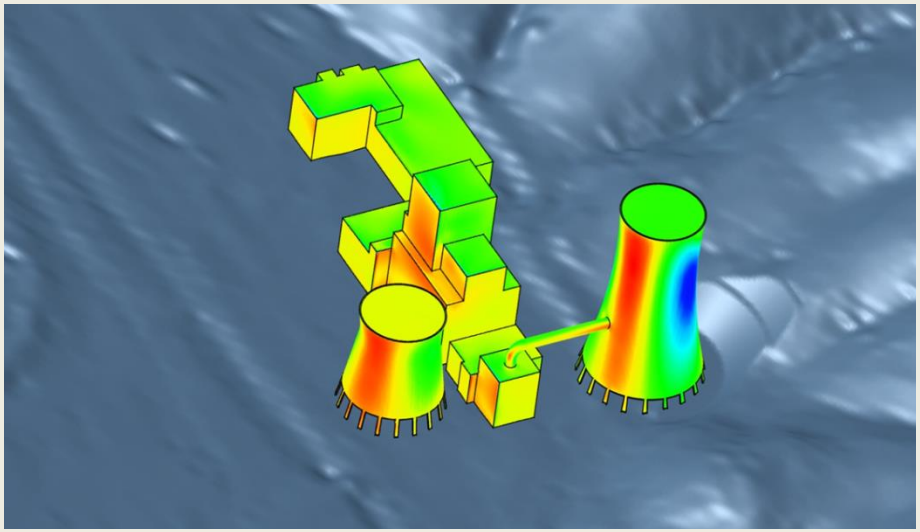


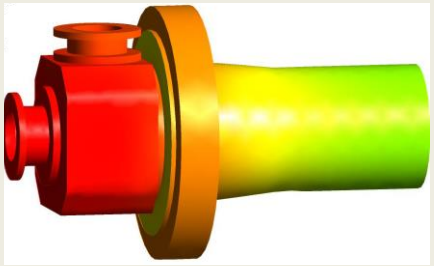
WHY 3D CAD MODELS

- Thermal stresses and deformation of the equipment
- Computational fluid dynamic analyze of the equipment, velocity and pressure distribution, forces and moments
- Fatique analyze of the materials of the equpment
- Flow analyze around the plants

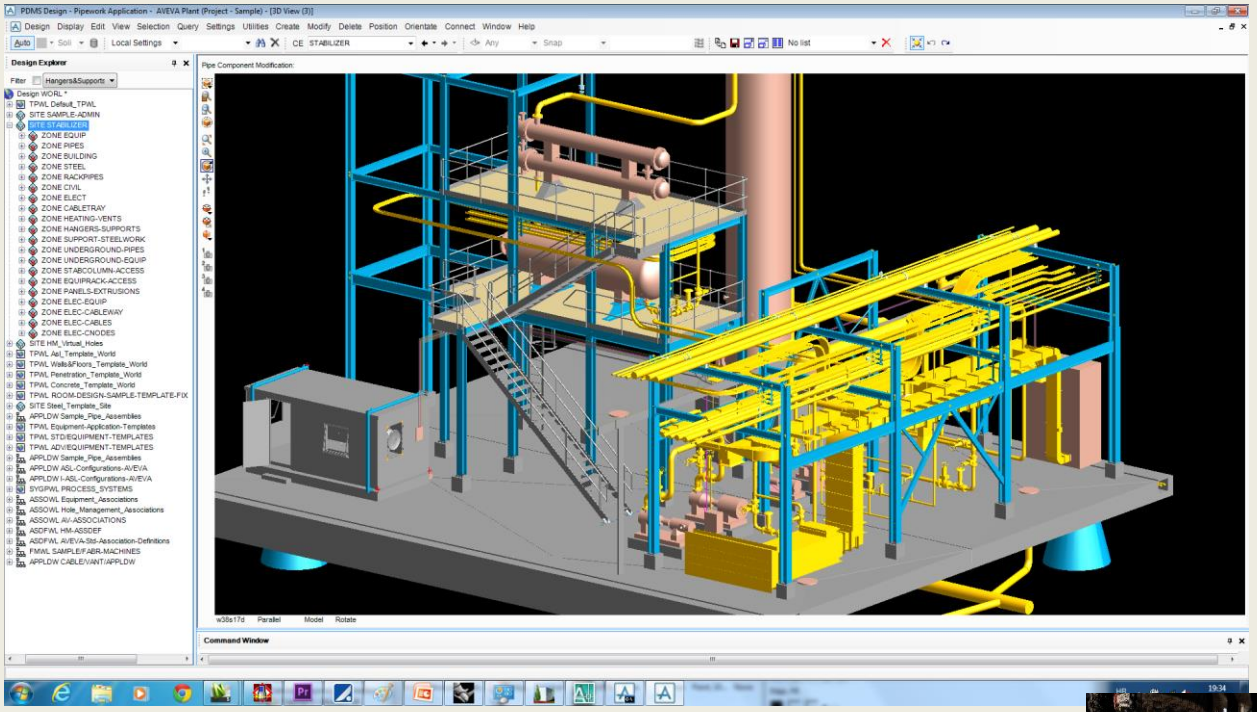


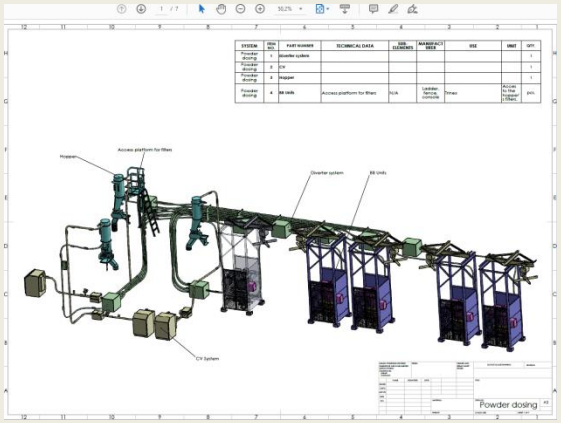


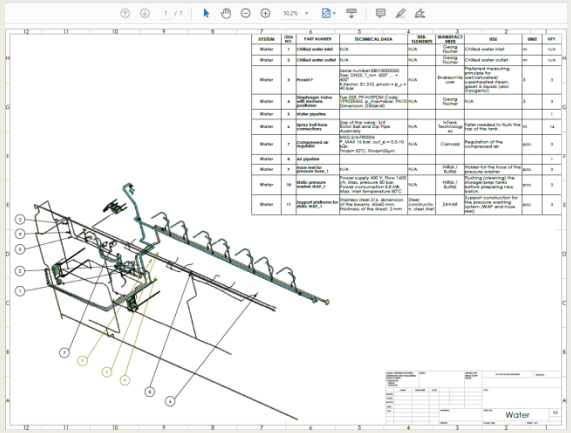


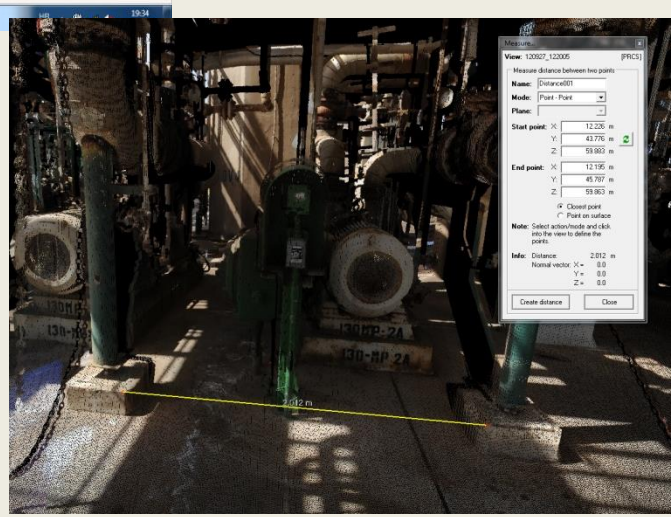


3D & 2D DESIGN

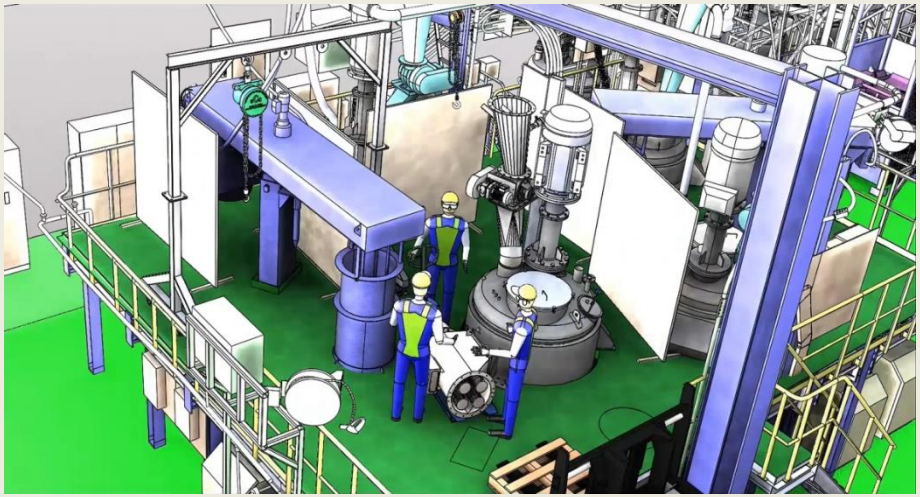

PDMS Design - Pipework Application - AVEVA Plant (Project - Sample) - [3D View (3)]
Design Explorer
Command Window


Powder dosing


Water

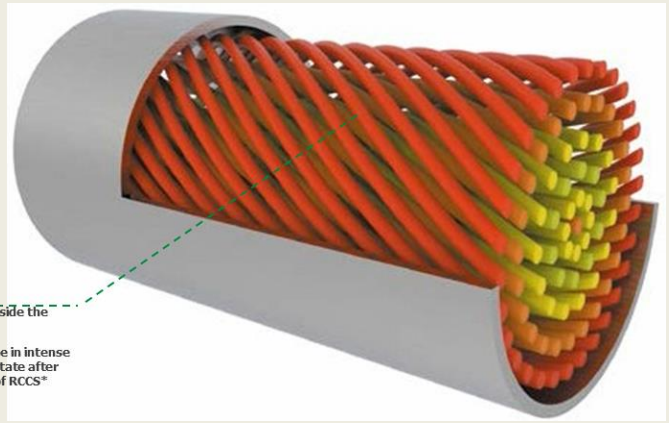

Measure...
Create distance
Close

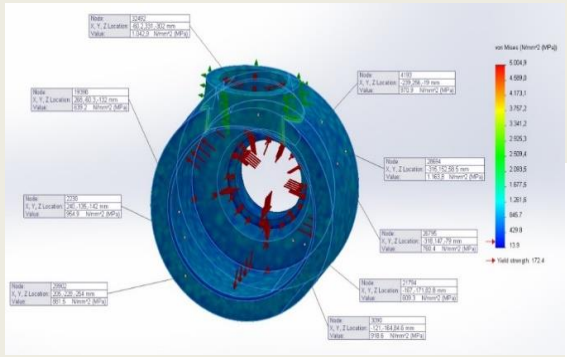
PLANNING
of modifications and maintenance
VIRTUAL REALITY

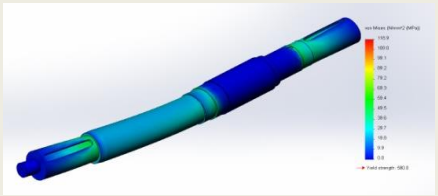


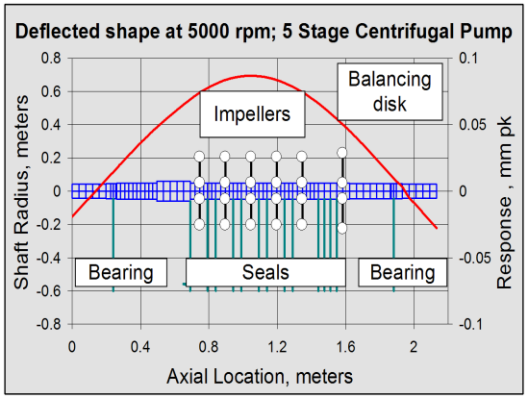
RISK ANALYZE SAFETY
ANALYZE, STRESSES DEFORMATIONS

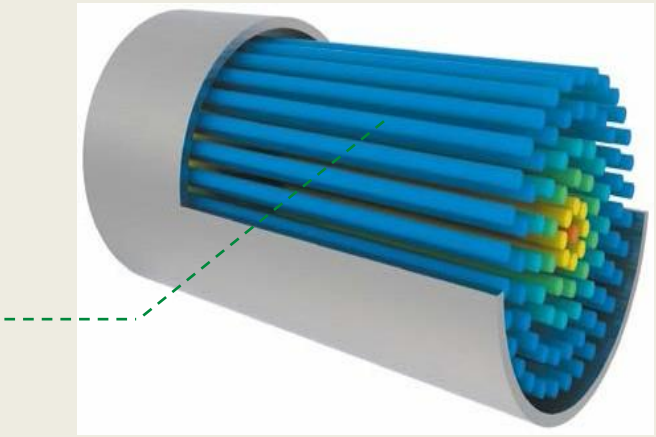
SM PUMPS
SLOVENIA

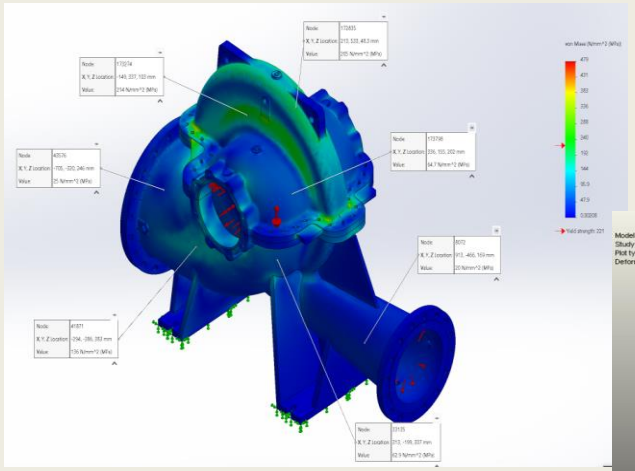


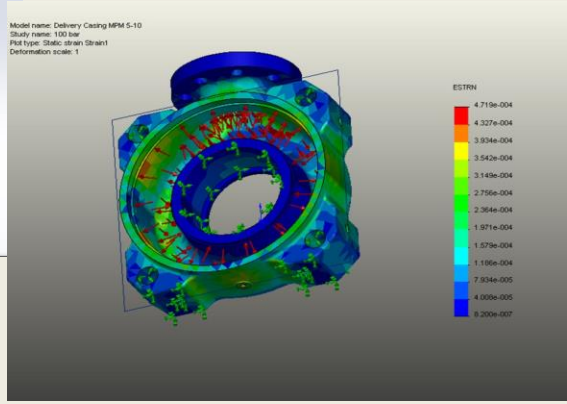


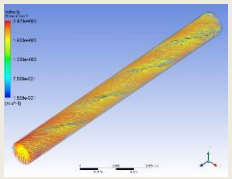




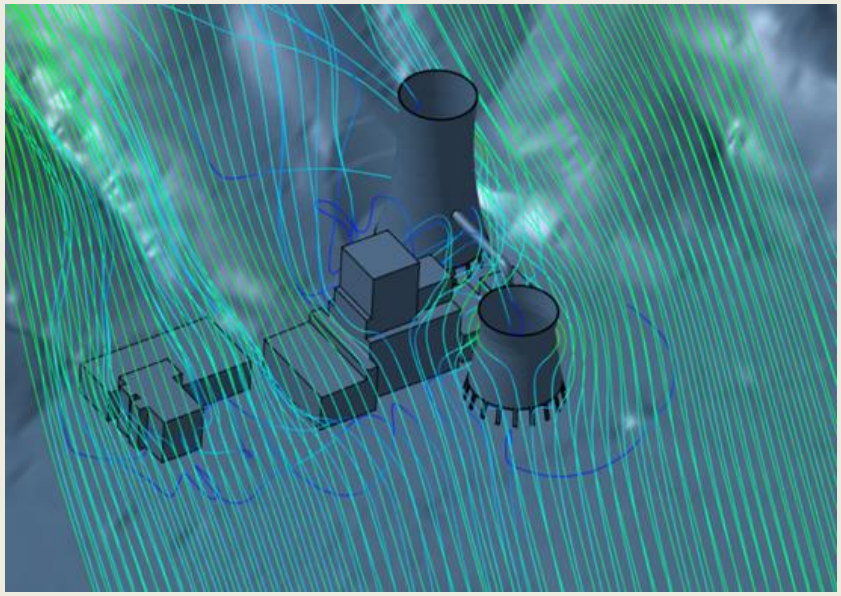


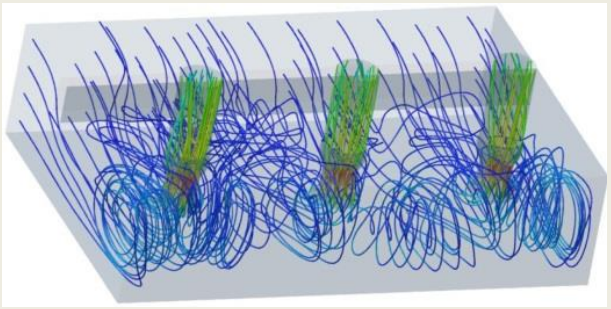


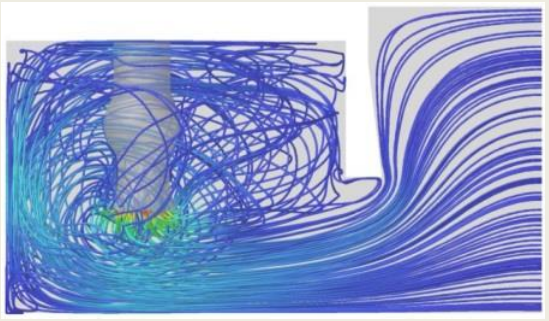


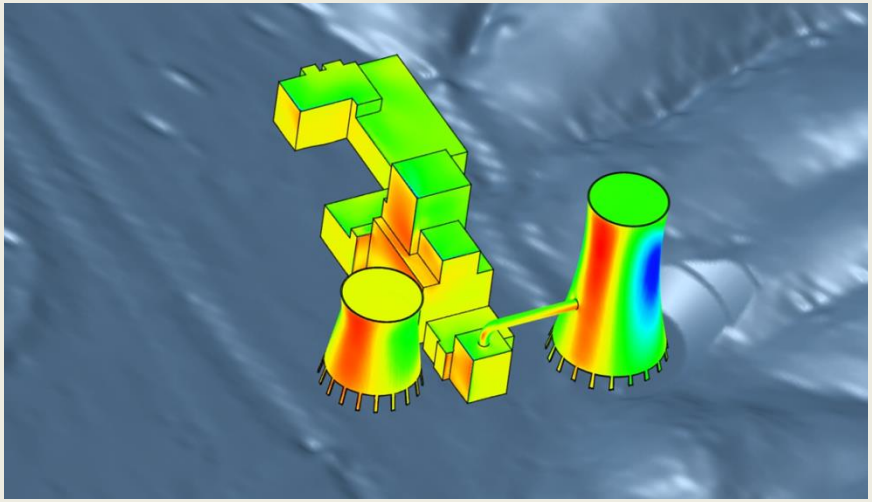


COMPUTATIONAL FLUID DYNAMIC ANALYZE









CONCLUSION

3D SCANNING and 3D CAD MODEL enable

- **Latest versionhigh accuracy 3D & 2D plant design**
- **Minimun time and cost of any modification, maintenance**
- **High reliability of the equipment**
- **Very accurate risk and safety analyze, control the stresses, deformation, velocity and pressure distribution**
- **Computational Fluid Dynamic (CFD) is very powerfull engineering tool and can replace a lot of experimental work.**