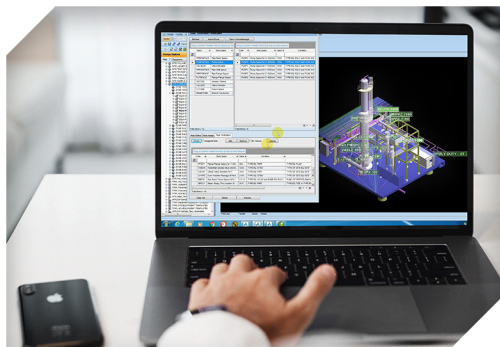




# DQCS

## Design Quality Check Solution



The main purposes of this innovative solution are to significantly improve design quality and to reduce construction re-work by automated quality check process based on design basis of the COMPANY.

Customers can expect not only reduction of regular design review man hours, costs and project risks but also improvement of safety, operational accessibility, walking space and maintainability of the plant assets. User can perform design quality check on 3D Plant Model by selection of pre-defined rules and values.

### KEY FEATURES

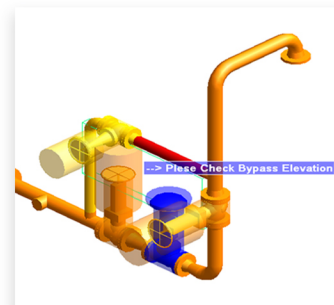
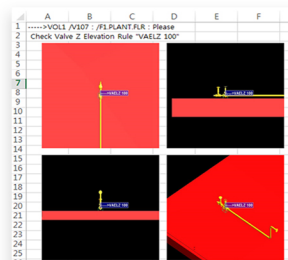
- Check and validate design, safety & hazardous, operational accessibility and maintainability by rules
- Generate log, report and check drawing automatically from quality check result
- Provide scalability for diverse rule aspects of P&ID note, data sheet, vendor print and more

### MAJOR QUALITY CHECK CRITERIA

- **Safety and Hazardous**
  - Spacing & accessibility of hydrants and monitors
  - Isolation valve location of hazardous equip.
  - Pipe end location from PF for PSV discharge
  - Thermal expansion on operating stage
- **Operational Accessibility**
  - Valve elevation
  - Stairway walk accessibility
  - Valve stem orientation for failsafe valve
- **Maintainability**
  - Pipe rack future space
  - Bolt space for maintenance
  - Tube bundle pulling area of heat exchanger
- **Design and Engineering**
  - Vent and drain size and location
  - Straight pipe run for flow meter
  - Drip leg for steam pipe at lowest point
  - Control valve dimension and bypass elevation
  - Minimum slope for flare header
  - Space between pipe and wall
  - Clearance between flanges for parallel pipe
  - Standard/Long shoe for pipe support
  - Companion flange type, size, spec., etc.

### LOG, REPORT AND DRAWING

- **Log Management**
  - Describe the content of design errors
  - Explain the reasoning and suggested decision
- **Report Management**
  - Easily readable check result in Microsoft Excel format
  - Display snapshot images by four-directional views
  - Commenting and feedback into 3D Model



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### BENEFITS

- **Quality Improvement**
  - Daily or weekly base quality check by Design Firm
  - Easy to understand what is problem, how to fix it
- **Better Communication regardless of location**
  - Share check reports across the Disciplines and/or between COMPANY and EPC CONTRACTOR to support 'contact-free' design review process
- **Cost/Time Saving**
  - Reduce re-work at construction site
  - Reduce time and cost for regular design review (30%, 60% & 90%) and punch list management

**For more information, please contact PlantAsset Technology Inc.**

www.plantasset.com  
sales@plantasset.com  
Phone: +82 2 3397 5510

#716 SJ Techno Ville, 278 Beotkkot-ro  
Geumcheon-gu, Seoul, 08511 Korea

**PLANTASSET**  
Engineering to O&M