Drilling Software | Sophisticated Yet Simple

CDEx®
Casing Design Expert Model

Overview

Casing strings are an indispensable asset to prevent the borehole from caving in, protect water sands from contamination, and control pressure in the well. They also serve as a path for production tubing, making it essential to determine a suitable casing string that can resist all potential loads while keeping budgets in mind.

CDEx, Pegasus Vertex's casing design software, implements an industry-accepted physics model to perform accurate and practical casing designs for complicated drilling circumstances.

Burst, collapse, tension, compression, bending, buckling and temperature effects are all taken into account in CDEx to analyze the casing strings' capabilities.

CDEx analyzes the strength of the user-selected casing strings and automatically generates a reliable design solution using minimum expenses with three design options. This software allows the user to create multiple design scenarios in order to conduct comparisons. The intuitive user-interface makes the sophisticated casing design process easy and simple.

Benefits

Enhanced Well Integrity and Performance

- Protects underground water sources and the environment by preventing fluid migration.
- Ensures the long-term structural integrity of the well, reducing the risk of leaks and other issues.

Cost Efficiency and Resource Management

- Generates multiple design options to identify the most economical solution without compromising safety or performance.
- Streamlines the design process, reducing engineering hours and accelerating project timelines.

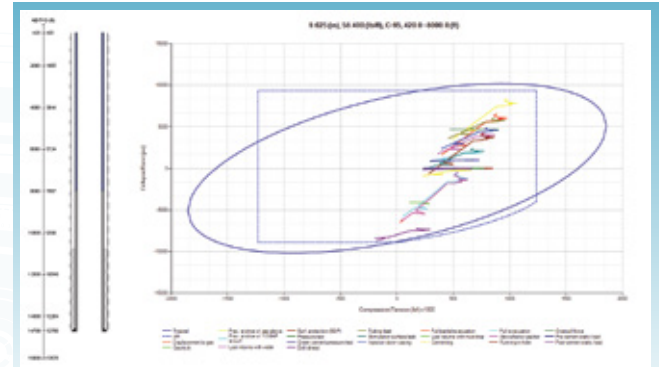### Comprehensive and User–Friendly Analysis

- Considers burst, collapse, tension, compression, bending, buckling, and temperature effects.
- Makes complex casing design processes simple and easy to manage, even for users with varying levels of expertise.

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Features

- Land and offshore wells
- Shoe depth selection
- Expandable casing database
- Casing availability setup
- Casing material and grade settings
- Temperature effect on casing strength
- Wellbore schematic in vertical and trajectory view
- 18 burst loads, 12 collapse loads, 6 axial loads and user-defined loads
- Manual casing design
- Fast one-section casing design
- Minimum cost casing design
- Worst scenario design
- Triaxial design ellipse plot
- Axial stress check for both casing body and connection
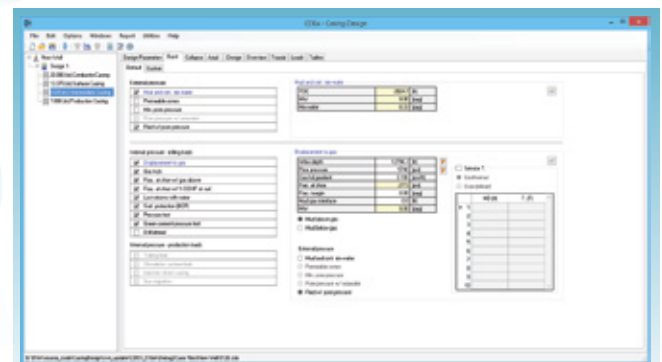- Customizable deisgn report
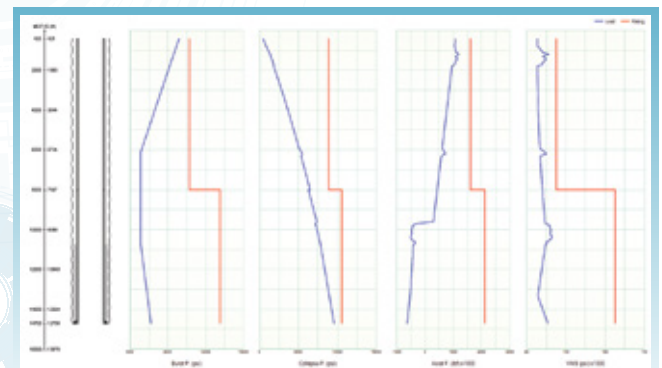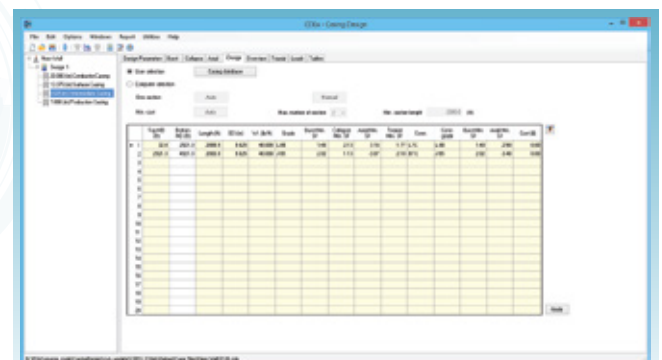
System Requirements

- Microsoft Windows® 10 or above
- Microsoft Office® 2016 or above
- Dual-core processor, 1.4 GHz or higher (Not compatible with ARM processor)
- 4 GB RAM
- 200 MB of free disk space for installation
- 1,280 x 768 display resolution

API and Triaxial Limits

Design Loads Overview

Load Input

iDesign