Deswik.CAD
DESIGN & SOLIDS MODELING

A powerful design platform with superior data handling – the next generation of planning tools for mining

Deswik.CAD has been designed by mining professionals for mining professionals. Effectively a spatial database, Deswik.CAD combines the visual power of a modern CAD engine with the efficient data management of a fully featured database, giving you the ability to display, analyze and report your data however you need to.

Deliberately designed to provide generic engineering tools with flexible applications, Deswik.CAD is used and sought after across all mining sectors; underground and open pit mines, both coal and metal, throughout the world.

FULLY FEATURED CAD ENGINE

» Modern Graphics engine designed to handle large mining datasets with excellent graphics performance.

» Generate, slice and Boolean without errors. Arguably the best solids and polygon Boolean tools on the market.

» Support for all standard CAD objects as well as mining specific objects including:

- Irregular stopes and tunnels

- Drill holes

- Gridded seam and block models.

» Superior graphic performance taking advantage of modern graphics card technologies.

» Generate solids / polygons using a robust Boolean engine. Where other mining technologies fail, our solids will be valid.

» Import invalid solids from other mining systems and repair them automatically.

INTEGRATED DATA MANAGEMENT

» Superior attribute and metadata handling, bringing GIS-style capabilities to 3D mining data.

» Brings advanced spreadsheet style calculations into the design environment, offering superior analysis and insights:

- 3D spatial lookup formulae

- Interrogate against solids for volume, area and intersections.

» Incorporate a broad variety of data sources:

- Global constants and parameter tables

- Curve and value surface interpolation

- Interactive and rules-based filtering from attribute values.

COMPREHENSIVE MINING DESIGN TOOLS

» Advanced design and editing tools within a simple, modern, and intuitive interface.

» Universal applications handle all mining sectors, open cut or underground, coal or metals.

» Rules-based mine design engine for designs, allowing for scenario and what-if analysis.

» Generate solids and surfaces using a multitude of methods:

- Projection – strip or pit (open cut reserving)

- X-Section along polyline (tunnels)

- Manual or batch linking (stopes)

- Tessellation (LIDAR data processing or DTM creation).

AUDITABILITY AND CONSISTENCY

» Information manipulation using a powerful formula builder, instead of scripting.

» Add structure to the planning process using graphical process maps tied into the entire Deswik.CAD toolset.

» Wizard and rules-based tools provides data manipulation transparency.

» Customizable process map macro builder:

- Repeatable design and data transformations

- Standardized planning process mapped to internal processes

- Remove confusion for unfamiliar users.

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POWERFUL REPORTING

» Rapid, intuitive plotting using the WYSIWYG principle.

» Use custom filters and legend overlays for superior graphical reporting.

» Flexible data queries generated on demand:
  - Volumes, areas, attributes and properties
  - Data histograms.

» Familiar plotting functionality mirroring most other commercial CAD systems:
  - Unlimited, independent viewports for each plot
  - Title block text with intelligent attributes including date and user
  - Spreadsheet-style table editing; with tables easily placed into 3D space or on plots.

INCLUSIVE FORMAT

» Based on an XML format, Deswik.CAD easily integrates with most mining and CAD packages including AutoCAD, Vulcan, Minex, Minescape, Minesight, Surpac, XPAC, etc.

» Plugin and scripting interfaces allow for customization and data manipulation.
  - Integrated scripting development environment (IDE): Plugins can be developed in VB.NET or C# and easily integrated into the application
  - Powerful object model that allows full access to all properties and methods
  - In-built development environment with full access to the entire .NET framework.

SURVEY FUNCTIONALITY

» Direct Integration with Leica Instruments:
  - Import jobs directly from DBX job files.
  - Upload reference data and survey stations from stations database.

» A multi-user stations database stores all of the survey stations set up by the survey team as well as a ledger of the imported jobs
  - Supports either a standalone stations database file or directly integrates with Deswik.MDM (Mining Data Management) for enterprise sites.

» Apply display styles to the imported survey data so that the observations appear as polylines, points, stations or inserts.

» Ability to load survey stations from the database to the CAD for plotting or reference.

» Export set-out and reference information to a variety of formats including; Leica DBX Job files, *.DXF, *.STR or user definable format text files.

» Store, edit and label attributes per vertex on polylines.

» Add a laser line offsets table to a plot.

» Flatten a wall outline polyline to a floor centreline polyline.

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