

midas Gen

Integrated design system
for buildings and general structures

www.MidasUser.com



midas **Gen**

Integrated design system
for buildings and general structures

Why midas Gen?

midas **Gen**

Integrated design system for buildings and general structures

01 Intuitive User Interface

The intuitive user interface, contemporary computer graphics and substantially fast solver speed are some of the highlights of midas Gen. The user-oriented input/output features and significant analysis capabilities enable the practicing engineers and researchers to readily undertake structural analyses and designs for all types of buildings and even complex and long-span structures.

02 Advanced Analysis Features

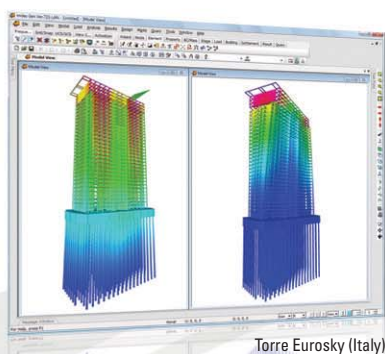
midas Gen offers conventional analysis capabilities as well as other analyses such as geometric nonlinear analysis reflecting large displacement, boundary nonlinear analysis, pushover analysis, construction simulated analysis reflecting time dependent material properties, heat of hydration analysis, etc.

03 Accurate and Practical Results

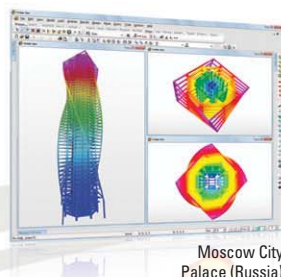
Diverse ranges of specialty finite elements in conjunction with the latest theories of structural analyses render accurate and practical results. It is prominent for providing convenience, efficiency, versatility and productivity.

04 Design Capabilities

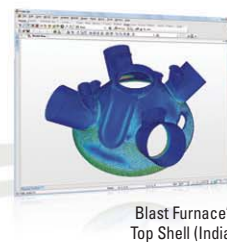
midas Gen provides design capabilities using various standards of different countries reflecting conventional as well as unusual design conditions, leading to optimal design. midas Gen has been used for over 20 years and applied to over an uncountable number of projects successfully, thereby, demonstrating its credibility and stability.



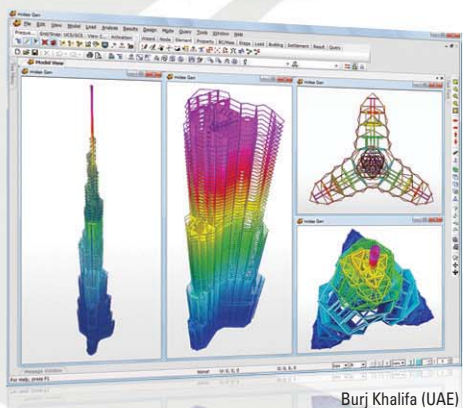
Torre Eurosky (Italy)



Moscow City
Palace (Russia)

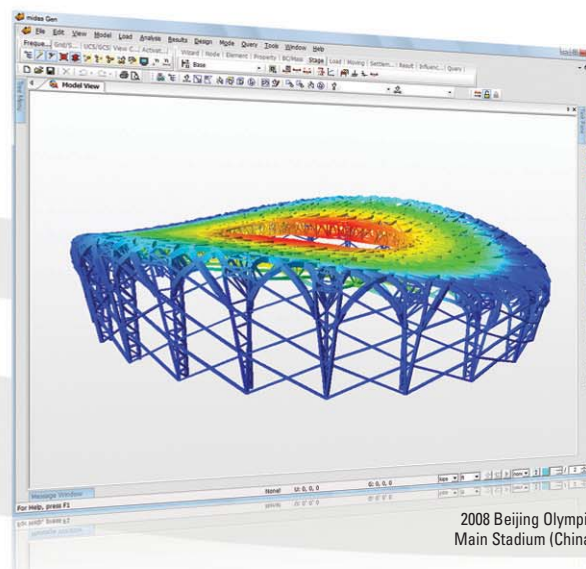


Blast Furnace's
Top Shell (India)



Burj Khalifa (UAE)

midas **Gen**



2008 Beijing Olympic
Main Stadium (China)

Features

Design Features

- **RC Design:**
ACI318, Eurocode 2 & 8, BS8110, IS:456 & 13920, CSA-A23.3, GB50010, AIJ-WSD, TWN-USD, AIK-USD & WDS, KSCE-USD, KCI-USD
- **Steel Design:**
AISC-ASD & LRFD, AISI-CFSD, Eurocode 3, BS5950, IS:800, CSA-S16, GBJ17 & GB50017, AIJ-ASD, TWN-ASD & LSD, AIK-ASD & LSD & CFSD, KSCE-ADS, KSSC-ASD
- **SRC Design:**
SSRC, JGJ138, CECS28, AIJ-SRC, TWN-SRC, AIK-SRC2K, AIK-SRC, KSSC-CFT
- **Footing Design:** ACI381, BS8110
- **Slab & Wall Design:** Eurocode 2
- **Capacity Design:** Eurocode 8, NTC2008

Wind & Seismic Loads auto-generation

- **Wind Load:**
IBC2000, UBC, ANSI, Eurocode 1, BS6399, IS875, NBC, GB, Japan, Taiwan & Korea
- **Seismic Load:**
IBC2000, UBC, ATC 3-06, Eurocode 8, IS1893, NBC, GB, Japan, Taiwan & Korea

High-rise Specific Functionality

- **3-D Column Shortening** reflecting change in modulus, creep and shrinkage
- **Construction Stage Analysis** accounting for change in geometry, supports and loadings
- **Building model generation wizard**
- Automatic mass conversion
- Material stiffness changes for **cracked sections**

High-end Analysis Capabilities

- **P-Delta & Large Displacement Analysis**
- **Dynamic Analysis (Time History, Response Spectrum, etc.)**
- **Base Isolators & Dampers**
- **Pushover Analysis**
- **Inelastic Time History Analysis**
- **Staged post-tensioning**
- **Catenary Cable Structure**
- **Heat of Hydration Analysis**

Intuitive User Interface

- **Works Tree** (Input summary with powerful modeling capabilities)
- Models created and changed with ease
- Floor Loads defined by areas and on inclined plane
- Built-in **Section Property Calculator**
- **Tekla Structures, Revit Structure & STAAD** interfaces

Why midas Gen?

midas Gen is a Windows-based, **general-purpose** structural analysis and optimal design system.

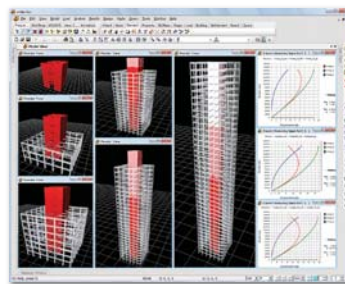
The **intuitive user interface**, contemporary computer graphics and substantially fast **solver speed** are some of the highlights of midas Gen.

The user-oriented input/output features and significant analysis capabilities enable the **practicing engineers** and researchers to readily undertake structural **analysis and design** for even complex and large structures.

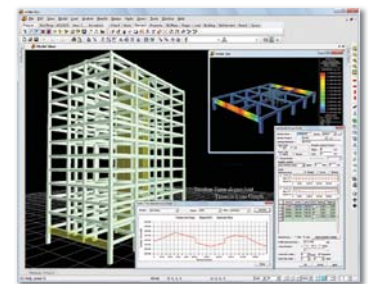
The fastest Multi-Frontal Solver and the latest analysis algorithms instantly bring accurate and practical analysis results.

In addition, midas Gen provides design capabilities using various standards of different countries leading to an **optimal design solution**.

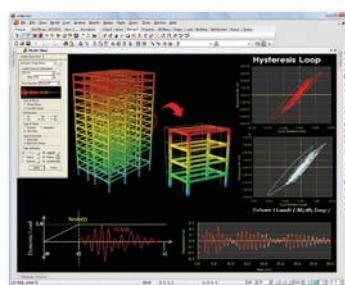
High-end Analysis Features



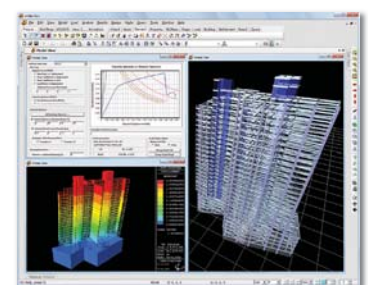
[Construction Stage Analysis]



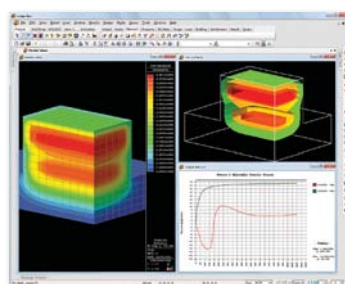
[Post-tension Analysis]



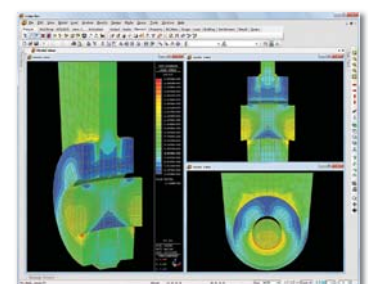
[Inelastic Time History Analysis]



[Pushover Analysis]



[Heat of Hydration Analysis]

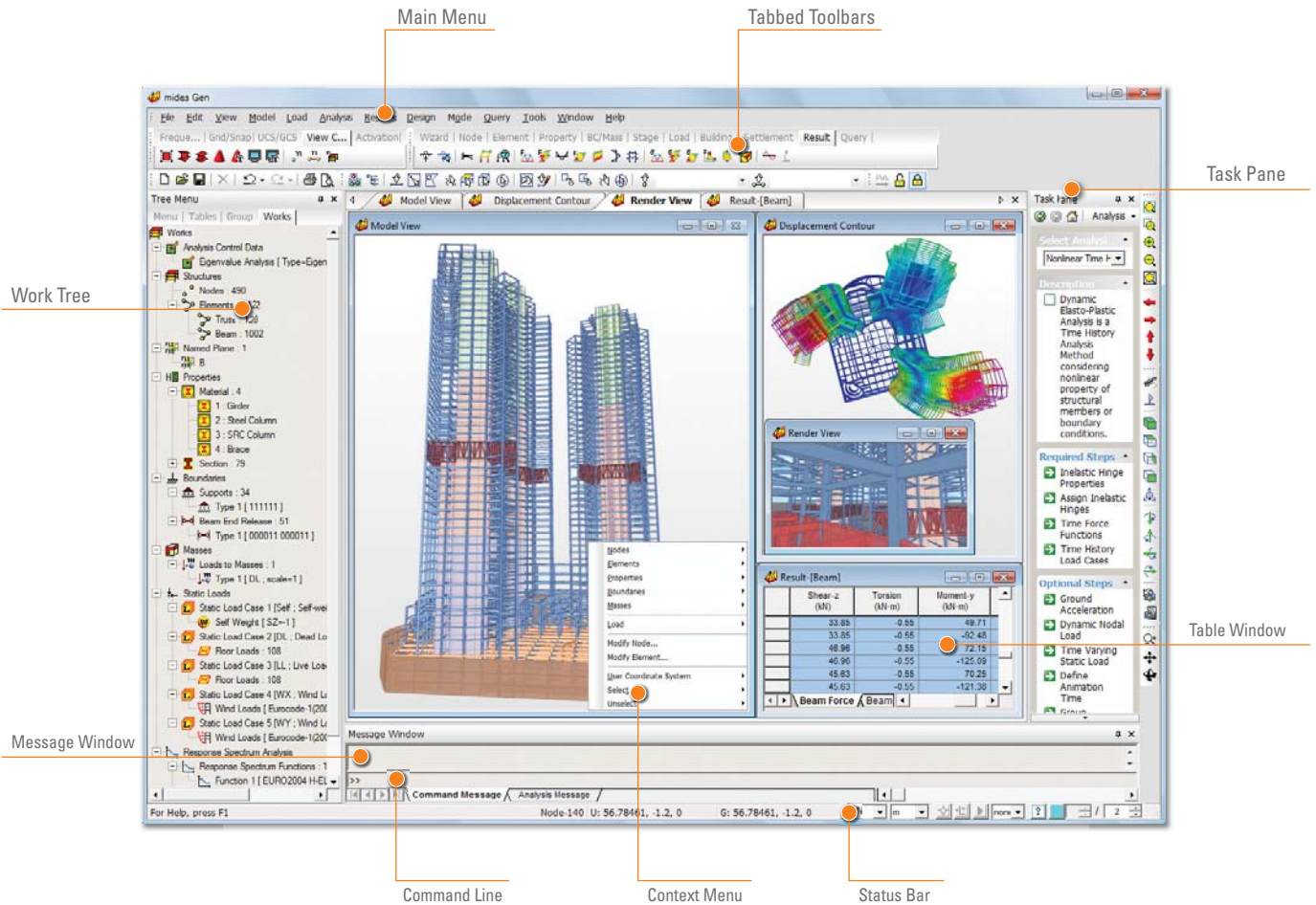


[Detail Analysis]

Integrated design system for buildings and general structures

midas Gen Framework

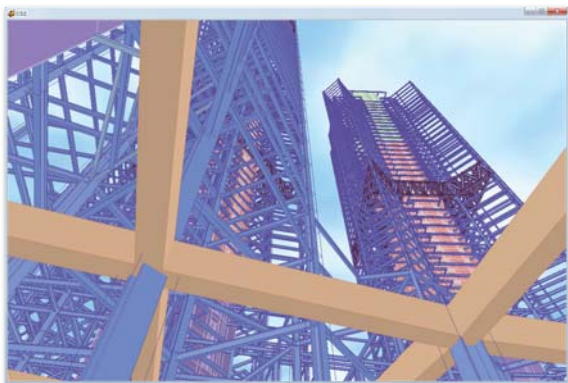
The menu system is structured to **readily gain access** to all the functions required for modeling, analysis, design and results checking tasks. It **minimizes the motion** of the mouse thereby **maximizing the efficiency** in the entire design process.



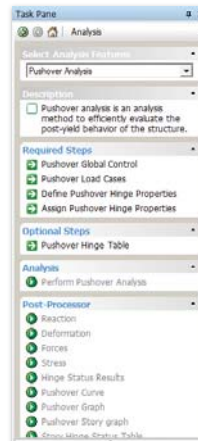
[midas Gen Framework]

Walk Through Mode

Model rendering provided in various view points



Task Pane



A new concept tool, which enables the user to freely set optimal menu system

- A new concept menu system comprising frequently used menus
- Procedural sequence defined by the user for maximum efficiency
- Auto-links to manuals, technical papers and tutorials
- Links to corresponding dialog boxes for ease of checking input data

Modeling

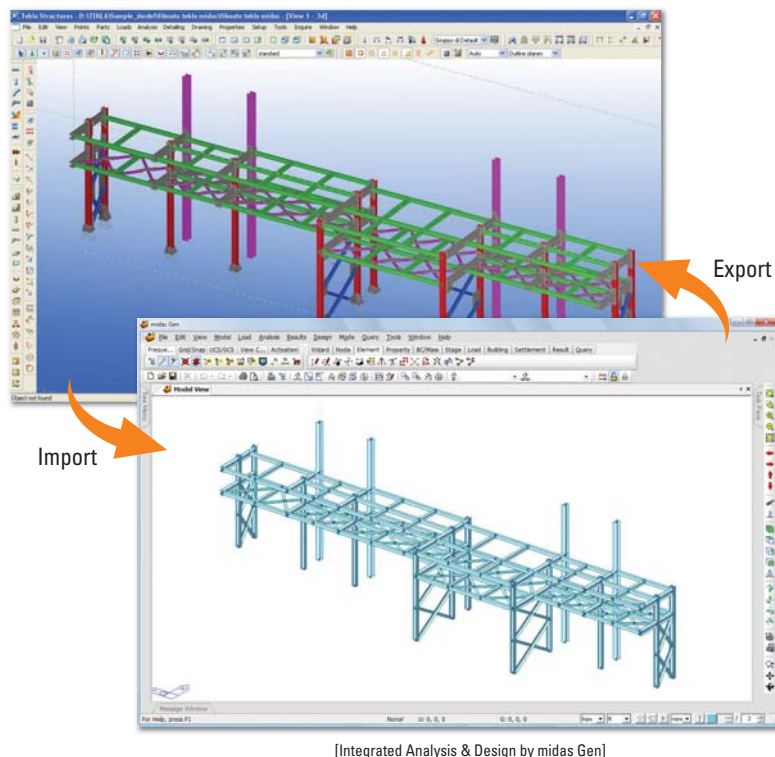
- Interface with **Tekla Structures, Revit Structure & STAAD**
- Various material and steel section DB for steel, concrete and composite structures
- Wall element** for modeling shear walls
- Tension-only element for modeling steel bracing
- Various combined sections for steel members
- Tapered section** for modeling haunched beam
- Section Property Calculator for modeling irregular sections
- Section Stiffness Scale Factor for considering stiffness of cracked sections
- Wall Stiffness Scale Factor for considering decrease in **shear stiffness due to openings**
- Multi-linear point spring** support for modeling piles and stiffness of soil
- Surface spring support for modeling mat foundation and stiffness of soil
- Beam End Release** for modeling shear connection of steel members
- Beam End Offset** and **Panel Zone Effect** for considering rigid zone in the connections of beams and columns
- Node Local Axis for modeling inclined support
- Loads to Mass for automatically converting gravity loads such as superimposed dead loads and live loads to mass
- Automatic generation of stories and floor diaphragms
- Defining ground level for generating static **seismic and wind loads**
- Building generation wizard

Steel & Concrete

DB	Code Name
ASTM	American Society for Testing Materials
EN	European Code
BS	British Standards
UNI	Italian National Standards
IS	Indian Standards
DIN	Deutsches Institut Fur Normung e.v
CSA	Canadian Standards Association
JIS	Japanese Industrial Standards
KS	Korean Industrial Standards
GB	Chinese National Standard
JGJ	Chinese Engineering Standard
JTJ	Chinese Transportation Department Standard
CNS	Chinese National Standard

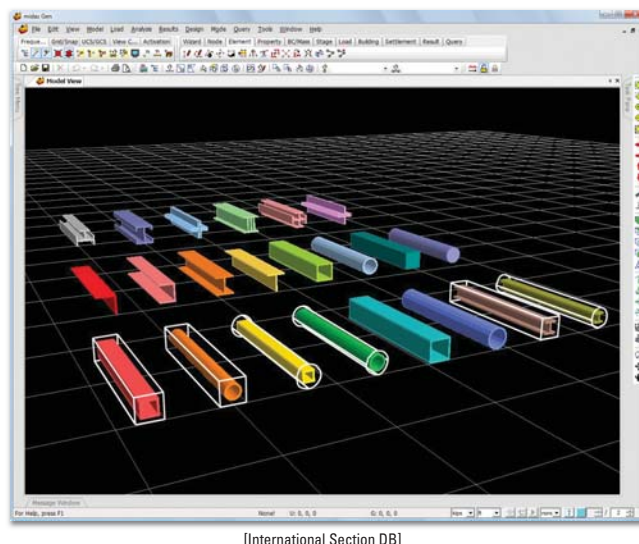
File Manipulation

- Direct Data Transfer with Tekla Structures, Revit Structure & STAAD
- Import/Export (AutoCAD DXF, MSC.Nastran, MGT, etc.)
- Merge Data Files
- Unlimited Undo/Redo & Step Return using History



Material & Section Properties

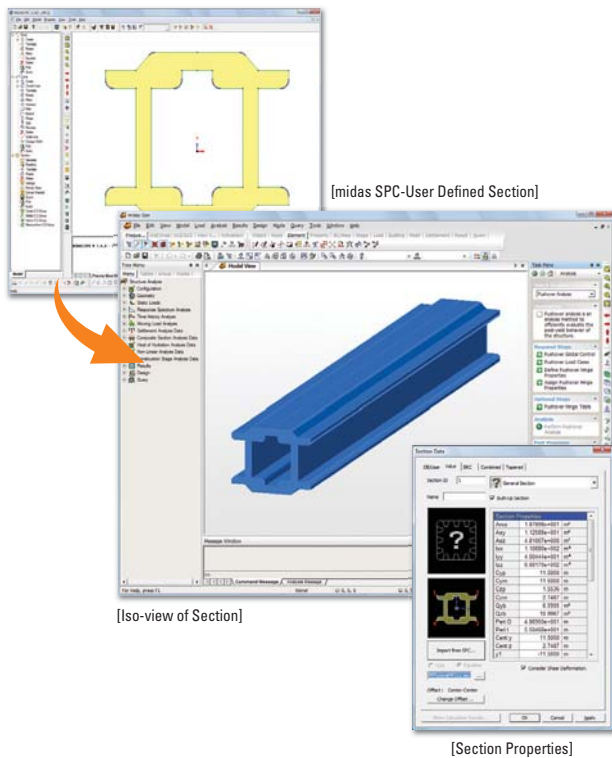
midas Gen provides various material and section database, and user-defined material and section data can be also specified. The database includes I-section, T-section, Channel, Angle, Pipe, Box, SRC, Combined, Tapered, Composite, etc.



Integrated design system for buildings and general structures

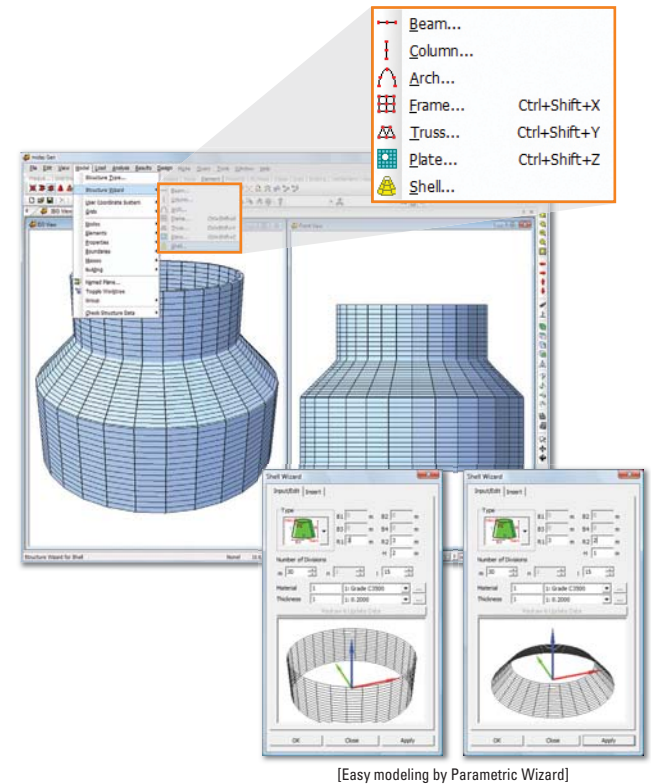
Section Property Calculator

midas Gen provides SPC, which calculates stiffness data for any shape or form. The section shape can be drawn, or a DXF file can be imported. The shape and properties of the generated section can be exported to midas Gen.



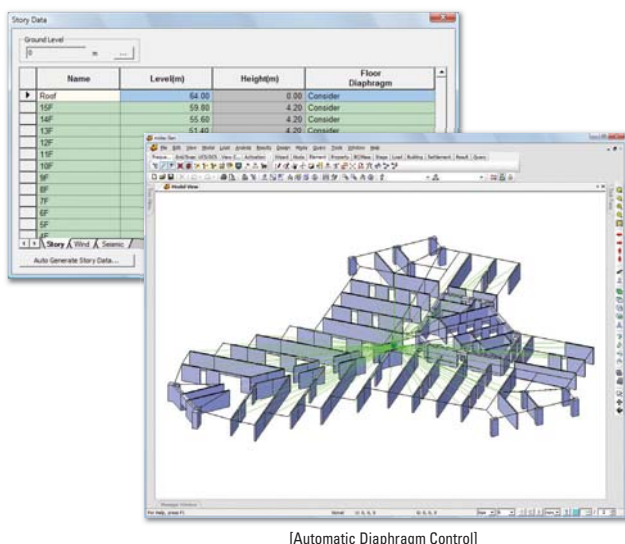
Structure Wizards

Unit structures such as a frame, an arch, a truss, a plate and a shell may be modeled by this automated modeling tool independently and may be combined later with the total model.



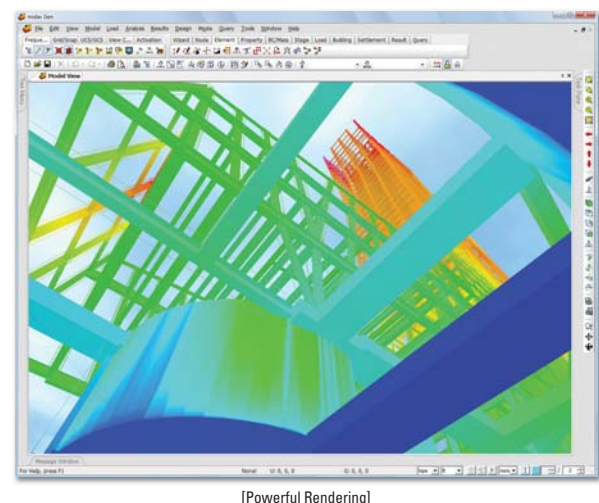
Floor Diaphragm

In-plane rigidity of a slab can be easily considered without including an actual slab in the model. The mass data are automatically entered at the diaphragm centers, that is, the center of mass is auto-calculated for each story. Only the components in the GCS X and Y directions and the rotational mass moment of inertia about the Z-axis are considered.



Walk Through Effect

The Model Window can represent common model shapes as well as shapes generated by hidden lines, removal of hidden surfaces, shading, lighting, dispersion of color tone, etc. The model, analysis and design results may be displayed in rendering views. The input status of the model or each type of analysis and design results can be visually verified by "walking through or flying over" the interiors of structures.



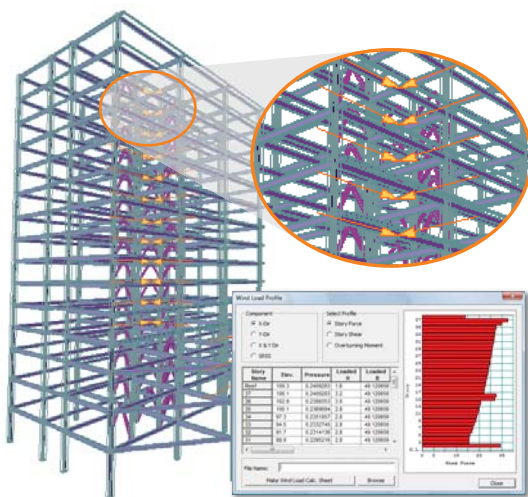
Loads

- midas Gen enables us to specify all types of nodal, element, point, surface, dynamic, **prestressing** and **thermal** loads encountered in practice
- Typical Beam Loads for applying floor loads
- Floor Loads by areas**
- Static seismic loads and wind loads based on various **international building codes**
- Hydrostatic Pressure** Loads for applying lateral earth pressure
- Load combination** based on various design codes
- Load group generation load cases from load combinations

Static Wind and Seismic Loads

midas Gen generates static wind and seismic loads on a building structure for each story. All one has to do is to provide the applicable standard and the building data.

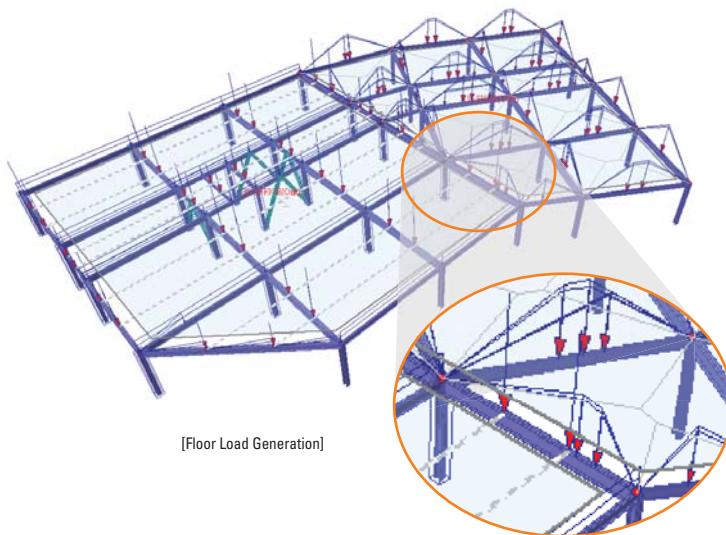
Wind Load Code	Seismic Load Code
IBC	IBC
UBC	UBC
ANSI	ATC
Eurocode	Eurocode
BS	.
IS	IS
NBC	NBC
GB	GB
Japan	Japan
Taiwan	Taiwan
Korea	Korea



[Wind Load at Geometric Centers]

Floor Loads

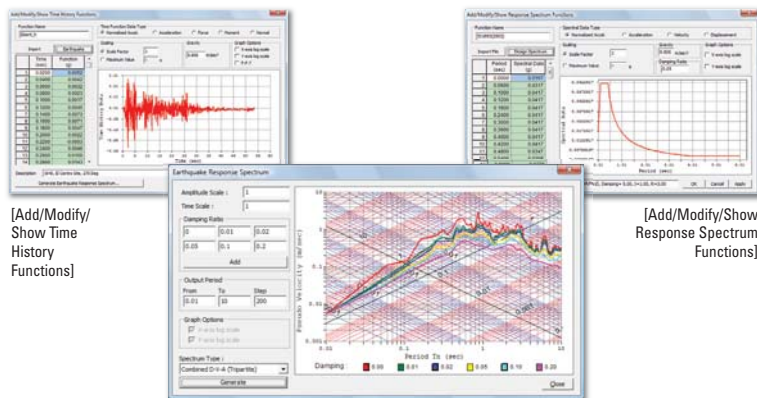
- This function allows us to readily specify uniformly distributed dead and live loads on specific areas of a floor.
- The floor loads are then **automatically distributed** and applied to the individual beams, girders and columns. This surely leads to speedy analysis and design.



[Floor Load Generation]

Dynamic Loads

Seismic analyses can be performed while implementing dynamic loads and nonlinear elements.

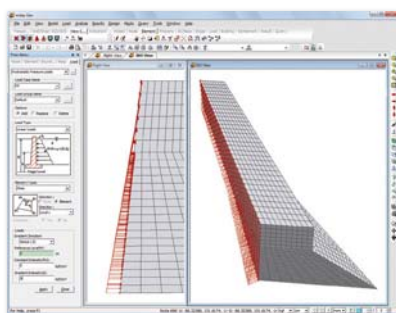


[Add/Modify/Show Time History Functions]

[Add/Modify/Show Response Spectrum Functions]

[Earthquake Response Spectrum]

Hydrostatic Pressure Loads

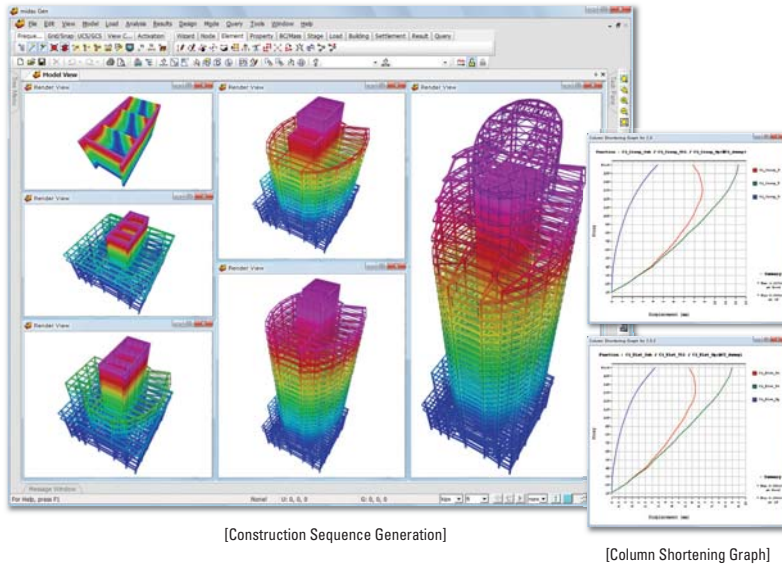


[Pressure Load Generation]

The hydrostatic pressure loads are calculated at each corner node of the elements. The point pressure is obtained by multiplying the distance from the given surface of the fluid by the density of the fluid.

Construction Stage Analysis •

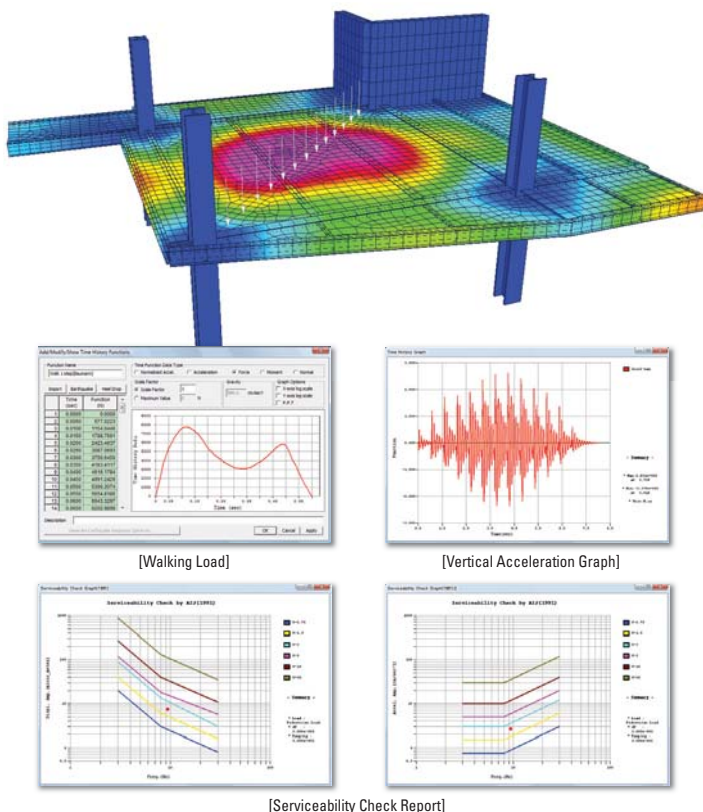
midas Gen provides Construction Stage Analysis capability, which reflects the **time dependent material properties** of concrete such as modulus of elasticity, **creep and shrinkage**. Change in material properties are reflected while simulating **construction sequence** with respect to the change in geometry, boundary conditions and loads relative to time.



Floor Vibration Analysis •

Serviceability of floor structures can be evaluated by dynamic time history analyses. midas Gen provides a number of time history forcing functions for **walking loads for floor vibration**.

- Baumann, IABSE, AIJ, Allen & Rainer



Analysis

- Linear Static & Thermal Analysis
- Dynamic Analyses (**Eigenvalue, Response spectrum & Time History**)
- **P-Delta Analysis**
- Buckling Analysis (Critical Buckling Load Factors & Modes)
- Moving Load Analysis
- Heat Transfer Analysis (Steady State & Transient)
- **Construction Stage Analysis** (Strength, Creep & Shrinkage)
- **Column Shortening Analysis** (Elastic/Creep & Shrinkage)
- Geometric Nonlinear Analysis
- **Pushover Analysis** (Concrete, Steel and Masonry)
- Boundary Nonlinear Time History Analysis
- **Inelastic Time History Analysis** (Lumped/ Distributed Hinges, Fiber Elements)
- **Material Nonlinear Analysis** (Von-Mises, Tresca, Mohr-Coulomb & Drucker-Prager)
- **Structural Masonry Analysis**
- Analysis for finding Unknown Forces by Optimization
- **Heat of Hydration Analysis** (Thermo-elastic, Maturity, Creep, Shrinkage & Pipe Cooling)

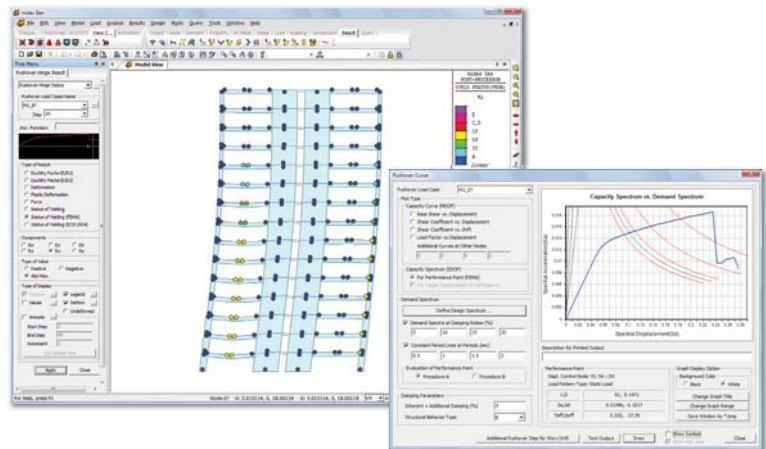
Finite Element Library

- General Beam element
- **Tapered Beam** element
- Truss element
- **Compression only** element
- **Tension only** element
- Cable element
- Plate element (Thick/Thin, In-plane/ Out-of-plane Thickness & Orthotropic)
- Plane Stress element
- Plane Strain element
- Axisymmetric element
- **Wall element** (In-plane, Out-of-plane Bending)
- Solid element (Hexagon, Wedge & Tetrahedron)
- Gap element
- Hook element
- **Visco-elastic System**
- Hysteretic System
- Lead Rubber Bearing Isolator
- Friction Pendulum Isolator

Pushover Analysis •

Pushover analysis of a 3 dimensional frame structure used for **performance based design** can be carried out for reinforced concrete, structural steel and steel-concrete composite sections.

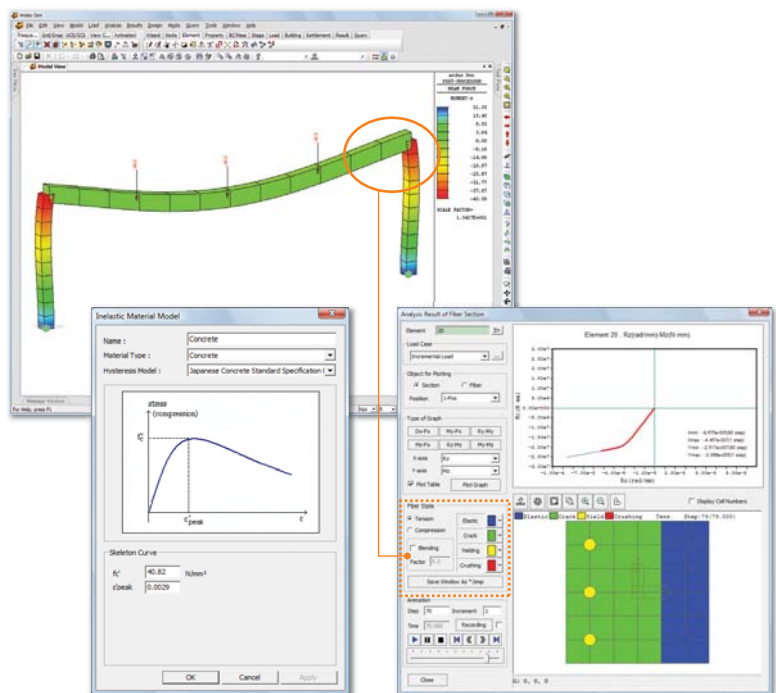
- Performance based design as per **FEMA, Eurocode 8** and **Masonry**
- Various Hinge Types (Truss/Beam/Column/Wall/Spring), Multi-linear Hinge and User-defined Hinge
- **Displacement control & Force control**
- **Target displacement & Performance Point** based on **Capacity Spectrum Method**
- Checking for acceptable performance (Drift limits, Deformation and Strength capacity)



[Capacity Spectrum Method]

Inelastic Time History Analysis •

For the **seismic design and assessment** of a structure, midas Gen offers a wide range of **hysteresis hinge models** such as kinematic hardening, Takeda, slip, etc. in the inelastic time history analysis.



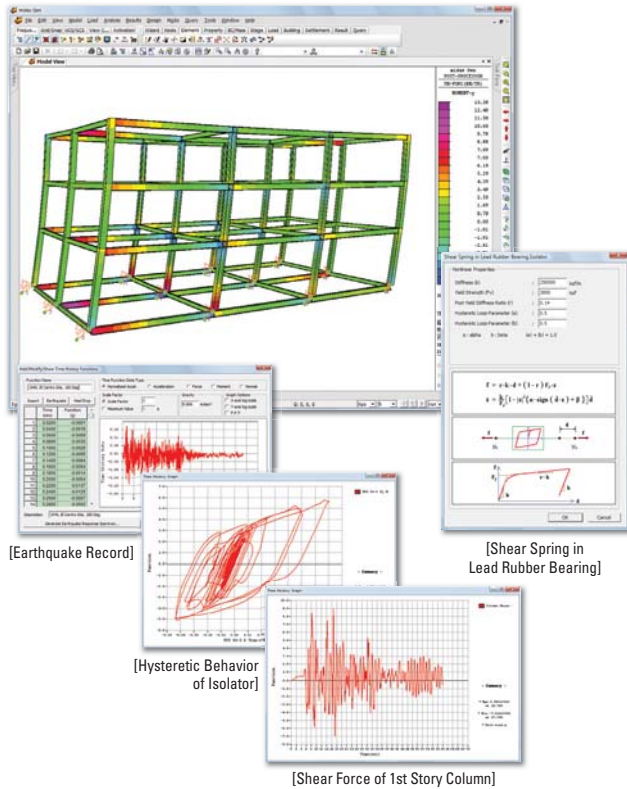
[Inelastic Material for Concrete]

[Analysis Result of Fiber Section]

Integrated design system for buildings and general structures

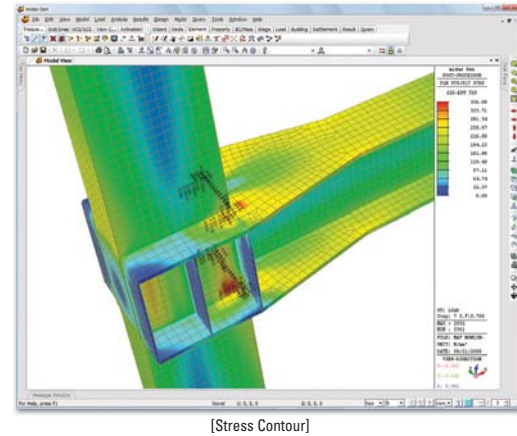
Boundary Nonlinear Time History Analysis

midas Gen offers boundary nonlinear time history analysis, which enables us to analyze and evaluate **seismic isolators and dampers**. Gap, Hook and hysteretic system are also provided.



Material Nonlinear Analysis/Plasticity Analysis

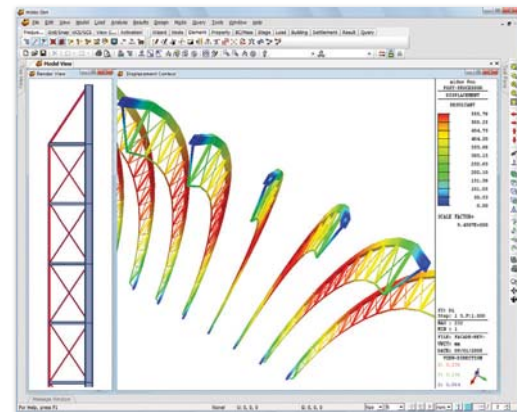
midas Gen offers material models for the analysis of nonlinear behaviors of steel, concrete, rock, etc. (Von-Mises, Tresca, Mohr-Coulomb & Drucker-Prager)



[Stress Contour]

Geometric Nonlinear Analysis

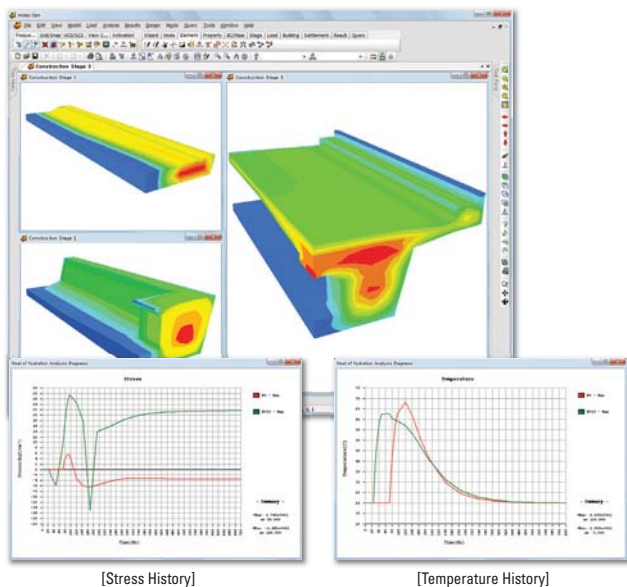
Large displacement analysis encountered in cable supported structures, cable net structures, long span structures, etc. can be performed reflecting the change in geometrical deformations.



[Deformed Shape of Cable Truss Facade System]

Heat of Hydration Analysis

midas Gen provides heat of hydration analysis capabilities through heat transfer and heat stress analyses. Heat of hydration analysis by construction stages reflects the change in modulus of elasticity due to **maturity**, effects of **creep/shrinkage**, **pipe cooling** and **concrete pour sequence**.

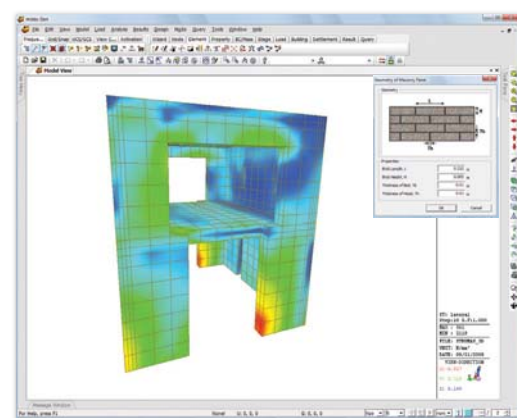


[Stress History]

[Temperature History]

Structural Masonry Analysis

Masonry structures can be modeled with solid elements, which contain orthotropic material properties. The effect of nonlinearity such as **tensile crack** and **compressive failure** can be considered.



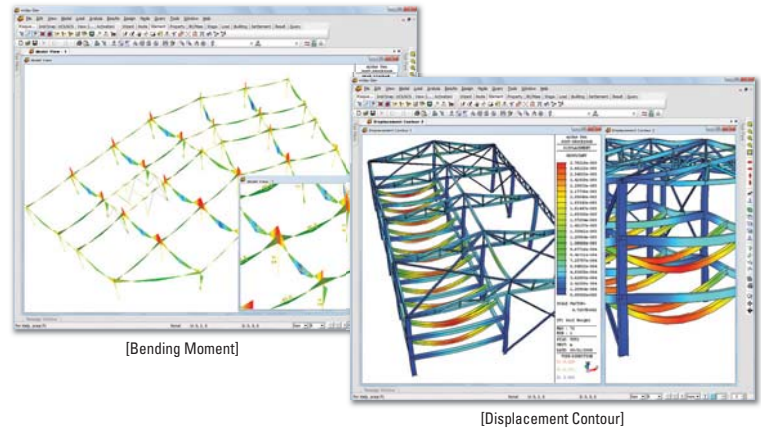
[Stress Contour of Masonry Structure]

Results

- **Story Drift** for Static and Dynamic Seismic Loads
- **Story Shear** for Response Spectrum and Time History Loads
- Mode Shapes
- Mass center and Stiffness center by story
- Center of building structure
- **Story Shear Force Ratio** for the columns and shear walls
- Overturning moment
- Torsional Irregularity Check
- Stiffness Irregularity Check
- Weight Irregularity Check
- Capacity Irregularity Check
- Defining **modules** for a multi-tower building
Story results for each module
- **Bill of Materials**

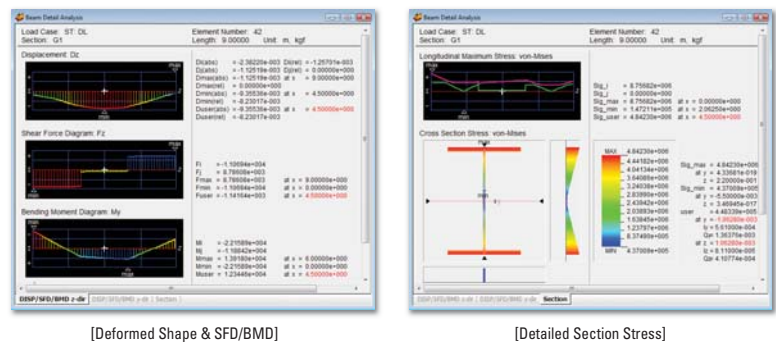
Bending Moment Diagram & Displacement Contour

- midas Gen provides all the analysis and design results in superb graphics, which enable us to analyze and **evaluate the results intuitively**.
- Member forces for weak and strong axes may be viewed simultaneously in **beam diagram**.

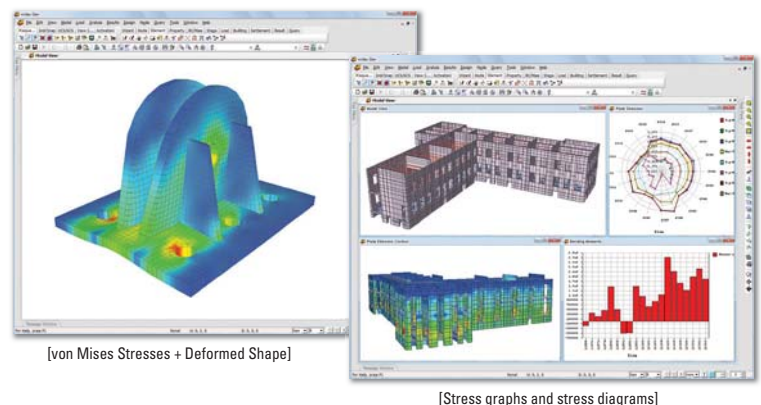


Beam Detail Analysis

- Member **displacements, forces and stresses** can be examined for various **section locations**.
- Detail forces and stresses in beam members resulting from detail analysis of individual elements can be verified in Beam Detail Analysis. **Any point in any section** can be examined.

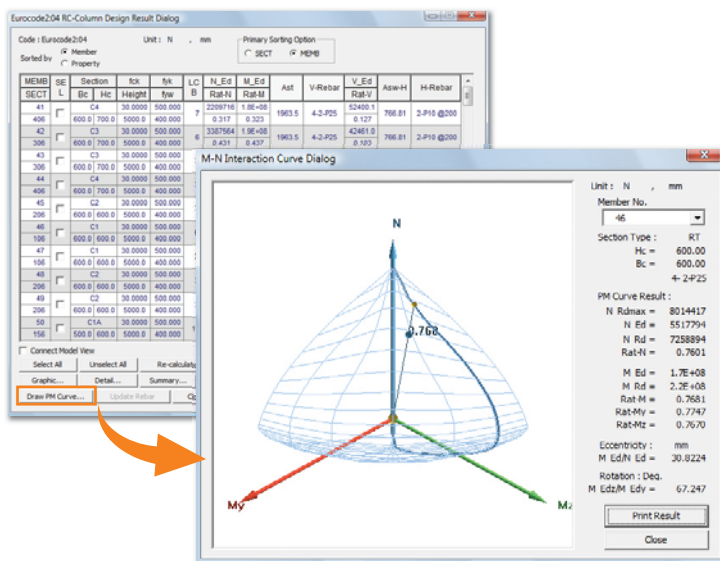


Post-Processing



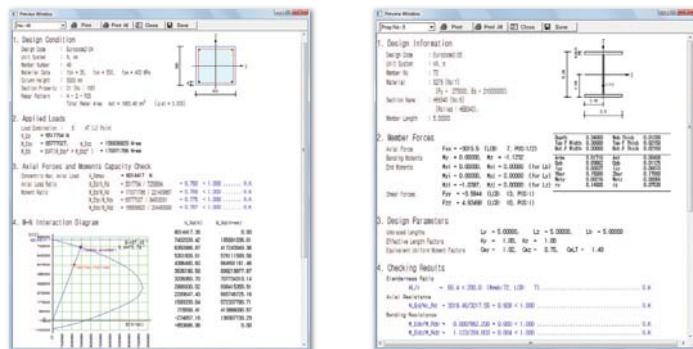
Design Codes

RC Design	Steel Design	SRC Design
ACI318	AISC-LRFD	SSRC
Eurocode 2 & 8	AISC-ASD	JGJ138
NTC2008	AISI-CFSD	CECS28
BS8110	Eurocode 3	AIJ-SRC
IS:456 & IS:13920	BS5950	TWN-SRC
CSA-A23.3	IS:800	AIK-SRC2K
GB50010	CSA-S16	AIK-SRC
AIJ-WSD	GBJ17, GB50017	KSSC-CFT
TWN-USD	AIJ-ASD	Footing Design
AIK-USD, WSD	TWN-ASD, TWN-LSD	ACI318
KSCE-USD	AIK-ASD, LSD, CFSD	BS8110
KCI-USD	KSCE-ASD	Slab & Wall Design
	KSSC-ASD	Eurocode 2



[P-M Interaction Surface]

Design Report



[Concrete Design Report]

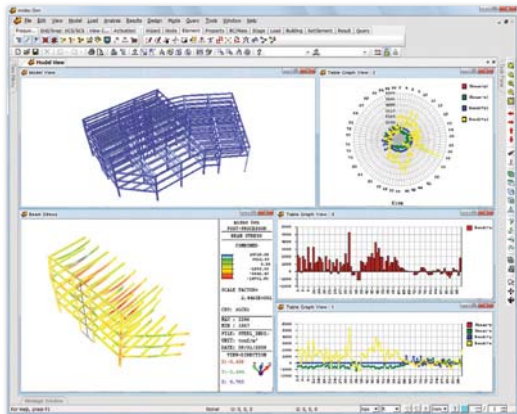
[Steel Design Report]

Design Features

- Automatic design/checking of concrete frame, shear wall, steel frame and isolated footing
- Providing reinforcement size and distribution on the concrete section
- Automatic checking the minimum spacing of reinforcements
- Doubly-reinforced beam design
- Option for splicing
- Automatic calculation of effective length factor
- Automatic calculation of unbraced length
- User-defined moment redistribution
- International reinforcement DB (ASTM, EN, UNI, BS, IS, CSA, GB, JIS, CNS, KS)
- Optimal design based on the lateral displacement
- Steel Optimal Design based on the strength check
- Shear wall design considering boundary element
- Strong Column-Weak Beam design
- Detailed design report

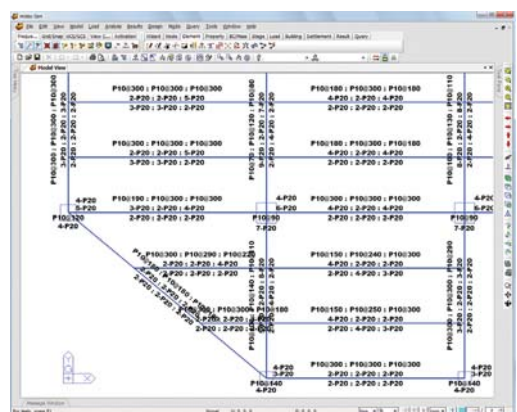
Optimal Design

The optimal design feature of midas Gen **optimizes the member sections**, which determines the section dimensions automatically for the minimum sectional area (minimum weights) satisfying the specified design standard through verifying **strength ratio (or stress ratio) in iterative analysis**.



Graphical Display of Design Results

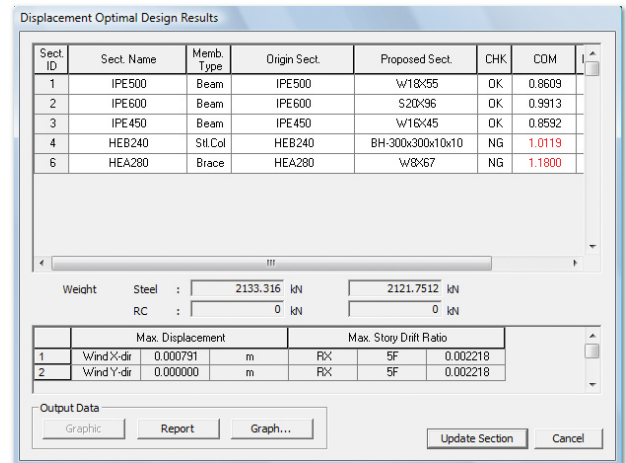
Reinforcing information such as rebar diameter, rebar spacing and required reinforcing steel area can be displayed.



[Reinforcement Output Different Format for Each Country]

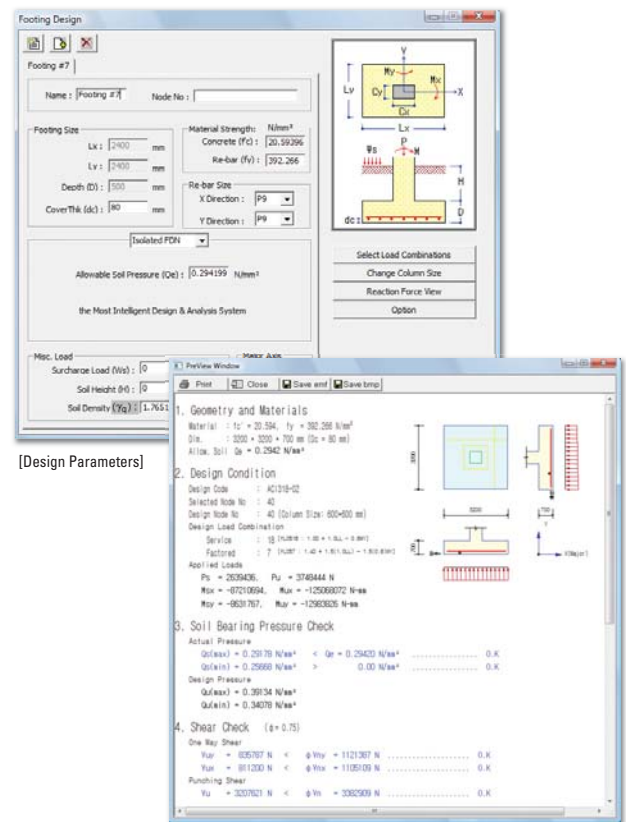
Displacement Optimal Design Results

Display the output for optimization design per lateral displacement control, sort the optimal design results in various forms, and reflect the change of sections in the model.



Footing Design

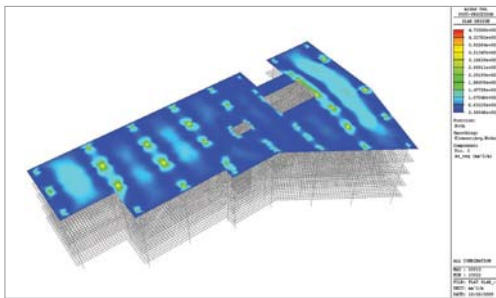
midas Gen automatically searches for an adequate **footing size** and **the number of piles**. It looks for satisfactory dimensions by checking all the entered nodes and load combinations. The results are produced only for the most severe load combination.



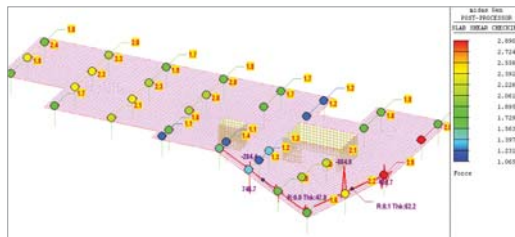
[Design Parameters]

[Design Report]

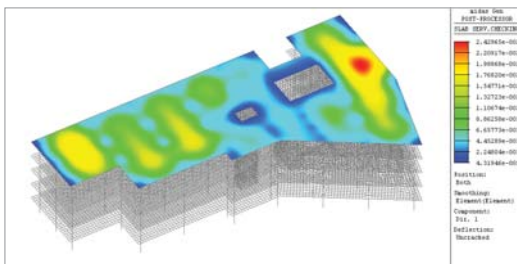
Meshed Slab and Wall Design



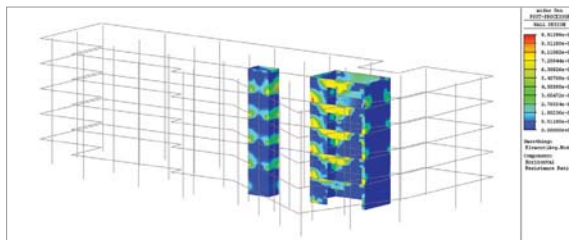
[Slab flexural design
(Required rebar area)]



[Punching shear check result]



[Slab serviceability checking
(Long-term deflection
considering creep effect)]



[Wall design
(Resistance ratio)]

Define Sub-Domain

Domain

Name: 1

Element Type: Plate

Material: C30

Thickness: 0.25

Sub-Domain

Name: [U]

Member Type: Slab

Rebar Dir. (CCW)

Dir. 1: Angle from Global X: 45 [deg]

Dir. 2: Angle from Dir. 1: 90 [deg]

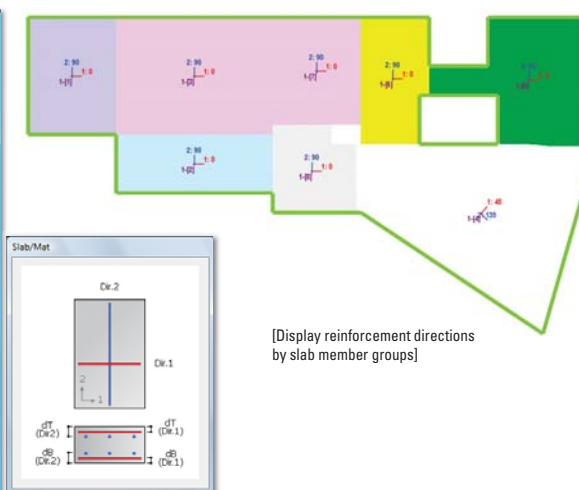
☒ Use Model Thickness

Element List

Name	Type	Angle	Elements
[1]	Slab	0+90	29110...
[2]	Slab	0+90	18912...
[3]	Slab	0+90	25831...
[4]	Slab	0+90	22791...
[5]	Slab	0+90	24691...
[6]	Slab	0+90	25291...
[7]	Slab	0+90	27891...
[8]	Slab	0+90	29691...
[9]	Slab	0+90	31091...
[10]	Slab	0+90	32691...

Add Modify Delete

Close



[Display reinforcement directions
by slab member groups]

[Define reinforcement directions]

Meshed Slab and Wall Design

midas Gen provides **slab and wall design** for meshed plate elements as per Eurocode 2-1-1:2004. midas Gen provides slab design for orthogonal / non-orthogonal reinforcement directions based on the Wood-Armer formula. Also smooth moment and shear forces are considered in slab and wall design. Static wind and seismic loads for flexible floors are automatically generated.

Slab Flexural Design / Checking

Graphical display :

Recommended rebar size and spacing
Required rebar area
Required rebar ratio
Flexural resistance ratio
Wood-Armer moment
One-way flexural design

Detail report : Design results of slab members in a text format summary

Design moment table : Wood-Armer moments in a spread sheet table

Punching Shear Checking

Graphical display :

Stress diagram in a critical perimeter
Punching shear check ratio
One-way shear check

Detail report : Verification results for punching shear with required shear rebar area in a text format summary

Slab Serviceability Checking

Graphical display :

Stress checking (concrete, rebar)
Crack control (crack width, minimum rebar area, minimum bar diameters, minimum bar spacing)
Deflection (un-cracked section, long term deflection considering creep effect)

Detail report

Wall Design / Checking

Graphical display :

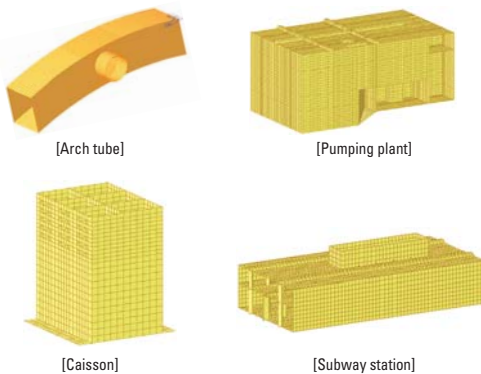
Recommended rebar size and spacing
Required rebar area
Required rebar ratio
Resistance ratio

Detail report

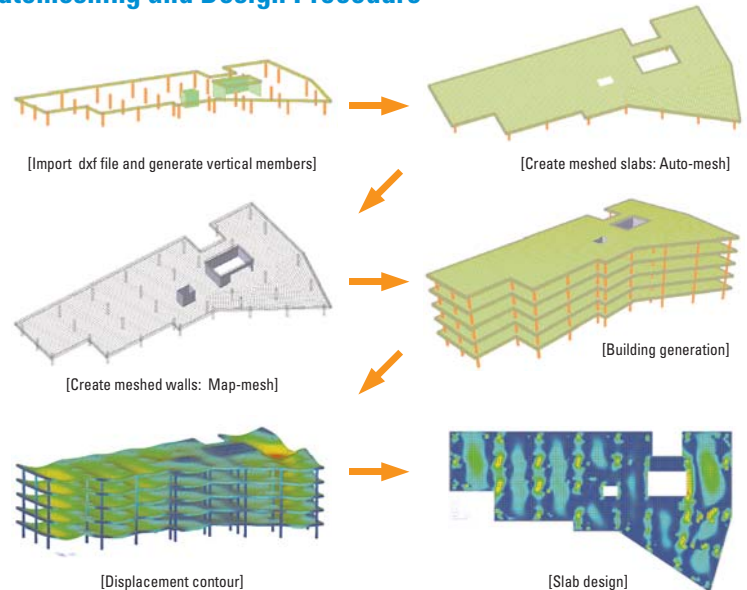
Automeshing

- midas Gen provides **mesh generation** features for slab and wall members. Generated mesh elements are fully compatible with analysis and design feature. Automesh considering interior nodes, elements and openings is available.
- Wall / Slab modeling and design
- Automatic generation of Static Wind and Seismic Loads for flexible floors
- Automatic consideration of **interior openings and connectivity** between Slab and Wall members

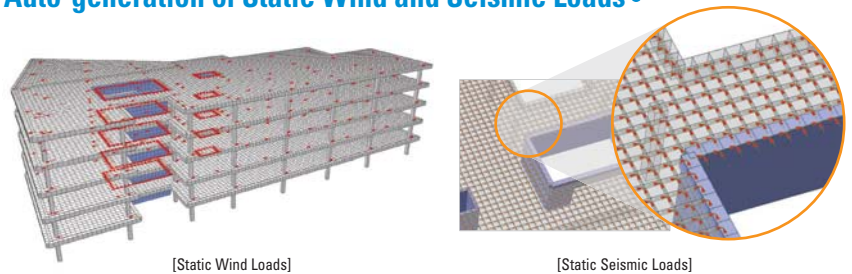
Various Applications



Automeshing and Design Procedure



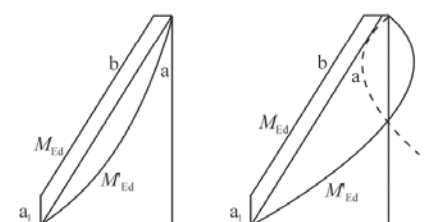
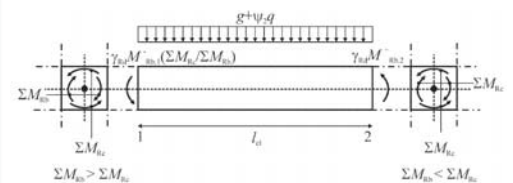
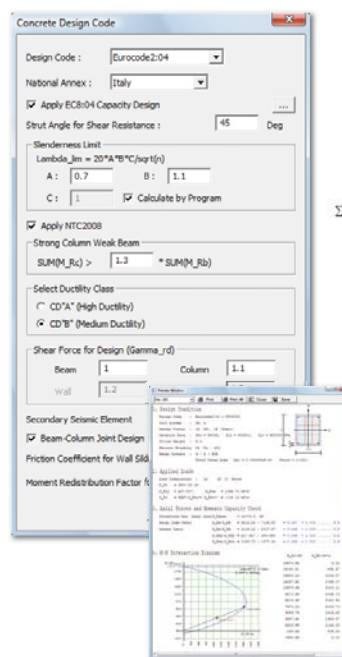
Auto-generation of Static Wind and Seismic Loads



Capacity Design

- midas Gen offers automatic **capacity design** capability for concrete structures to provide the appropriate amount of ductility in the corresponding ductility classes.
- Beam, column, wall and beam-column joint**
- EN 1998-1: 2004 (DCM/DCH)**
- NTC2008 (CD "B", CD "A")**
- Design action effects** are calculated in accordance with the capacity design rule. Special provision for ductile primary seismic walls is considered.
- Detailing for local ductility** is considered.
 - max/min reinforcement ratio of the tension zone
 - the spacing of hoops within the critical region
 - mechanical volumetric ratio of confining hoops with the critical regions

Capacity Design for Concrete Structures



[Define ductility class and check design results]

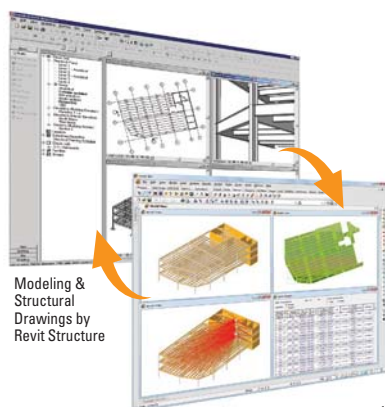
midas Gen & Integrated Solutions?

midas Gen & Integrated Solutions are one stop total solution from modeling/analysis/design to engineering drawings/shop drawings. Integrated modeling/analysis/design system by **midas Gen**, auto-generation of structural drawings/B.O.M by **midas DShop** and direct data transfer with **Tekla Structures & Revit Structure** are integral parts of midas Gen.

CAD Interface

Direct Data Transfer with Tekla Structures & Revit Structure

- Exporting all the standard, double and built up sections from Tekla/Revit to Gen
- Exporting all the defined material and section properties from Tekla/Revit to Gen
- Updating Tekla/Revit models based on optimally designed sections in Gen



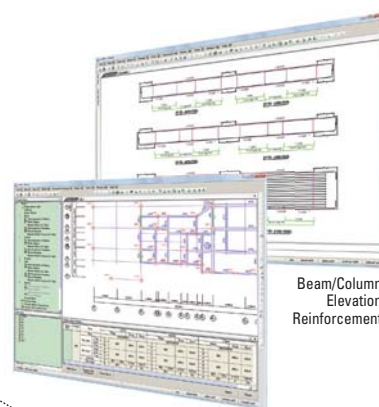
Modeling & Structural Drawings by Revit Structure

Integrated Analysis & Design by midas Gen

midas DShop

Auto-drafting Module for midas Gen

- midas Gen design results transformed into auto-generate structural drawings (General Notes / Plans / Sections / Member Schedules)
- Reinforcement Edit function by members (Beam, Column, Brace, Wall & Footing)
- Auto-generation of B.O.M. (Bill Of Materials)
- Drawing environment and edit functions identical to AutoCAD



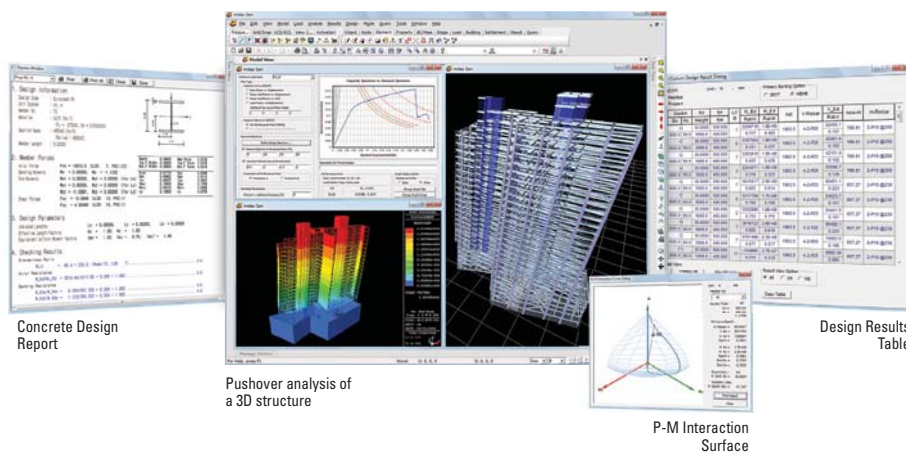
Beam/Column Elevation Reinforcement

Editing reinforcement in Table

midas Gen

Integrated design system for buildings and general structures

- Intuitive User Interface
- RC / Steel / SRC / Meshed Slab and Wall Design
- Seismic Analysis, Pushover Analysis, Dampers & Base Isolators & Capacity Design
- Geometric / Material Nonlinear / Nonlinear Time History (fiber element)



Concrete Design Report

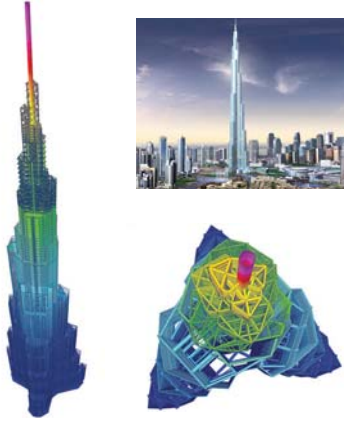
Pushover analysis of a 3D structure

Design Results Table

P-M Interaction Surface

Project Applications

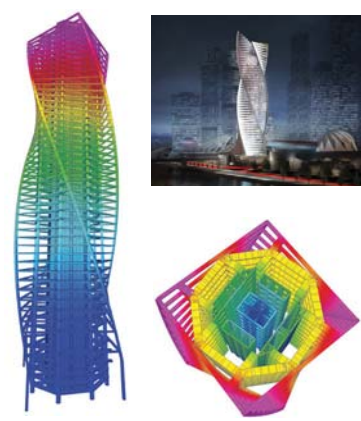
Buildings



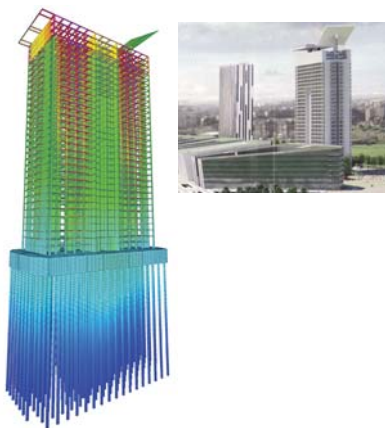
Burj Khalifa (UAE)



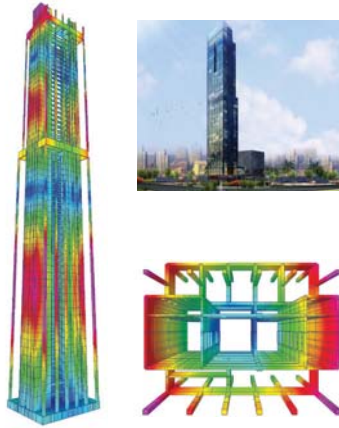
Guangzhou Twin Tower (China)



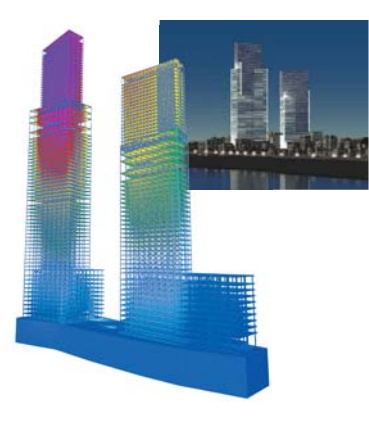
Moscow City Palace (Russia)



Torre Eurosky (Italy)



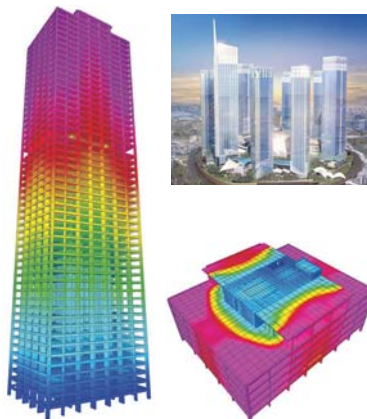
Rolex Tower (UAE)



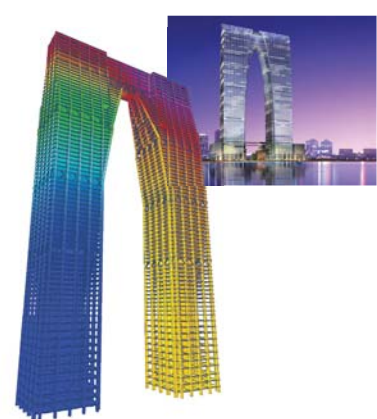
Taipei Twin Tower (Taiwan)



Hanoi Landmark (Vietnam)



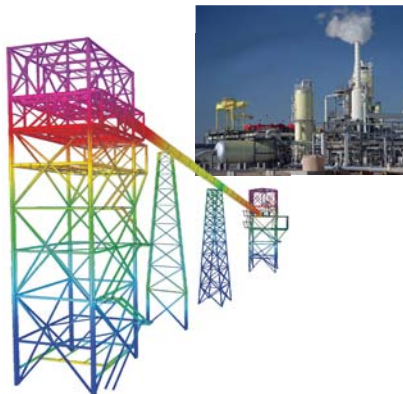
Omnix Tower (UAE)



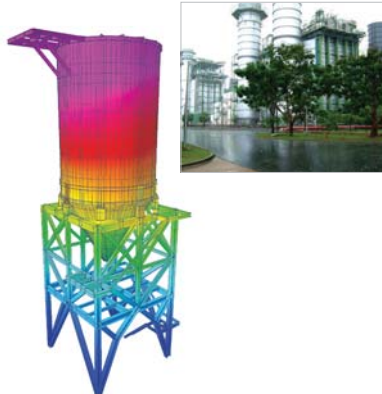
Gate of the Orient (China)

Project Applications

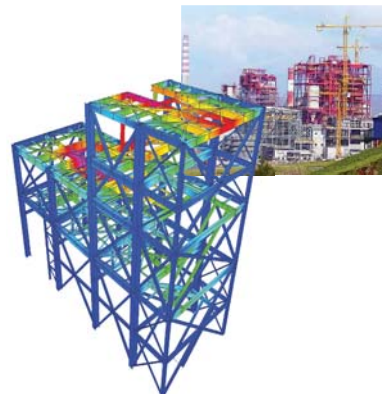
Plant Structures



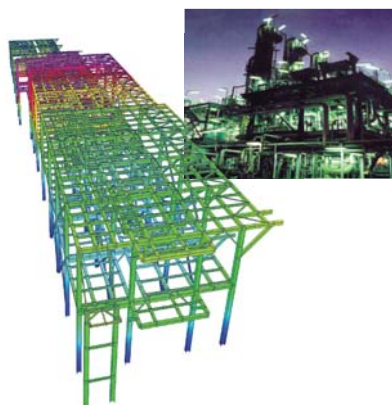
Campiche Power Plant (Chile)



Nghi Power Plant (Vietnam)



Angamos Power Plant (Chile)



Hadeed CCL Steel Plant (Saudi Arabia)



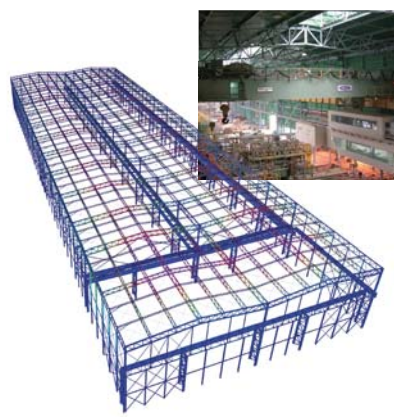
TAVAZON Steel Plant (Iran)



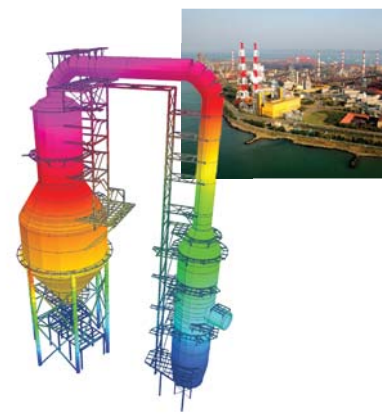
India IISCO Steel Plant (India)



Pohang Steel Plant (Korea)



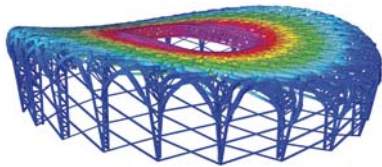
Zhangjiagang STS Steel Plant (China)



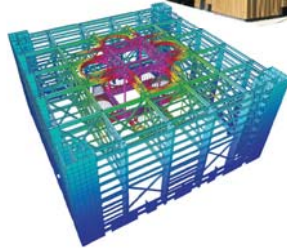
Gwangyang Steel Plant (Korea)

Project Applications

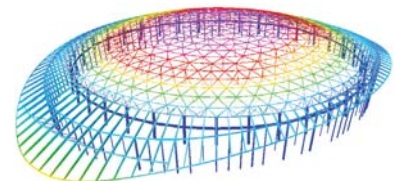
Spatial Structures



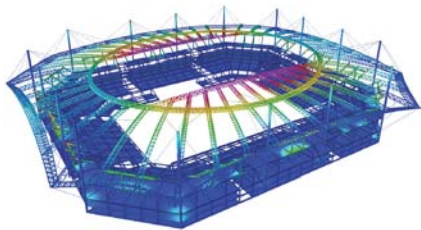
2008 Beijing Olympic Main Stadium (China)



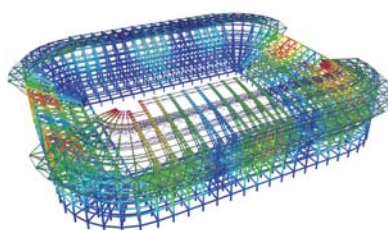
2008 Beijing Olympic Basketball Arena (China)



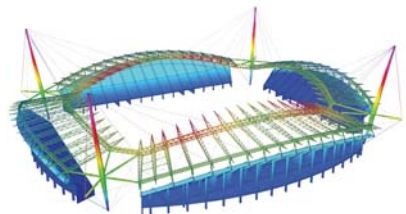
2008 Beijing Olympic Badminton Arena (China)



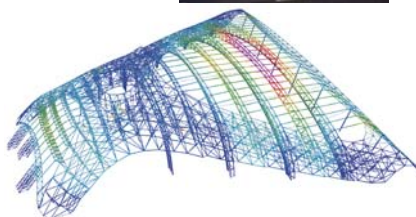
FIFA World Cup Main Stadium (Korea)



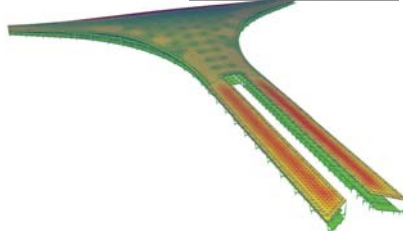
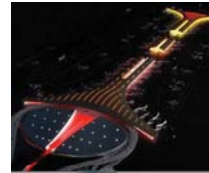
FIFA World Cup Daejeon Stadium (Korea)



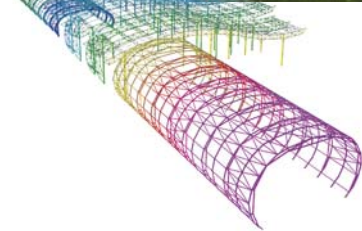
FIFA World Cup Jeonju Stadium (Korea)



Incheon International Airport (Korea)



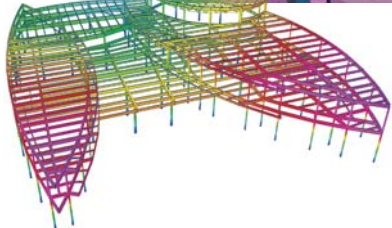
Beijing International Airport (China)



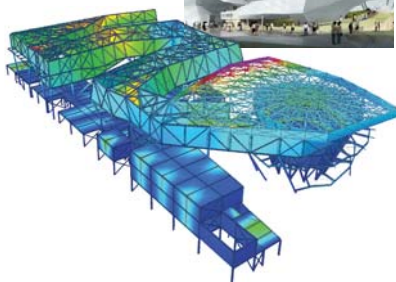
Seoksan Subway Station (Korea)

Project Applications

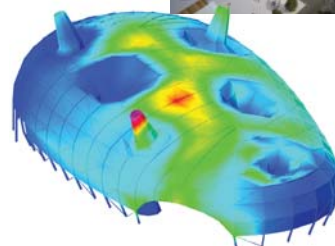
Specialty Structures



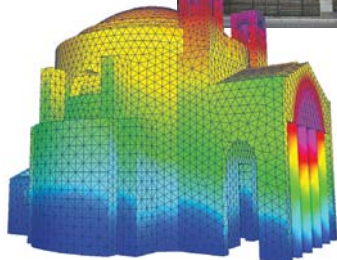
USA Pavilion (Shanghai EXPO)



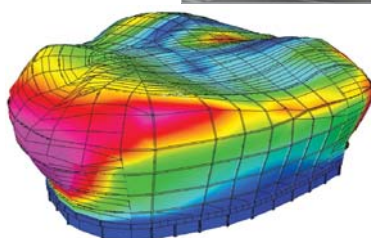
German Pavilion (Shanghai EXPO)



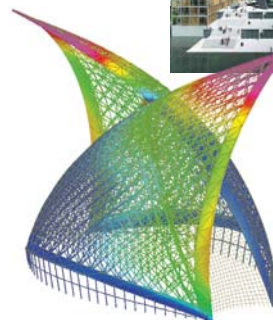
Japan Pavilion (Shanghai EXPO)



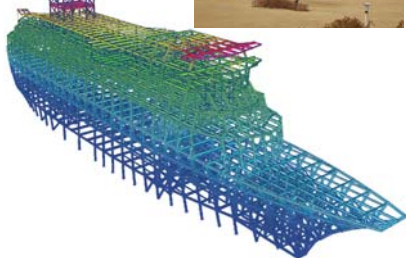
Tempietto di Villa Barbaro (Italy)



Erdos Museum (Mongolia)



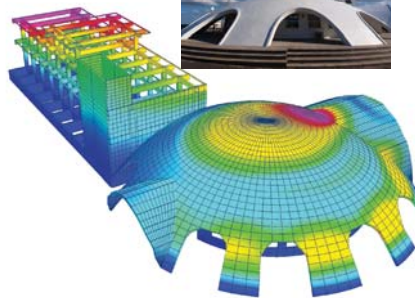
Maritime Museum (China)



Jeongdongjin Resort Facilities (Korea)



Saint Ignatius High School (Taiwan)



Sungsanpo Marine Terminal (Korea)

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International MIDAS Users Conferences & Seminars



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United Kingdom



India



China



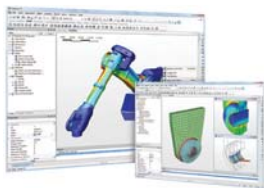
Japan



Korea

Introduction to MIDAS Family Programs

Mechanical Engineering



Nastran FX

Easy, Accurate and Practical Solution for True Analysis-Driven Design

midas FX+

General Pre & Post Processor for Finite Element Analysis

FEPartner for Plamedia (in Japan)

Customized Pre & Post-processors for Plastic CAE

Building Engineering



midas Gen

Integrated Design System for Buildings and General Structures

midas Building (in China)

A revolutionary building specific design system with auto-drafting modules

midas Modeler

Automatic Generation of 3D Structural Analysis Model

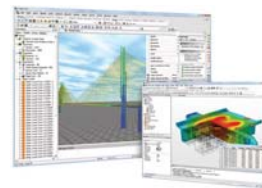
midas DShop

Auto-drafting Module to Generate Structural Drawings and Bills of Material

midas Set

Structural engineer's tools

Bridge Engineering



midas Civil

Integrated Solution System for Bridge and Civil Structures

midas FEA

Advanced Nonlinear and Detail Analysis System

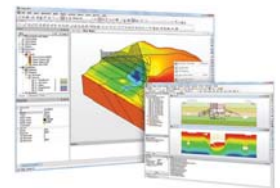
midas FX+ for DIANA

An Official Pre & Post Processor for DIANA

midas FX+ Modeler

General Pre-Processor for Finite Element Analysis

Geotechnical Engineering



midas GTS

Geotechnical and Tunnel analysis System

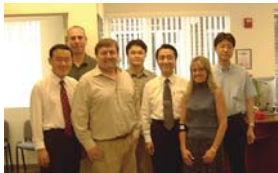
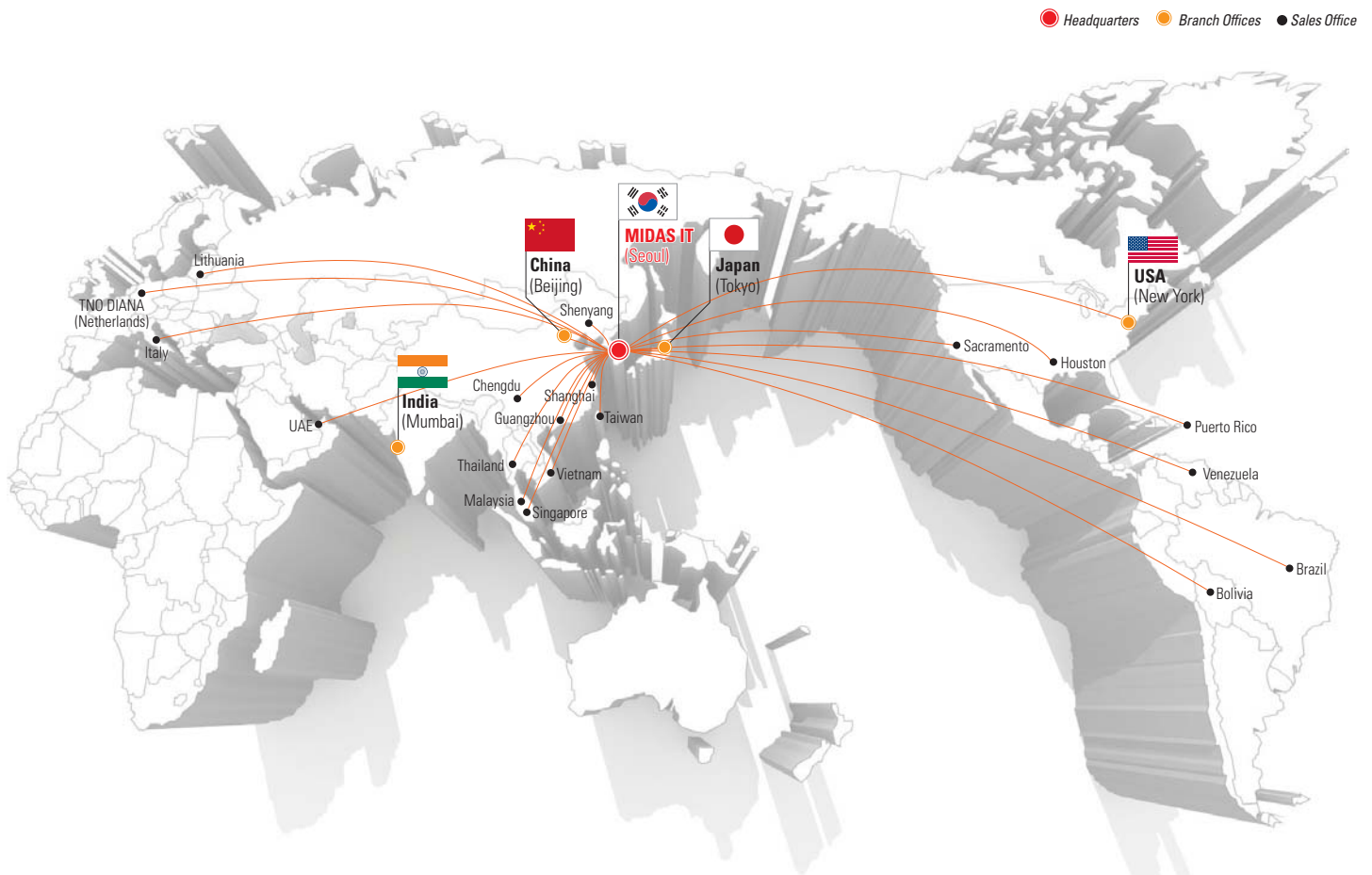
midas GeoX

Temporary shoring & Settlement analysis System for Excavation

FEPartner for SoilPlus (in Japan)

Structural Analysis System for Geotechnical Engineering

MIDAS Global Network



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+91 22 6721 1001-3 / india@midasuser.com

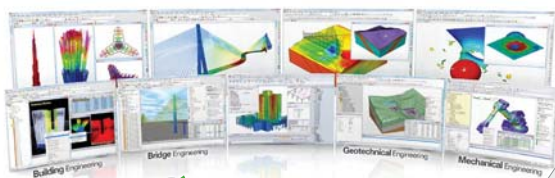


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