迈达斯建筑结构技术交流会(深圳站)

MIDAS GEN与其它结构程序的转换原理及应用

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MIDAS GEN与其它结构程序的 转换原理及应用

the procedure of MIDAS gen model transfer to other structural program model and application

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MIDAS GEN与其它结构程序的转换原理及应用

主要内容

- 1、MIDAS Gen 转换其它结构程序原理及mgt格式
- 2、MIDAS Gen 自带结构转换程序的操作介绍
- 3、MIDAS Gen 与 SAP2000, ETABS, ANSYS程序转换程序介绍



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Dinobox 关于MIDAS的转 换程序的开发均采用 DELPHI进行开发

📾 elfnochen.com 🌽 WSP 迈达斯建筑结构技术交流会(深圳站) MIDAS GEN与其它结构程序的转换原理及应用 (1)MIDAS Gen 转换为其它结构程序的原理(文本方式) MIDAS/Gen MGT 文件(G)... ▶【导出】→【MIDAS/GEN MGT文件】 AutoCAD DXF 文件(D)... 导出的单位制保证是N,mm MIDAS/Gen Text (MGT) File. Date : 2009/7/31 *VERSION 7.1.2 *UNIT ; Unit System ; FORCE, LENGTH, HEAT, TEMPER N , MM, KJ, C *PROJINFO : Project Information USER=zlptx ADDRESS=zlptx *STRUCTYPE ; Structure Type ; iSTYP, iMASS, iSMAS, bMASSOFFSET, GRAV, TEMPER, bALIGNBEAM, bALIGNSLAB 0, 1, 1, NO, 9806, 20, NO, NO ; Rebar Material Code *REBAR-MATL-CODE ; CONC_CODE, CONC_MDB, SRC_CODE, SRC_MDB Τ GB(RC), HRB400, GB(RC), HRB400 *GRIDLINE : Define Line Grid NAME=00 X=0, 7500, 15300, 23100, 30900, 38700, 46500, 54300, 65300 文件表头 Y=0, 8100, 12600, 21300, 30300, 39300, 47900



(1)MIDAS Gen 转换为其它结构程序的原理(文本方式)

<pre>*NODE : Nodes : iNO, X, Y, Z 1, 15300, -1000, 0 2, 23100, -1000, 0 3, 30900, -1000, 0 4, 38700, -1000, 0 5, 46500, -1000, 0 6, 7350, 8170, 0 7, 15300, 6400, 0 8, 23100, 5500, 0 0 30000 5500 0</pre>	<pre>*ELEMENT : Elements : iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, iOPT : Frame Element : iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iSUB, iWID : Planar Element : iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iN5, iN6, iN7, iN8 : Solid Element : iEL, TYPE, iMAT, iPRO, iN1, iN2, REF, RPX, RPY, RPZ, iSUB, EXVAL : Frame(Ref. Point) 1, BEAM , 1, 1, 14, 47, 0 2, BEAM , 1, 1, 15, 48, 0 3, BEAM , 1, 1, 16, 49, 0</pre>			
结点坐标				
*ELEMENI : Elements : iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, iOPT : Frame Element : iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iSUB, iWID : Planar Element				
一般结构的主要单元为 Frame Wall & Slab				
梁、柱、斜撑、二力杆单元属于 Frame类				
单元编号,类型,材料,截面,结点I,结点J,截面夹角,其它				





楼板单元属于 Planar Element 单元编号, 类型, 材料, 截面, 结点1, 结点2, 结点3, 结点4, 其它



MIDAS GEN与其它结构程序的转换原理及应用

(1)MIDAS Gen 转换为其它结构程序的原理(文本方式)

6597,	WALL	,	1,	4,	1552,	1553,	1549,	1548,	2,
6598,	WALL	,	1,	4,	1548,	1549,	1556,	1555,	2,
6599,	WALL	,	1,	4,	1555,	1556,	1557,	1559,	2,
6600,	WALL	,	1,	4,	1559,	1557,	1558,	1560,	2,
6601,	WALL	,	1,	4,	1560,	1558,	1907,	1906,	2,
6602,	WALL	,	1,	4,	1906,	1907,	1610,	1609,	2,

4结点的剪力墙单元

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剪力墙单元属于 Planar Element 单元编号,类型,材料,截面,结点1,结点2,结点3,结点4,其它

*MATERIAL : Material : iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, [DATA1] : STEEL, CONC, USER : iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, [DATA2], [DATA2] : SRC : [DATA1] : 1, DB, NAME : [DATA1] : 2, ELAST, POISN, THERMAL, DEN, MASS : [DATA1] : 3, Ex, Ey, Ez, Tx, Ty, Tz, Sxy, Sxz, Syz, Pxy, Pxz, Pyz, DEN : Orthotropic : [DATA2] : 1, DB, NAME or 2, ELAST, POISN, THERMAL, DEN, MASS 1, CONC , concrete , 0, 0, , C, NO, 1, GB(RC) , C30 2, STEEL, steel , 0, 0, , C, NO, 1, GB03(S) , Q235 3, USER , 屈曲约束支撑 , 0, 0, , C, NO, 2, 5.0000e+004, 0.3, 1.2000e-005, 7.698, 0

材料属性



MIDAS GEN与其它结构程序的转换原理及应用

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(1)MIDAS Gen 转换为其它结构程序的原理(文本方式) 框架截面属性信息

*SECTION : Section iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2] iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2] iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL : 1st line - DB/USER : 1st line - VALUE ; 2nd line AREA, ASy, ASz, Ixx, Iyy, Izz CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz ; 3rd line ; 4th line ISEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF ; 1st line - SRC D1, D2, [SRC] ; 2nd line iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2 : 1st line - COMBINED iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24 iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, ivVAR, izVAR, STYPE : 1st line - TAPERED DB, NAME1, NAME2 : 2nd line(STYPE=DB) ; 2nd line (STYPE=USER) [DIM1], [DIM2] D11, D12, D13, D14, D15, D16, D17, D18 ; 2nd line (STYPE=VALUE)

 CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1
 3rd line(STYPE=VALUE)

 Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2
 5th line(STYPE=VALUE)

 D21, D22, D23. D24. D25. D26
 D27. D28

 Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2
 5th line(STYPE=VALUE)

 D21, D22, D23, D24, D25, D26, D27, D28
 6th line(STYPE=VALUE)

 AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2
 7th line(STYPE=VALUE)

 CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2
 8th line(STYPE=VALUE)

 Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zz2
 9th line(STYPE=VALUE)

 Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2 [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10 [DATA2] : CCSHAPE or iCEL or iN1, iN2 [SRC] : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2 [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8 [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 600, 800, 0, 0, 0, 0, 0, 0, 0, 0 1, DBUSER , 600x800 , 600x600 , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 600, 600, 0, 0, 0, 0, 0, 0, 0, 0 2, DBUSER , P 70X4(筒壳) 3, DBUSER , CC, O, O, O, O, O, O, YES, P , 2, 70, 4, O, O, O, O, O, O, O, O , 2, 60, 3.5, 0, 0, 0, 0, 0, 0, 0, 0, ,P60X3.5(上弦) 0, 0, 0, 0, 0, 0, 0, YES, P , CC, 0 4, DBUSER , 2, 70, 4, 0, 0, 0, 0, 0, 0, 0, 0 ,P70X4.0(上弦) , CC, 0, 0, 0, 0, 0, 0, YES, P 5, DBUSER , CC, O, O, O, O, O, O, YES, P , 2, 95, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0 ,P95X5.0(王弦) 6. DBUSER , ZZ 300X600 0, YES, SB , 2, 600, 300, 0, 0, , CC, 0, 0, 0, 0, 0, 0, 7. DBUSER Ο, Ο, NDUCED



YES, YES, YES, YES, YES, YES, YES, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ο, Ο, Ο, 0, 0, 0, 0, 0, 0, 0, 0, ō, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, JUD, 1000, հ, O, Ն O, P , 0, 0, сс, сс, сс, сс, 600, 60, 0, 0, 0, 0, 0, 3.5, 0, 0, 0, 0, 0, 800, 800, 121, 11. DBUSER KL300X800 ò, 0 800, 0, 0, 0, 0, 0, _0, Ō, O, 0, 0 800x800 12, DBUSER 0 ĊĊ, P 121x6(腹杆) 13. DBUSER 6, 0, 0, 16, 0, 650, 300, ĊĊ, YES, 0, 0, DBUSER 0, 0, 0, 0, 250, Ο, Ο, Ο, Ο, Ο, 14, L 250X650 0 16, 0, DBUSER □300x300 CC, YES, 300, 284, Ο, 15. 16, Ο, Ο. 0 , 0, 0, 0, 70, 60, 95, 70, 95, 900, YES, YES, YES, YES, P70x4.0(下弦) P60x3.5(腹杆) 0, 0, 0, 0, 0, 0, 0, DBUSER Ο, 4, Ο, Ο, Ο, Ō 16. 0, 0, Ó, 0, 0, 0, 0, 0, 3.5, 5, 0, 0, 0, DBUSER Ο, Ο, 0 17, DBUSER P 95x5(下弦) Ο, 0, 0, 0, Ō 18. 0, 0, 0, 0, 0, 0, 0, 0, 0, Ο, , 5, 0, 4, 0, 5, 0, 300, 400, 200, 1, 0, 7, 0, 250 P70x4(腹杆) P95x5(腹杆) DBUSER Ο, Ο, Ο, Ο, 19. Ο, Ο, Ο, 0 YES, YES, YES, YES, YES, YES, 0, 0, 0, 0, 0, DBUSER 0, 0, 0, 0, 0, 0, Ο, 20, 0, 0, 0, 0, Ο, 0 Ο, DBUSER 21. TZ1 300X900 0, 0, 0, 0, 0, 0, 0, 0, 0, Ο, Ο, Ο, Ο, 0, 0, 0, 0, 0, 400, 800, 500, DBUSER TZ2 300X400 22, Ο, Ο, Ο, 0 23, DBUSER 0, 0, Ο, Ο, KL400X800 0, 0, 0, 0, Ο, Ο, 0 24, DBUSER L 200X500 Ο, Ο, Ο, Ο, 0 4, 7, 0, 0, 0, 0, Ō, O, 0, 0, YES, 60, 121, DBUSER 25, P 60X4.0(筒壳) 0 P 121X7.0(筒壳) YES, 26, DBUSER 0 27, DBUSER сc, O, YES, 600, 250, Ο, 0, Ο, Ο, Ο, L 250X600 Ο, DBUSER сс, Ο, Ο, Ο, YES, 700, 250, Ο, Ο, Ο, 28, L 250X700 Ο, Ο, Ο, Ο, Ο, 0, 0, СC, 0, 0, 0, YES, Ο, DBUSER Ο, Ο, Ο, 900, 400, 29, KL 400X900 Ο, Ο, Ο, Ο, Ο, Ο, Ο, L 200X400 , CC, L 200X400 , CC, L 100x100 , CC, HM 244x175x7/11(简壳顶), P121x6(下弦) , CC, P 121x6(上弦) , CC, DBUSER Ο, Ο, YES, 400, 200, Ο, , L 200X400 Ο, Ο, Ο, 30. Ο, Ο, Ο, Ο, Ο, 0, CC, 0, YES,), 0, 31, DBUSER Ο, Ο, Ο, 100, 100, Ο, Ο, Ο, Ο, Ο, Ο, Ο, 0 , 123, 0, 0, YES, YES, YES, 0, 0, 0, 0, 0, 0, 0, 0, , 0, 0, 0, 0, 0, GB-YB, HM 244x175x7/11 DBUSER 32, 1, , 0, 0, 0, 6, 0, 0, DBUSER Ο, 33. 121, Ο, Ο, Ο, 0 121, 6, 0, 0, 0, 0, 0, 0, 0, 400, 800, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, Ο, 34, DBUSER Ο, 0 , cc, 35, DBUSER , KL 800x400 Ο, Ο, 0, 0

截面实例



MIDAS GEN与其它结构程序的转换原理及应用

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(1)MIDAS Gen 转换为其它结构程序的原理(文本方式)

<pre>SHAFE, INIX-IN, INIX-OUT, NO, NL iTHK, TYPE, SUBTYPE, RPOS, PLATETHIK bRIB {, SHAPE, DIST, SIZE1, SIZE2,, SIZE6} bRIB {, SHAPE, DIST, SIZE2, SIZE2,, SIZE6} iTHK, TYPE, SUBTYPE, RPOS, PLATETHIK, DBNAME bRIB {, SHAPE, DIST, SNAME} bRIB {, SHAPE, DIST, SNAME} bRIB {, SHAPE, DIST, SNAME} content of the section bRIB {, SHAPE, DIST, SNAME} content of the section content of the se</pre>	言息
<pre>*STORY : Story : NAME, LEVEL, bFLDIAP, WINDWX, WINDWY, WINDCX, WINDCY, \ : ECCX, ECCY, IECCX, IECCY, TAFX, TAFY B1 , -1500, N0 , 65300, 49100, 32650, 23550, 3265, 2455, 0, 0, 1, 1 1F , 0, YES, 65300, 49100, 32650, 23550, 3265, 2455, 0, 0, 1, 1 2F , 3800, YES, 67800, 43700, 34650, 23550, 3465, 2455, 0, 0, 1, 1 3F , 8000, YES, 67800, 43700, 34600, 26250, 3390, 2185, 0, 0, 1, 1 4F , 12200, YES, 54400, 43700, 34400, 26250, 3440, 2185, 0, 0, 1, 1 5F , 16400, YES, 54400, 43700, 27200, 26250, 2720, 2185, 0, 0, 1, 1 6F , 20145, YES, 54400, 43700, 27200, 26150, 2720, 2185, 0, 0, 1, 1</pre>	
*CONSTRAINT : Supports : NODE_LIST, CONST(Dx, Dy, Dz, Rx, Ry, Rz), GROUP 47to92 94 96 98 1551to1553 1672 1829, 111111,	



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(2)MIDAS Gen自身转导程序功能的介绍

Ľ	新项目(№)	Ctrl+N		导入DXF文件
2	打开项目(⊇) 关闭项目(⊆)	Ctrl+O		DXF文件名:
	项目信息(<u>I</u>)		-	
	保存(<u>S</u>) 另存为(<u>A</u>) 另存当前施工阶段为	Ctrl+S	-	
	导入(<u>I</u>)	•	MIDAS/Gen MGT 文件(G)	导入: 〇 节点 〇 节点和単元
	导出(E) 数据交换(D) 合并数据文件(M) 导出STF文件	•	AutoCAD DXF 文件(D) SAP2000(V6, V7) 文件(D) SAP2000(V8) 文件 STAAD2000 文件	编号 节点起始号: 1964 单元起始号: 6736 材料和截面 材料: 1 1: concrete ▼
	输出模型数据文本文	7件	STAAD2002 文件	截面: 1 1: 600x800
<i>s</i> 2	打印(₽) 打印预览(⊻) 设置打印机(r)	Ctrl+P	MSC.Nastran 文件 Lusas DAT 文件	放大系数和原点 放大系数和原点 放大系数: 頂点: 0,0,0
	图形文件(<u>G</u>) 打印EMF文件(E)		-	加時用短 Rx Ry Rz 0 ▼ 0 ▼ ○ ○ ○ ○
	最近建立的项目			
	退出(<u>x</u>)		AUTOCAD DXF	▶ ●<





已经生成S2K文件至指定目录





迈达斯建筑结构技术交流会(MII	深圳站) DAS GEN与其它结构程序的转换原理及应用
(3)MIDAS Gen转换程序介绍_Midas g ◆ T载地址: http://dinochen.com/article.as ♥ Dio MTE(Midas to Etabs) from DinoBox, 转换程序(2013-10-12) ♥ Dio MTE(Midas to Etabs) from DinoBox, 特换程序(2013-10-12) ♥ Dio MTE(Midas to Etabs) from DinoBox, the DinoChen, common ♥ Dino MTE(Midas to Etabs) from DinoBox, the DinoChen, common ♥ Dino MTE(Midas to Etabs) from DinoBox, the Dino Chen, common ♥ Dino MTE(Midas to Etabs) from Dino Chen, common ♥ Dino MTE(Midas to Etab	gen to ETABS p?id=189 DinoBox——DinoMTE, midas 导 etabs的小程 序 (1)首先需要在MIDAS GEN导出结构文本文 件MGT文件 (2)打开小程序DINOMET,读取MGT,有读取 进度,如果读到哪不行可以知道,大家在工 程上遇到导不过去,可以帮我DEBUG一下, 发展这个程序的可适用性。 (3)导入小程序后,再点击导出ETABS的 E2K文件,设定好目录位置就可以了 (4)最后,在ETABS程序中,导入E2K文件
作者 陈学伟,Email:dinochen1983@qq.com, 个人网站 http://www.dinochen.com	就可以完成了。









谢谢聆听 Thanks for Your Attention

WSP HONG KONG LTD. Associate Dr. Chen Xuewei