

GeniE User Manual

Import and Export

Import Wajac File

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1. WAJAC TO GENIE CONVERTER

The Wajac to GeniE converter converts a Wajac.inp file to a GeniE Java Script command file.

1.1 Introduction

Wajac input files (WAJAC.INP) can now be imported so that the environment, hydro properties and analysis can be set up automatically in GeniE. Most of the cards supported both by Wajac and GeniE can be imported. Please refer to the table below and check whether the cards in Wajac input file have been supported yet.

To import a Wajac input file to from GUI: File | Import | WAJAC file ...

1.2 Database Units

When a new workspace is created, users should set up database units same as those used in FEM file and Wajac input file.

1.3 Data Check

It is assumed that the Wajac input file, to be imported, has passed Wajac data check. This means that users should carefully check all the cards and ensure that they have the right formats before importing to GeniE. Or users can run WAJAC.EXE with input files and check possible input error messages in WAJAC.LIS file.

1.4 Limitations and Error handling

The FEM file should be imported into GeniE prior to importing the WAJAC.INP file.

Since GeniE only supports one superelement type number, by default STYPE equal to 1 is assumed to be the jacket structure. Users should verify that the corresponding value in all the related cards is set to 1.

Otherwise error messages will be generated and logged into WajacToGenie.js. These error messages can also be found in GeniE's Message window. All the commands in WajacToGenie.js file will be executed if WajacToGenie.js contains only warning messages and no error messages.

1.5 File handling:

The input and output files used are listed in the table below.

Filename	Description
input:	
*.INP	Wajac input data file.
*.FEM	The SESAM input interface file
output:	
WajacToGenie.js	Java script file executed in GeniE

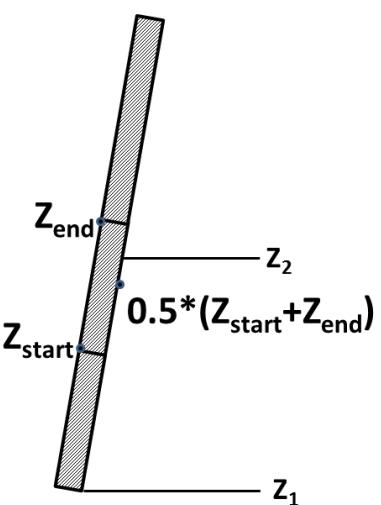
1.6 Data conversion

The following WAJAC data cards are read:

Wajac card:	Comment and example:																																			
AMP	Not supported in GeniE. (Frequency domain)																																			
API	<p>Notes: This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Restrictions: In GeniE, only one functional card can be assigned to the structure.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C DOPP WAKE ALPH CURW API 0. 0. 15. 0.</pre> <p>GeniE js command:</p> <pre>Analysis1.step(2).rules().setRuleType(wrAPI); Analysis1.step(2).rules().includeDoppler(true); Analysis1.step(2).rules().applyWakeType(wrToVertical); Analysis1.step(2).rules().adjustForCurrent(true); Analysis1.step(2).rules().maxAngle = 15 deg;</pre>																																			
CDIA	<p>Define hydrodynamic coefficients as functions of member diameter.</p> <p>Notes: The data in CDIA cards will be collected and only one MorisonDiameter property will be written. Thus this property will be assigned as default to all the members.</p> <p>Restrictions: In GeniE, only one functional card can be assigned to the structure.</p> <p>Example:</p> <p>Wajac.inp:</p> <table border="1"> <thead> <tr> <th>C</th> <th>DIA1</th> <th>CDN1</th> <th>CMN1</th> <th>DIA2</th> <th>CDN2</th> <th>CMN2</th> </tr> </thead> <tbody> <tr> <td>CDIA</td> <td>0.5</td> <td>0.4</td> <td>1.5</td> <td>0.4</td> <td>0.5</td> <td>1.6</td> </tr> <tr> <td>CDIA</td> <td>0.8</td> <td>0.5</td> <td>1.6</td> <td>0.7</td> <td>0.6</td> <td>1.7</td> </tr> <tr> <td>CDIA</td> <td>0.9</td> <td>0.6</td> <td>1.7</td> <td>0.3</td> <td>0.7</td> <td>1.8</td> </tr> <tr> <td>CDIA</td> <td>1.1</td> <td>0.7</td> <td>1.8</td> <td>1.2</td> <td>0.8</td> <td>1.9</td> </tr> </tbody> </table> <p>GeniE js command:</p> <pre>MorisonDiameter1 = MorisonDiameterFunction(Array(0.3,0.4,0.5,0.7,0.8,0.9,1.1 ,1.2),Array(0.7,0.5,0.4,0.6,0.5,0.6,0.7,0.8),Array(1.8,1. 6,1.5,1.7,1.6,1.7,1.8,1.9)); for (var object in ModelObjects) { if(object.supportsType(typeStraightbeam)) {object.morison = MorisonDiameter1;} }</pre>	C	DIA1	CDN1	CMN1	DIA2	CDN2	CMN2	CDIA	0.5	0.4	1.5	0.4	0.5	1.6	CDIA	0.8	0.5	1.6	0.7	0.6	1.7	CDIA	0.9	0.6	1.7	0.3	0.7	1.8	CDIA	1.1	0.7	1.8	1.2	0.8	1.9
C	DIA1	CDN1	CMN1	DIA2	CDN2	CMN2																														
CDIA	0.5	0.4	1.5	0.4	0.5	1.6																														
CDIA	0.8	0.5	1.6	0.7	0.6	1.7																														
CDIA	0.9	0.6	1.7	0.3	0.7	1.8																														
CDIA	1.1	0.7	1.8	1.2	0.8	1.9																														

CDIR/CDIX	<p>Define directional hydrodynamic coefficients. CDIX command is used for up to 10 digit element numbers.</p>
	<p>Notes: Even if a SETNAME has been input, the MorisonConstant properties will be assigned on the members included in this set.</p> <p>Restrictions: STYPE should be , if not data will be ignored and an error message will be logged into WajacToGeniE.js file.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C N1 N2 STP STYP IDX CD1 CD2 CD3 CM1 CM2 CM3 CDIX 831 1. 1. .9 0 .9 2.2 0.0 2.2 C SETNAM STYP IDX CD1 CD2 CD3 CM1 CM2 CM3 CDIX ALLELM 1. 1. .7 .0 .7 2.0 0.0 2.0</pre> <p>GeniE js command:</p> <pre>MorisonConstant4 = MorisonCoefficients(0,0.9,0.9,0,2.2,2.2); MorisonConstant1 = MorisonCoefficients(0,0.7,0.7,0,2.0,2.0); Bm831.morison = MorisonConstant4; Bm838.morison = MorisonConstant1;</pre>
CDRG	<p>Define drag coefficients as functions of roughness and Rn or KC number.</p> <p>Notes: Input data in CDRG and CMAS cards will be collected and only one MorisonReynold/MorisonKC property will be generated and assigned to all the members in the structure.</p> <p>Restrictions: In GeniE, only one functional card can be assigned to the structure.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C OPT ROUGH NU1 CDN1 NU2 CDN2 NU3 CDN3 CDRG 1 0.01 5e+006 0.7 1e+006 0.8 4e+006 0.6 CDRG CDRG 1 0.02 1e+006 0.7 2e+006 0.8 3e+006 0.6 CDRG C OPT ROUGH NU1 CMN1 NU2 CMN2 NU3 CMN3 CMAS 1 0.01 5e+006 0.7 1e+006 0.8 4e+006 0.6 CMAS CMAS 1 0.02 1e+006 0.7 2e+006 0.8 3e+006 0.6 CMAS</pre> <p>GeniE js command:</p> <pre>MorisonReynold1 = MorisonRoughnessReynoldFunction(); MorisonReynold1.add(0.01,Array(1e+006,2e+006,3e+006,4e+006,5e+006),Array(0.8,0.3,0.4,0.6,0.7),Array(0.8,0.3,0.4,0.6,0.7));</pre>

	<pre> 6,0.7)); MorisonReynold1.add(0.02,Array(1e+006,2e+006,3e+006,4e+00 6,5e+006),Array(0.7,0.8,0.6,0.4,0.3),Array(0.7,0.8,0.6,0. 4,0.3)); for (var object in ModelObjects) { if(object.supportsType(typeStraightbeam)) {object.morison = MorisonReynold1;}} </pre>																																													
CDWN	<p>Define air drag coefficients for specified members.</p> <p>Notes:</p> <p>Restrictions STYPE should be 1. If not an error message will be logged into WajacToGeniE.js file.</p> <p>Example:</p> <p>Wajac.inp:</p> <table> <thead> <tr> <th>C</th><th>N1</th><th>N2</th><th>STEP</th><th>STYP</th><th>IDX</th><th>CDX</th><th>VOID</th><th>CDZ</th></tr> </thead> <tbody> <tr> <td>CDWN</td><td>81</td><td>0</td><td>0</td><td>2</td><td>1</td><td>0.5</td><td></td><td>0.5</td></tr> <tr> <td>CDWN</td><td>82</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0.5</td><td></td><td>0.5</td></tr> <tr> <td>C</td><td>SETNAM</td><td></td><td></td><td>STYP</td><td>IDX</td><td>CDX</td><td>VOID</td><td>CDZ</td></tr> <tr> <td>CDWN</td><td>ONESET</td><td></td><td></td><td></td><td>1</td><td>1</td><td>0.5</td><td>0.5</td></tr> </tbody> </table> <p>GeniE js command:</p> <pre> ////Error: Please check superelement type number STYPE, which should be set as 1.AirDragConstant1 = AirDragConstant(0.5,0.5); Bm82.airDrag = AirDragConstant1; AirDragConstant2 = AirDragConstant(0.5,0.5); ONESET.airDrag = AirDragConstant2; </pre>	C	N1	N2	STEP	STYP	IDX	CDX	VOID	CDZ	CDWN	81	0	0	2	1	0.5		0.5	CDWN	82	0	0	1	1	0.5		0.5	C	SETNAM			STYP	IDX	CDX	VOID	CDZ	CDWN	ONESET				1	1	0.5	0.5
C	N1	N2	STEP	STYP	IDX	CDX	VOID	CDZ																																						
CDWN	81	0	0	2	1	0.5		0.5																																						
CDWN	82	0	0	1	1	0.5		0.5																																						
C	SETNAM			STYP	IDX	CDX	VOID	CDZ																																						
CDWN	ONESET				1	1	0.5	0.5																																						
CDWR	<p>Define air drag coefficients as functions of Reynolds number.</p> <p>Note: Only one AirDragReynold property will be generated. This property will as default be assigned to all the members.</p> <p>Example:</p> <p>Wajac.inp:</p> <table> <thead> <tr> <th>C</th><th>RN1</th><th>CDX1</th><th>CDZ1</th><th>RN2</th><th>CDX2</th><th>CDZ2</th></tr> </thead> <tbody> <tr> <td>CDWR</td><td>1e-006</td><td>0.5</td><td>0.5</td><td>2e-006</td><td>0.7</td><td>0.6</td></tr> </tbody> </table> <p>GeniE js command:</p> <pre> AirDragReynold1 = AirDragReynoldFunction(Array(1e-006, 2e-006),Array(0.5, 0.7),Array(0.5, 0.6)); </pre>	C	RN1	CDX1	CDZ1	RN2	CDX2	CDZ2	CDWR	1e-006	0.5	0.5	2e-006	0.7	0.6																															
C	RN1	CDX1	CDZ1	RN2	CDX2	CDZ2																																								
CDWR	1e-006	0.5	0.5	2e-006	0.7	0.6																																								
CMAS	<p>Define inertial coefficients as functions of roughness and Rn or KC number.</p> <p>Notes: Input data in CDRG and CMAS cards will be collected together and only one MorisonReynold/MorisonKC property will be generated and assigned to all the members in the structure.</p> <p>Restrictions: In GeniE, only one functional card can be assigned to the structure.</p>																																													

	<p>Example:</p> <p>Wajac.inp:</p> <table border="1"> <thead> <tr> <th>C</th><th>OPT</th><th>ROUGH</th><th>NU1</th><th>CDN1</th><th>NU2</th><th>CDN2</th><th>NU3</th><th>CDN3</th></tr> </thead> <tbody> <tr> <td>CDRG</td><td>1</td><td>0.01</td><td>5e+006</td><td>0.7</td><td>1e+006</td><td>0.8</td><td>4e+006</td><td>0.6</td></tr> <tr> <td>CDRG</td><td></td><td></td><td></td><td></td><td>3e+006</td><td>0.4</td><td>2e+006</td><td>0.3</td></tr> <tr> <td>CDRG</td><td>1</td><td>0.02</td><td>1e+006</td><td>0.7</td><td>2e+006</td><td>0.8</td><td>3e+006</td><td>0.6</td></tr> <tr> <td>CDRG</td><td></td><td></td><td></td><td></td><td>4e+006</td><td>0.4</td><td>5e+006</td><td>0.3</td></tr> <tr> <td>C</td><td>OPT</td><td>ROUGH</td><td>NU1</td><td>CMN1</td><td>NU2</td><td>CMN2</td><td>NU3</td><td>CMN3</td></tr> <tr> <td>CMAS</td><td>1</td><td>0.01</td><td>5e+006</td><td>0.7</td><td>1e+006</td><td>0.8</td><td>4e+006</td><td>0.6</td></tr> <tr> <td>CMAS</td><td></td><td></td><td></td><td></td><td>3e+006</td><td>0.4</td><td>2e+006</td><td>0.3</td></tr> <tr> <td>CMAS</td><td>1</td><td>0.02</td><td>1e+006</td><td>0.7</td><td>2e+006</td><td>0.8</td><td>3e+006</td><td>0.6</td></tr> <tr> <td>CMAS</td><td></td><td></td><td></td><td></td><td>4e+006</td><td>0.4</td><td>5e+006</td><td>0.3</td></tr> </tbody> </table> <p>GeniE js command:</p> <pre>MorisonReynold1 = MorisonRoughnessReynoldFunction(); MorisonReynold1.add(0.01,Array(1e+006,2e+006,3e+006,4e+006,5e+006),Array(0.8,0.3,0.4,0.6,0.7),Array(0.8,0.3,0.4,0.6,0.7)); MorisonReynold1.add(0.02,Array(1e+006,2e+006,3e+006,4e+006,5e+006),Array(0.7,0.8,0.6,0.4,0.3),Array(0.7,0.8,0.6,0.4,0.3)); for (var object in ModelObjects) { if(object.supportsType(typeStraightbeam)) {object.morison = MorisonReynold1;}}</pre>	C	OPT	ROUGH	NU1	CDN1	NU2	CDN2	NU3	CDN3	CDRG	1	0.01	5e+006	0.7	1e+006	0.8	4e+006	0.6	CDRG					3e+006	0.4	2e+006	0.3	CDRG	1	0.02	1e+006	0.7	2e+006	0.8	3e+006	0.6	CDRG					4e+006	0.4	5e+006	0.3	C	OPT	ROUGH	NU1	CMN1	NU2	CMN2	NU3	CMN3	CMAS	1	0.01	5e+006	0.7	1e+006	0.8	4e+006	0.6	CMAS					3e+006	0.4	2e+006	0.3	CMAS	1	0.02	1e+006	0.7	2e+006	0.8	3e+006	0.6	CMAS					4e+006	0.4	5e+006	0.3
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COEF	<p>Define hydrodynamic coefficients as functions of vertical position.</p> <p>Notes:</p> <p>If no COEF card has been input and no hydro property has been imported from FEM file, then a default set of Morison coefficients will be assigned to all the members. If no COEF card has been input and hydro properties have been imported from FEM file, then keep those hydro properties.</p> <p>If only one COEF card has been input, then this property will be assigned to all the members.</p>  <p>If more than one COEF cards have been input, then the corresponding</p>																																																																																										

	<p>MorisonConstants property will be generated and assigned to those members if the z coordinate, calculated as the average value of starting and ending point z-coordinates is within the defined range of [Z1, Z2].</p> <p>Restrictions: CML values will be set as zero and replace those in FEM model. This hydro property, through GeniE, will be written into updated T*.FEM file.</p> <p>Example:</p> <p>Wajac.inp:</p> <ol style="list-style-type: none"> 1. No COEF card 2. One COEF card <table border="0"> <thead> <tr> <th>C</th><th>Z1</th><th>Z2</th><th>CDN</th><th>CDL</th><th>CMN</th></tr> </thead> <tbody> <tr> <td>COEF</td><td>0.</td><td>101.</td><td>0.7</td><td></td><td>2.</td></tr> </tbody> </table> <ol style="list-style-type: none"> 3. More than one COEF cards <table border="0"> <thead> <tr> <th>COEF</th><th>Z1</th><th>Z2</th><th>CDN</th><th>CDL</th><th>CMN</th></tr> </thead> <tbody> <tr> <td>COEF</td><td>0.</td><td>101.</td><td>0.7</td><td></td><td>2.</td></tr> <tr> <td>COEF</td><td>101.</td><td>111.</td><td>0.8</td><td></td><td>2.</td></tr> <tr> <td>COEF</td><td>111.</td><td>131.</td><td>0.7</td><td></td><td>2.</td></tr> </tbody> </table> <p>GeniE js command:</p> <ol style="list-style-type: none"> 1. No COEF card & no hydro property from FEM file <pre>//////Warnings: No COEF card has been input, then default coefficients will be assigned to all the beams"; MorisonConstant1 = MorisonCoefficients(0,0.7,0.7,0,2,2); for (var object in ModelObjects){ if(object.supportsType(typeStraightbeam)) {object.morison = MorisonConstant1;}}</pre> <ol style="list-style-type: none"> 2. One COEF card <pre>//////Warnings: if only one COEF card is input, then these coefficients, with CML=0, will be assigned to all the beams"; MorisonConstant1 = MorisonCoefficients(0,0.7,0.7,0,2,2);" for (var object in ModelObjects){ if(object.supportsType(typeStraightbeam)) {object.morison = MorisonConstant1;}}</pre> <ol style="list-style-type: none"> 3. More than one COEF card <pre>MorisonConstant1 = MorisonCoefficients(0,0.7,0.7,0,2,2); Bm831.morison = MorisonConstant1;"; MorisonConstant2 = MorisonCoefficients(0,0.8,0.8,0,2,2);"; Bm832.morison = MorisonConstant2;"; Bm835.morison = MorisonConstant1;";</pre>	C	Z1	Z2	CDN	CDL	CMN	COEF	0.	101.	0.7		2.	COEF	Z1	Z2	CDN	CDL	CMN	COEF	0.	101.	0.7		2.	COEF	101.	111.	0.8		2.	COEF	111.	131.	0.7		2.
C	Z1	Z2	CDN	CDL	CMN																																
COEF	0.	101.	0.7		2.																																
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COEF	101.	111.	0.8		2.																																
COEF	111.	131.	0.7		2.																																
CONDUCT	<p>Define shielding effects for conductor arrays.</p> <p>Notes:</p> <p>Restrictions</p> <p>STYPE should be 1. If not an error message will be logged into WajacToGeniE.js file.</p>																																				

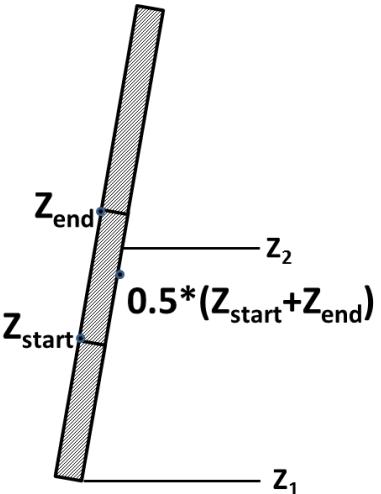
	<p>Example:</p> <p>Wajac.inp:</p> <table border="0"> <tr><td>C</td><td>N1</td><td>N2</td><td>STEP</td><td>STYP</td><td>IDX</td><td>VOID</td><td>DX</td><td>DY</td></tr> <tr><td>CONDCT</td><td>132</td><td>134</td><td>1</td><td>1</td><td>1</td><td></td><td>1</td><td>1</td></tr> <tr><td>CONDCT</td><td>135</td><td>0</td><td>0</td><td>1</td><td>1</td><td></td><td>0.5</td><td>1</td></tr> <tr><td>CONDCT</td><td>136</td><td>138</td><td>1</td><td>1</td><td>1</td><td></td><td>0.7</td><td>0.6</td></tr> <tr><td>CONDCT</td><td>139</td><td>0</td><td>0</td><td>1</td><td>1</td><td></td><td>1</td><td>1</td></tr> <tr><td>C</td><td></td><td>SETNAM</td><td></td><td>STYP</td><td>IDX</td><td>VOID</td><td>DX</td><td>DY</td></tr> <tr><td>CONDCT</td><td></td><td>CONDSET1</td><td></td><td></td><td>1</td><td>1</td><td>0.5</td><td>1</td></tr> </table> <p>GeniE js command:</p> <pre>ConductorShielding1 = ConductorShielding(1,1); Bm132.shielding = ConductorShielding1; Bm133.shielding = ConductorShielding1; Bm134.shielding = ConductorShielding1; ConductorShielding2 = ConductorShielding(0.5,1); Bm135.shielding = ConductorShielding2; ConductorShielding3 = ConductorShielding(0.7,0.6); Bm136.shielding = ConductorShielding3; Bm137.shielding = ConductorShielding3; Bm138.shielding = ConductorShielding3; Bm139.shielding = ConductorShielding1; CONDSET1.shielding = ConductorShielding2;</pre>	C	N1	N2	STEP	STYP	IDX	VOID	DX	DY	CONDCT	132	134	1	1	1		1	1	CONDCT	135	0	0	1	1		0.5	1	CONDCT	136	138	1	1	1		0.7	0.6	CONDCT	139	0	0	1	1		1	1	C		SETNAM		STYP	IDX	VOID	DX	DY	CONDCT		CONDSET1			1	1	0.5	1
C	N1	N2	STEP	STYP	IDX	VOID	DX	DY																																																								
CONDCT	132	134	1	1	1		1	1																																																								
CONDCT	135	0	0	1	1		0.5	1																																																								
CONDCT	136	138	1	1	1		0.7	0.6																																																								
CONDCT	139	0	0	1	1		1	1																																																								
C		SETNAM		STYP	IDX	VOID	DX	DY																																																								
CONDCT		CONDSET1			1	1	0.5	1																																																								
CONS	<p>Define units and constants.</p> <p>Notes:</p> <p>The users are required to assign the right data base unit when a new GeniE workspace is set up.</p> <p>All the other undefined unit related constants will take the default values from GeniE.</p> <p>Restrictions:</p> <p>Only one location can be converted and set up in GeniE.</p> <p>Example:</p> <p>Wajac.inp:</p> <table border="0"> <tr><td>CONS</td><td>1.0</td><td>9806.6</td><td>1.025E-9</td></tr> </table> <p>GeniE js command:</p> <pre>Location1.gravity = 9806.6; Location1.water().density()= 1.025E-9;</pre>	CONS	1.0	9806.6	1.025E-9																																																											
CONS	1.0	9806.6	1.025E-9																																																													
CPRI	<p>Not supported by GeniE.</p> <p>Notes:</p> <p>GeniE takes the following priority by default:</p> <table border="0"> <tr><td>CPRI</td><td>FEM</td></tr> <tr><td>CPRI</td><td>API</td></tr> <tr><td>CPRI</td><td>FUNC - functions, with priorities as defined in Wajac UM.</td></tr> <tr><td>CPRI</td><td>SPEC</td></tr> <tr><td>CPRI</td><td>CDIR</td></tr> </table>	CPRI	FEM	CPRI	API	CPRI	FUNC - functions, with priorities as defined in Wajac UM.	CPRI	SPEC	CPRI	CDIR																																																					
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CPRI	CDIR																																																															

CRNT <p>Define current profiles.</p> <p>Notes: In Wajac input file, Z values (vertical position) are given relative to mudline. However, in GeniE Z values are given relative to SWL.</p> <p>If users have specified VX/VY/VZ instead of V in CRNT card, horizontal velocity input in GeniE will be</p> <p>$V = \sqrt{VX^2 + VY^2}$, which means VZ will be always zero if Wajac input is generated from GeniE.</p> <p>Restrictions: The CTNO and OPT value, in Wajac input file, should only be given in the first command for each current profile. Values of Z must be given in increasing order.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre> C CurrentProfile1 (Current profile property) C CTNO Z V THETA OPT CRNT 1. 0. 0. . 1. 80. 0.5 124. 1.1 154. 1.1 C CurrentProfile2 (Current profile property) C CTNO Z V THETA OPT CRNT 2. 0. 0. 15. 0. 80. 0.5 15. 124. 1.1 15. 154. 1.1 15. C CTNO VX VY VZ Z CRNT 3. 0.1 0.1 . 0.0 3. 0.2 0.2 . 25.0 3. 0.3 0.2 . 32.0 3. 0.5 0.3 . 50.0 C Z MUDP 0. C DEPTH DPTH 124. </pre> <p>GeniE js command:</p> <pre> CurrentProfile1_Elevations = Array(30,-0,-44,-124); CurrentProfile1_Directions = Array(0, 15,90,120,180); CurrentProfile1_Velocities = Array(1.1,1.1,0.5,0); CurrentProfile1 = CurrentProfileRelDir(CurrentProfile1_Elevations, CurrentProfile1_Directions,CurrentProfile1_Velocities,dta longHeading); CurrentProfile2_Elevations = Array(30,-0,-44,-124); CurrentProfile2_Directions = Array(0, 15,90,120,180); CurrentProfile2_Velocities = Array(1.1,1.1,0.5,0); CurrentProfile2 = CurrentProfileRelDir(CurrentProfile2_Elevations, CurrentProfile2_Directions,CurrentProfile2_Velocities, </pre>
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	<pre>dtRelativeX); CurrentProfile3_Elevations = Array(-74,-92,-99,-124); CurrentProfile3_Directions = Array(0,0,0,0); CurrentProfile3_Velocities = Array(0.583095,0.360555,0.282843,0.141421); CurrentProfile3=CurrentProfileRelDir(CurrentProfile3_Elevations,CurrentProfile3_Directions, CurrentProfile3_Velocities,dtRelativeX);</pre>																														
DENS	Not supported. (NEWWAVE)																														
DPTH	<p>Define water depth.</p> <p>Notes: This value, together with Location1.seabed.z will define waterline Z, i.e. Location1.watersurface.z.</p> <p>Restrictions: This card has to be specified in Wajac.inp file.</p> <p>Only one DPTH card can be imported and set up in GenieE.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>DPTH 43500. MUDP 0.</pre> <p>GenieE js command: Location1.watersurface.z = 43500;</p>																														
ELIM	<p>Member elimination.</p> <p>Notes: If var.1 of ELIM card is given, then all the members will be added into one set, named ELIMSET1 before being eliminated.</p> <p>Since ELIMSET1 is a system defined variable name, users are therefore not allowed to give the same set name if var.2 format is used as input. An error message will be printed out in js command file if user has given the same set name as ELIMSET1.</p> <p>This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Restrictions STYPE should be set as 1. If not a warning message will be printed out in js command.</p> <p>Example:</p> <p>Wajac.inp:</p> <table> <thead> <tr> <th>C</th> <th>N1</th> <th>N2</th> <th>STEP</th> <th>STYPE</th> <th>INDEX</th> </tr> </thead> <tbody> <tr> <td>ELIM</td> <td>12</td> <td>18</td> <td>3</td> <td>1</td> <td>1</td> </tr> <tr> <td>ELIM</td> <td>12</td> <td>18</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td>ELIM</td> <td>13</td> <td></td> <td></td> <td>2</td> <td>1</td> </tr> <tr> <td>C</td> <td>SETNAM</td> <td></td> <td></td> <td>STYPE</td> <td>INDEX</td> </tr> </tbody> </table>	C	N1	N2	STEP	STYPE	INDEX	ELIM	12	18	3	1	1	ELIM	12	18	3	2	1	ELIM	13			2	1	C	SETNAM			STYPE	INDEX
C	N1	N2	STEP	STYPE	INDEX																										
ELIM	12	18	3	1	1																										
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ELIM	13			2	1																										
C	SETNAM			STYPE	INDEX																										

	ELIM ELIMSET1 1 1 ELIM SET1 1 1																								
	GeniE js command: ELIMSET1.add(Bm12); ELIMSET1.add(Bm15); ELIMSET1.add(Bm18); Analysis1.step(2).specialOptions().useEliminatedStructure(true) ; Analysis1.step(2).specialOptions().eliminatedStructure = ELIMSET1; //////Error: Please check superelement type number STYPE in ELIM card, which should be set as 1. //////Error: Please check superelement type number STYPE in ELIM card, which should be set as 1. //////Error: Please check SETNAME given in ELIM card, which should be set other than ELIMSET1. Analysis1.step(2).specialOptions().useEliminatedStructure(true) ; Analysis1.step(2).specialOptions().eliminatedStructure = SET1;																								
EQVL	Not supported in GeniE.																								
ERG	Not supported in GeniE. (Seastate simulation)																								
FLOO	<p>Define flooded members.</p> <p>Notes: By default, GeniE assumes a member is non-flooded until a flooding property has been applied on members or sets.</p> <p>Flood property, through GeniE, will be written into T*.FEM file.</p> <p>Restrictions STYPE should be 1. If not an error message will be logged into WajacToGeniE.js file.</p> <p>Example:</p> <p>Wajac.inp:</p> <table> <tr> <td>C</td><td>N1</td><td>NN</td><td>STEP</td><td>STYPE</td><td>INDEX</td></tr> <tr> <td>FLOO</td><td>12</td><td>18</td><td>3</td><td>1</td><td>1</td></tr> <tr> <td>C</td><td></td><td>SETNAM</td><td></td><td>STYPE</td><td>INDEX</td></tr> <tr> <td>FLOO</td><td></td><td>FLOOSET1</td><td></td><td>1</td><td>1</td></tr> </table> <p>GeniE js command: Flooding1=Flooding(1); Bm12.flooding = Flooding1; Bm15.flooding = Flooding1; Bm18.flooding = Flooding1; FLOOSET1.flooding = Flooding1;</p>	C	N1	NN	STEP	STYPE	INDEX	FLOO	12	18	3	1	1	C		SETNAM		STYPE	INDEX	FLOO		FLOOSET1		1	1
C	N1	NN	STEP	STYPE	INDEX																				
FLOO	12	18	3	1	1																				
C		SETNAM		STYPE	INDEX																				
FLOO		FLOOSET1		1	1																				
FMOD	Not imported.																								
FRQ	Not supported in GeniE. (Frequency domain)																								
FWAVE	<p>Define prefix and format for loads interface file.</p> <p>Notes: Only FORM field is imported.</p> <p>This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e.</p>																								

	<p>Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C PREFIX FORM FWAVE 2011003_135615_ FORMATTED</pre> <p>GeniE js command:</p> <pre>Analysis1.step(2).output().loadsInterfaceFile().formatted(true);</pre>
GRID	Not supported in GeniE. (Seastate simulation)
KPRT	<p>Print out fluid dynamics.</p> <p>Notes:</p> <p>This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C X Y Z KPRT 0. 0. 10. KPRT 0. 0. 20. KPRT 0. 0. 30. KPRT 0. 0. 40.</pre> <p>GeniE js command:</p> <pre>Analysis1.step(2).output().printFile().addPoint(point(0,0,10)); Analysis1.step(2).output().printFile().addPoint(point(0,0,20)); Analysis1.step(2).output().printFile().addPoint(point(0,0,30)); Analysis1.step(2).output().printFile().addPoint(point(0,0,40));</pre>
KSCA	Not supported in GeniE. (Deterministic domain)
LEG	Not supported in GeniE.
LOASIM	Not supported in GeniE. (Seastate simulation)
LONO	<p>Load case numbering.</p> <p>Notes:</p> <p>This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C LN LONO 1.</pre> <p>GeniE js command:</p> <pre>Analysis1.step(2).output().loadsInterfaceFile().firstLoadCaseNumber = 1;</pre>

MASS	<p>Define added mass to the load interface file.</p> <p>Notes: This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C ADMAS DAMP MASS 2. 1.</pre> <p>GeniE js command:</p> <pre>Analysis1.step(2).addedMassAndDamping().calculateAddedMass(true); Analysis1.step(2).addedMassAndDamping().includeInternalWater(true); Analysis1.step(2).addedMassAndDamping().useCm(false); Analysis1.step(2).addedMassAndDamping().calculateDamping(true);</pre>
MEMGRW	<p>Member specification of marine growth data.</p> <p>Notes: For each MEMGRW card Z1 and Z2 values can be found that corresponds to the IMEM value. Then the members defined in MEMGRW card will be assigned the corresponding MarineGrowth property if the z coordinate, calculated as the average of starting and ending point z-coordinates, is within the region of [Z1, Z2].</p>  <p>Restrictions: STYPE should be 1. If not an error message will be logged into WajacToGeniE.js file. IMEM should be larger than 0, otherwise an error message will be given.</p>

	<p>Example:</p> <p>Wajac.inp:</p> <table> <tr> <td>C</td><td>N1</td><td>N2</td><td>STEP</td><td>STYP</td><td>IDX</td><td>IMEM</td></tr> <tr> <td>MEMGRW</td><td>1.</td><td>0.</td><td>0.</td><td>1.</td><td>1.</td><td>2.</td></tr> <tr> <td>C</td><td colspan="3">SETNAM</td><td>STYP</td><td>IDX</td><td>IMEM</td></tr> <tr> <td>MEMGRW</td><td colspan="3">MEMSET2</td><td>1.</td><td>1.</td><td>2.</td></tr> </table> <p>GeniE js command:</p> <pre>Bm1.marineGrowth = MarineGrowthZLevel2; MEMSET2.marineGrowth = MarineGrowthZLevel2;</pre>	C	N1	N2	STEP	STYP	IDX	IMEM	MEMGRW	1.	0.	0.	1.	1.	2.	C	SETNAM			STYP	IDX	IMEM	MEMGRW	MEMSET2			1.	1.	2.
C	N1	N2	STEP	STYP	IDX	IMEM																							
MEMGRW	1.	0.	0.	1.	1.	2.																							
C	SETNAM			STYP	IDX	IMEM																							
MEMGRW	MEMSET2			1.	1.	2.																							
MEMSEG	<p>Member specification of segmentation coefficients.</p> <p>Notes:</p> <p>For each MEMSEG card Z1 and Z2 values can be found that corresponds to the IMEM value. Then the members defined in MEMSEG card will be assigned the corresponding ElementRefinement property if the z coordinate, calculated as the average of starting and ending point z-coordinates, is within the region of [Z1, Z2].</p> <p>The diagram shows a vertical element divided into two segments by a diagonal line. The bottom segment is labeled z_{start} at its base and z_{end} at its top. The top segment is labeled z_2 at its top. A point on the diagonal line is labeled $0.5*(z_{start}+z_{end})$.</p> <p>Restrictions</p> <p>STYPE should be 1. If not an error message will be logged into WajacToGeniE.js file.</p> <p>IMEM should be larger than 0, otherwise an error message will be given.</p> <p>Example:</p> <p>Wajac.inp:</p> <table> <tr> <td>C</td> <td>N1</td> <td>N2</td> <td>STEP</td> <td>STYP</td> <td>IDX</td> <td>IMEM</td> </tr> <tr> <td>MEMSEG</td> <td>831.</td> <td>831.</td> <td>1.</td> <td>1.</td> <td>1.</td> <td>1.</td> </tr> <tr> <td>C</td> <td colspan="3">SETNAM</td> <td>STYP</td> <td>IDX</td> <td>IMEM</td> </tr> <tr> <td>MEMSEG</td> <td colspan="3">SEGSET</td> <td>1.</td> <td>1.</td> <td>1.</td> </tr> </table> <p>GeniE js command:</p> <pre>Bm831.elementRefinement = ElementRefinement2; SEGSET.elementRefinement = ElementRefinement2;</pre>	C	N1	N2	STEP	STYP	IDX	IMEM	MEMSEG	831.	831.	1.	1.	1.	1.	C	SETNAM			STYP	IDX	IMEM	MEMSEG	SEGSET			1.	1.	1.
C	N1	N2	STEP	STYP	IDX	IMEM																							
MEMSEG	831.	831.	1.	1.	1.	1.																							
C	SETNAM			STYP	IDX	IMEM																							
MEMSEG	SEGSET			1.	1.	1.																							

MGRW	<p>Marine growth and roughness definition.</p> <p>Notes:</p> <p>For MGRW cards with IMEM=0, the corresponding MarineGrowthConstant (if $Z1 \geq 0$) or MarineGrowthZLevel (if $Z1 < 0$) properties will be generated. Then these properties will be assigned on all the members with the z coordinate, calculated as average of starting and ending point z-coordinates, is within $[Z1, Z2]$ (if $Z1 \geq 0$) or lies between the vertical positions given (if $Z1 = -1$).</p> <p>For MGRW cards with IMEM>0, the corresponding MarineGrowthConstant or MarineGrowthZLevel properties will be generated but will not be assigned on any member until a MEMGRW card is read.</p> <p>Example:</p> <p>Wajac.inp:</p> <table border="1"> <thead> <tr> <th>C</th><th>Z1</th><th>Z2</th><th>HMGRW</th><th>HROUGH</th><th>OPT</th><th>IMEM</th><th>GRWFAC</th></tr> </thead> <tbody> <tr> <td>MGRW</td><td>0.0</td><td>97.</td><td>.050</td><td>.0</td><td>1.</td><td></td><td></td></tr> <tr> <td>MGRW</td><td>97.</td><td>117.</td><td>.120</td><td>.0</td><td>1.</td><td></td><td></td></tr> <tr> <td>MGRW</td><td>-1.</td><td>124.</td><td>0.1</td><td>0.</td><td>1.</td><td>0.</td><td>0.</td></tr> <tr> <td>MGRW</td><td>-1.</td><td>100.</td><td>0.1</td><td>0.</td><td>1.</td><td>0.</td><td>0.</td></tr> <tr> <td>MGRW</td><td>-1.</td><td>0.</td><td>0.01</td><td>0.</td><td>1.</td><td>0.</td><td>0.</td></tr> <tr> <td>MGRW</td><td>0.</td><td>148.247</td><td>0.1</td><td>0.01</td><td>1.</td><td>2.</td><td>0.2</td></tr> <tr> <td>MGRW</td><td>-1.</td><td>124.</td><td>0.1</td><td>0.</td><td>1.</td><td>2.</td><td>0.</td></tr> <tr> <td>MGRW</td><td>-1.</td><td>100.</td><td>0.1</td><td>0.</td><td>1.</td><td>2.</td><td>0.</td></tr> <tr> <td>MGRW</td><td>-1.</td><td>0.</td><td>0.01</td><td>0.</td><td>1.</td><td>2.</td><td>0.</td></tr> </tbody> </table> <p>GenIE js command:</p> <pre> MarineGrowthConstant1 = MarineGrowthConstant(0.05, 0, 1); MarineGrowthConstant1.useInForceCalculations(true); Bm831.marineGrowth = MarineGrowthConstant1; MarineGrowthConstant2 = MarineGrowthConstant(0.12, 0, 1); MarineGrowthConstant2.useInForceCalculations(true); Bm831.marineGrowth = MarineGrowthConstant2; MarineGrowthZLevel1 = MarineGrowthZLevelFunction(); MarineGrowthZLevel1.useInForceCalculations(true); MarineGrowthZLevel1.add(-0.0, 1.0, 1); </pre>	C	Z1	Z2	HMGRW	HROUGH	OPT	IMEM	GRWFAC	MGRW	0.0	97.	.050	.0	1.			MGRW	97.	117.	.120	.0	1.			MGRW	-1.	124.	0.1	0.	1.	0.	0.	MGRW	-1.	100.	0.1	0.	1.	0.	0.	MGRW	-1.	0.	0.01	0.	1.	0.	0.	MGRW	0.	148.247	0.1	0.01	1.	2.	0.2	MGRW	-1.	124.	0.1	0.	1.	2.	0.	MGRW	-1.	100.	0.1	0.	1.	2.	0.	MGRW	-1.	0.	0.01	0.	1.	2.	0.
C	Z1	Z2	HMGRW	HROUGH	OPT	IMEM	GRWFAC																																																																										
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MGRW	-1.	0.	0.01	0.	1.	2.	0.																																																																										

	<pre> MarineGrowthZLevel1.add(-24,0.1,0,1); MarineGrowthZLevel1.add(-124,0.01,0,1); Bm831.marineGrowth = MarineGrowthZLevel1; MarineGrowthConstant3 = MarineGrowthConstant(0.1,0.01,1.2); MarineGrowthConstant3.useInForceCalculations(true); Bm831.marineGrowth = MarineGrowthConstant3; MarineGrowthZLevel2 = MarineGrowthZLevelFunction(); MarineGrowthZLevel2.useInForceCalculations(true); MarineGrowthZLevel2.add(-0,0.1,0,1); MarineGrowthZLevel2.add(-24,0.1,0,1); MarineGrowthZLevel2.add(-124,0.01,0,1); Bm831.marineGrowth = MarineGrowthZLevel2; </pre>
MODE	<p>Define model identification and loads interface file generation.</p> <p>Notes: This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Restrictions: ISETOP is not imported to GeniE. It is assumed that superelement type 1 is the jacket structure.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C ILFSAV ISETOP MODE 1. 1.</pre> <p>GeniE js command:</p> <pre>Analysis1.step(2).output().loadsInterfaceFile().generateL File(true);</pre>
MOMT	<p>Define motion reference point.</p> <p>Notes: This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C X Y Z MOMT 0. 0. 10.</pre> <p>GeniE js command:</p> <pre>Analysis1.step(2).output().globalResults().momentRefPoint = Point(0,0,10);</pre>
MPRT	<p>Member force printout specification.</p> <p>Notes: If var.1 of MPRT card is given, then all the members in each card will be added into</p>

	<p>one set, with a name starting with MPRTSET, for example MPRTSET1. If more than one MPRT card is input with var.1 format, then MPRTSET2, etc.</p> <p>Since MPRTSET is a system defined variable name users are not allowed to give the set name starting with MPRTSET if var.2 format is used as input. An error message will be logged into out WajacToGeniE.js file if user has given the same set name, for example MPRTSET1.</p> <p>This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Restrictions STYPE should be 1. If not an error message will be logged into WajacToGeniE.js file.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C N1 NN STEP STYPE INDEX MPRT 12 18 3 1 1 C SETNAM STYPE INDEX MPRT MPRTSET1 1 1</pre> <p>GeniE js command:</p> <pre>MPRTSET1 = Set(); MPRTSET1.add(Bm12); MPRTSET1.add(Bm15); MPRTSET1.add(Bm18); Analysis1.step(2).output().printFile().addDeterministicData(MPRTSET1,0,0); ////Error: Please check SETNAME given in MPRT card, which should be set other than MPRTSET.</pre>
MSEG	<p>Member segmentation definition.</p> <p>Notes: ElementRefinement property from this card will be assigned to all the members.</p> <p>By default, SEG is equal to 1 if no MSEG card has been input. Even if there is no SEG card in the input file, an ElementRefinement property will be generated and applied to all the members.</p> <p>The segmentation coefficients specified by this command may be overruled by SEGMENT command.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C SEG MSEG 2.</pre>

	<p>GeniE js command:</p> <pre>ElementRefinement1 = ElementRefinement(2); for (var object in ModelObjects){ if(object.supportsType(typeStraightbeam)) {object.elementRefinement = ElementRefinement1;}}</pre>
MUDP	<p>Define mudline elevation.</p> <p>Notes: This value corresponds to Location1.seabed.z.</p> <p>If this card is omitted in Wajac.inp file, then Location1.seabed.z will be set up same as default value, i.e. 0.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>MUDP -117.05</pre> <p>GeniE js command:</p> <pre>Location1.seabed.z = -117.05;</pre>
NEWWAVE	Not supported in GeniE. (NEWWAVE)
OMEG	Not supported in GeniE. (NEWWAVE)
OPTI	<p>Special options.</p> <p>Notes: This card will be skipped if no SEA card has been input in Wajac input file. In such a case, no loading condition is available and thus a WaveLoadActivity (i.e. Analysis1.Step(2)) cannot be added into an analysis activity.</p> <p>Restrictions: Only OPTI1, OPTI2, OPTI6, OPTI7 and OPTI8 in this card are supported by GeniE and thus imported.</p> <p>OPTI3, OPTI4, OPTI5 and OPTI9 are not supported by GeniE.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C OPT1 OPT2 OPT3 OPT4 OPT5 OPT6 OPT7 OPTI 1. 0. 0. 0. 0. 1. 1. OPTI 1.</pre> <p>GeniE js command:</p> <pre>Analysis1.step(2).morison().total(true); Analysis1.step(2).buoyancy().actualFreeSurface(true); Analysis1.step(2).buoyancy().steelAreaBuoyancy(false); Analysis1.step(2).specialOptions().excludeEccentricities(true);</pre>
SEA	<p>Deterministic load calculation.</p> <p>Notes:</p> <ul style="list-style-type: none"> • If in Wajac input file NSTEP is positive then T0 is initial time and STEP is time step. While converting to GeniE command, both T0 and STEP are converted to initial phase and phase steps through the following formula

- $\text{PHIO} = \text{T0/PERIOD*360}$
- $\text{STEP} = \text{STEP/PERIOD*360}$
- Calm sea runs will be added in the end of a loading condition.

Example:

Wajac.inp:

```
C      THEO CTNO HEIGH PERIOD    PHIO     T0 STEP NSTEP   BETA
SEA    1.1    1    4.    10.    0.    0. 10. -36.  30.
SEA   16.10   2    12.   20.    0.    0.  2. 10.  60.
SEA   29.00   2    0.    0.    0.    0.  0.  1.  0.

C      ISEA   THEO HEIGHT PERIOD PHIO     T0 STEP NSTEP
SEA     1.    1.3    4.    10.    0.    0. 10. -36.
SEA     2.    5.0    6.    12.    0.    0. 10. -36.
SEA     3.    5.0    10.   14.    0.    0. 10. -36.
SEA     4.    1.3    12.   16.    0.    0. 10. -36.
SEA     5.    5.0    6.    10.    0.    0. 10. -36.
SEA     6.    9.0    0.    0.    0.    0.  0.  1.
SEA     7.    9.0    0.    0.    0.    0.  0.  1.

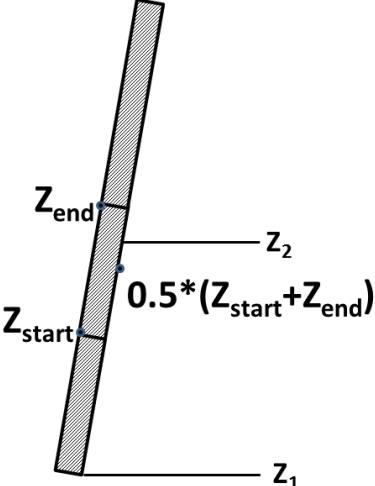
C
C      ISEA BETA WKFA CTNO CBFA CSTR LOAD DLOA WID WIME
SEAOPT  1.  30.  1.  1.  1.  0.  0.  0.  1.  0.
SEAOPT  2.  60.  1.  2.  1.  .  0.  0.  1.  0.
SEAOPT  3.  90.  1.  3.  1.  0.  0.  0.  1.  0.
SEAOPT  4. 120.  1.  4.  1.  0.  0.  0.  1.  0.
SEAOPT  5. 180.  1.  5.  1.  0.  0.  0.  1.  0.
SEAOPT  6.  0.  1.  0.  1. -1.  0.  0.  1.  0.
SEAOPT  7.  0.  1.  0.  1. -1.  0.  0.  0.  0.
```

GeniE js command:

```
///Regular wave set 1/////////
WaveSet1 = RegularWaveSet();
WaveSet1.heightType = rwHeight;
WaveSet1.add(RegularWave(30, 4, WavePeriod(10), 0, rwHeight));
WaveSet1.add(RegularWave(60, 12, WavePeriod(20), 0, rwHeight));
WaveSet1.add(RegularWave(30, 4, WavePeriod(10), 0, rwHeight));
WaveSet1.add(RegularWave(60, 6, WavePeriod(12), 0, rwHeight));
WaveSet1.add(RegularWave(90, 10, WavePeriod(14), 0, rwHeight));
WaveSet1.add(RegularWave(120,12, WavePeriod(16), 0, rwHeight));
WaveSet1.add(RegularWave(180, 6, WavePeriod(10), 0, rwHeight));

///Loading condition1///////
Condition1 = DeterministicTime(Location1);
Condition1.waterSurface.regularWaveSet = WaveSet1;
Condition1.populate();
Condition1.component(1).water.current(CurrentProfile1);
Condition1.component(1).waterSurface.waveModel(Airy());
Condition1.component(2).water.current(CurrentProfile2);
Condition1.component(2).waterSurface.waveModel(StreamFunction(1
0));
Condition1.component(3).water.current(CurrentProfile1);
Condition1.component(3).air.windProfile(WindProfileRelDir1);
Condition1.component(3).waterSurface.waveModel(Airy());
Condition1.component(4).water.current(CurrentProfile2);
Condition1.component(4).air.windProfile(WindProfileRelDir1);
Condition1.component(4).waterSurface.waveModel(Stokes5());
Condition1.component(5).water.current(CurrentProfile3);
Condition1.component(5).air.windProfile(WindProfileRelDir1);
Condition1.component(5).waterSurface.waveModel(Stokes5());
Condition1.component(6).water.current(CurrentProfile4);
Condition1.component(6).air.windProfile(WindProfileRelDir1);
Condition1.component(6).waterSurface.waveModel(Airy());
Condition1.component(7).water.current(CurrentProfile5);
Condition1.component(7).air.windProfile(WindProfileRelDir1);
```

	Condition1.component(7).waterSurface.waveModel(Stokes5()); Condition1.addCalmSea(); Condition1.component(8).water.current(CurrentProfile2); Condition1.addCalmSea(); Condition1.component(9).air.windProfile(WindProfileRelDir1); Condition1.addCalmSea();
SEAFRQ	Not supported in GeniE. (Frequency domain)
SEAOPT	<p>Additional seastate data for deterministic load calculation.</p> <p>Notes:</p> <ul style="list-style-type: none"> If var.1 of SEA card is used, then the following default values are set: WKFAC = 1.0; CBFAC = 1.0; CSTR = -1.0; DLOAD = 0; WID = 0; WIMET = 0; LOAD = 0; Stretching on current: If wave theory THEO in SEA card is 1.1 or 1.2, then no stretching on current. If wave theory THEO = 1.3, then always stretch current ignoring input of CSTR in SEAOPT card. If wave theory is 9, i.e. calm sea, no stretching on current. If nonlinear waves, current stretching will be set as input value. If CSTR is blank, then CSTR=0, i.e. wheeler stretching on current. <p>Restrictions: NEWWAVE theory is not supported by GeniE.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C THEO CTNO HEIGH PERIOD PHI0 T0 STEP NSTEP BETA SEA 1.1 1 4. 10. 0. 0. 10. -36. 30. SEA 16.10 2 12. 20. 0. 0. 2. 10. 60. SEA 29.00 2 0. 0. 0. 0. 0. 1. 0. C ISEA THEO HEIGHT PERIOD PHI0 T0 STEP NSTEP SEA 1. 1.3 4. 10. 0. 0. 10. -36. SEA 2. 5.0 6. 12. 0. 0. 10. -36. SEA 3. 5.0 10. 14. 0. 0. 10. -36. SEA 4. 1.3 12. 16. 0. 0. 10. -36. SEA 5. 5.0 6. 10. 0. 0. 10. -36. SEA 6. 9.0 0. 0. 0. 0. 0. 1. SEA 7. 9.0 0. 0. 0. 0. 0. 1. C C ISEA BETA WKFA CTNO CBFA CSTR LOAD DLOA WID WIME SEAOPT 1. 30. 1. 1. 0. 0. 0. 1. 0. SEAOPT 2. 60. 1. 2. 1. 0. 0. 1. 0. SEAOPT 3. 90. 1. 3. 1. 0. 0. 1. 0. SEAOPT 4. 120. 1. 4. 1. 0. 0. 1. 0. SEAOPT 5. 180. 1. 5. 1. 0. 0. 1. 0. SEAOPT 6. 0. 1. 0. 1. -1. 0. 1. 0. SEAOPT 7. 0. 1. 0. 1. -1. 0. 0. 0.</pre> <p>GeniE js command:</p> <pre>//////////SET UP deterministicSeaState/////////// Analysis1.step(2).deterministicSeastates().seastate(1).dataPhase(NoStretching,10,36,buOn,NoDesignLoads,1,1); Analysis1.step(2).deterministicSeastates().seastate(2).dataPhase(NoStretching,36,10,buOn,NoDesignLoads,1,1); Analysis1.step(2).deterministicSeastates().seastate(3).dataPhase(WheelerStretching,10,36,buOn,NoDesignLoads,1,1); Analysis1.step(2).deterministicSeastates().seastate(4).dataPhase(WheelerStretching,10,36,buOn,NoDesignLoads,1,1);</pre>

	<pre>Analysis1.step(2).deterministicSeastates().seastate(5).dataPhase(WheelerStretching,10,36,buOn,NoDesignLoads,1,1); Analysis1.step(2).deterministicSeastates().seastate(6).dataPhase(WheelerStretching,10,36,buOn,NoDesignLoads,1,1); Analysis1.step(2).deterministicSeastates().seastate(7).dataPhase(WheelerStretching,10,36,buOn,NoDesignLoads,1,1); Analysis1.step(2).deterministicSeastates().seastate(8).dataPhase(NoStretching,0,1,buOn,NoDesignLoads,1,1); Analysis1.step(2).deterministicSeastates().seastate(9).dataPhase(NoStretching,0,1,buOn,NoDesignLoads,1,1); Analysis1.step(2).deterministicSeastates().seastate(10).dataPhase(NoStretching,0,1,buOn,NoDesignLoads,1,1);</pre>														
SEASIM	Not supported in GeniE. (Seastate simulation)														
SEGM	<p>Member segmentation as a function of vertical position.</p> <p>Notes: If IMEM=0, then an ElementRefinement property, if not duplicate, will be generated and assigned on the members with the z coordinate, calculated as average of starting and ending point z-coordinates , within the range defined by [Z1, Z2].</p>  <p>If IMEM>0, then an ElementRefinement property, if not duplicate, will be generated only. It will not be assigned to any members until a MEMSEG card is read.</p> <p>Example:</p> <p>Wajac.inp:</p> <table> <tr> <td>C</td> <td>Z1</td> <td>Z2</td> <td>SEG</td> <td>SLMIN</td> <td>SLMAX</td> <td>IMEM</td> </tr> <tr> <td>SEGM</td> <td>0.</td> <td>10.</td> <td>1.</td> <td>0.1</td> <td>5.0</td> <td>0.</td> </tr> </table> <p>GeniE js command:</p> <pre>ElementRefinement2 = ElementRefinement(1,true,0.1,5.0); ElementRefinement2.doConstrain(true); Bm831.elementRefinement = ElementRefinement2; Bm821.elementRefinement = ElementRefinement2;</pre>	C	Z1	Z2	SEG	SLMIN	SLMAX	IMEM	SEGM	0.	10.	1.	0.1	5.0	0.
C	Z1	Z2	SEG	SLMIN	SLMAX	IMEM									
SEGM	0.	10.	1.	0.1	5.0	0.									
SELI	Not supported in GeniE.														
SPEC/SPEX	Definitions for specified members. SPEX command is used for up to 10 digits element numbers.														
	Notes:														

	<p>Even if a SETNAME has been input, the MorisonConstant and HydroDynamicDiameter properties will be assigned on the members included in this set.</p> <p>Restrictions STYPE should be 1. If not an error message will be logged into WajacToGeniE.js file.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C M1 M2 INC STYP IDX DIAM CDN CDL CMN CML SPEX 831. 0. 0. 1. 1. 0.2 -1. -1. -1. -1. SPEX 832. 0. 0. 1. 1. 0.3 0.1 0.1 1.2 1.2 SPEX 833. 0. 0. 1. 1. 0.2 -1. -1. -1. -1. SPEX 834. 0. 0. 1. 1. 0.3 0.2 0.1 1.2 1.2</pre> <p>GeniE js command:</p> <pre>HydroDynamicDiameter1 = HydroDynamicDiameter(0.2 m); Bm831.hydrodynamicDiameter = HydroDynamicDiameter1; MorisonConstant1 = MorisonCoefficients(0.1,0.1,0.1,1.2,1.2,1.2); Bm832.morison = MorisonConstant1; HydroDynamicDiameter2 = HydroDynamicDiameter(0.3 m); Bm832.hydrodynamicDiameter = HydroDynamicDiameter2; Bm833.hydrodynamicDiameter = HydroDynamicDiameter1; MorisonConstant2 = MorisonCoefficients(0.1,0.2,0.2,1.2,1.2,1.2); Bm834.morison = MorisonConstant2;</pre>
SPECTR	Not supported in GeniE. (Seastate simulation and frequency domain)
TANK	Not supported in GeniE.
WIND	<p>Define wind profile.</p> <p>Example:</p> <p>Wajac.inp:</p> <pre>C WID VEL ANGLE GUSTF H0 HEXP PRAT IFRM WIND 1. 2. 60. 0.7 1. 10. 0. 0. WIND 2. 2. 60. 0.7 1. 10. 3. 1. WIND 3. 2. 60. 0.7 1. 10. 3. 2.</pre> <p>GeniE js command:</p> <pre>WindProfileRelDir1 = WindProfileRelDir(2, 1, 10, dtRelativeX, wpGeneral, 60, 0.7); WindProfileRelDir2 = WindProfileRelDir(2, 1, dtRelativeX, wpNormal, 60, 3); WindProfileRelDir3 = WindProfileRelDir(2, 1, dtRelativeX, wpExtreme, 60, 3);</pre>