### Content

|  |  |  |
| --- | --- | --- |
| Individual Load | FemLoad / Result Case | Constraint |
| 1..gravity | Static Structural - step: 1 | - |
| 2..tip load | Static Structural - step: 2 | - |
| 3..middle\_bridge | Static Structural - step: 3 | - |
| 4..back side | Static Structural - step: 4 | - |
| 5..at\_forestay | Static Structural - step: 5 | - |
| 6..at\_hinge\_point | Static Structural - step: 6 | - |
| 7..Trolley\_ride | Static Structural - step: 7 | - |
| 8..tip side\_load | Static Structural - step: 8 | - |
| 9..middle\_bridge\_side\_load | Static Structural - step: 9 | - |
| 10..back side\_side\_load | Static Structural - step: 10 | - |
| 11..at\_forestay\_side\_load | Static Structural - step: 11 | - |
| 12..at\_hinge\_point\_side\_load | Static Structural - step: 12 | - |
| 13..Crane\_ride | Static Structural - step: 13 | - |

### Individual Load '5..at\_forestay'

|  |
| --- |
|  |

|  |  |
| --- | --- |
| Title | Value |
| Individual Load | 5..at\_forestay |
| Type | Imported from Result Case |
| Result Case | Static Structural - step: 5 |

Sum of Reaction Forces

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Load | Fx | Fy | Fz | Fsum | Mx | My | Mz | Msum |
| IL5..at\_forestay | 0.0 | 0.0 | 1220000.0 | 1220000.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Displacement (All Entities)

|  |  |  |  |
| --- | --- | --- | --- |
| Individual Load | 5..at\_forestay | Selection | All Entities |
| Type | Extreme | Category | Displacement |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Extreme | Ux | Uy | Uz | Usum | Rx | Ry | Rz | Rsum |
| Minimum | 0.000 | -0.004 | -0.113 | 0.000 | -0.001 | 0.000 | 0.000 | 0.000 |
| Maximum | 0.031 | 0.004 | 0.015 | 0.113 | 0.001 | 0.002 | 0.000 | 0.002 |
| Absolute | 0.031 | 0.004 | -0.113 | 0.113 | -0.001 | 0.002 | 0.000 | 0.002 |

Usum (All Entities, v1)

|  |
| --- |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| Individual Load | IL5..at\_forestay | Parameter | Displacement Usum |
| Selection | All Entities | View | 1..Default View |

Seqv (All Entities, v1, Total)

|  |
| --- |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| Individual Load | IL5..at\_forestay | Parameter | Stress Equivalent |
| Selection | All Entities | View | 1..Default View |
| Point | Total (AbsMax) | Limits | None |

### Content

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Individual Load | LS1 | LS2 | LS3 | LS4 | LS5 | LS6 | LS7 | LS8 | LS9 | LS10 |
| IL1..gravity | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| IL2..tip load | 1.35 | 1.35 | 1.35 | 1.35 | - | - | - | - | - | - |
| IL3..middle\_bridge | - | - | - | - | 1.35 | 1.35 | 1.35 | 1.35 | - | - |
| IL4..back side | - | - | - | - | - | - | - | - | 1.35 | 1.35 |
| IL7..Trolley\_ride | 1.15 | 1.15 | -1.15 | -1.15 | 1.15 | 1.15 | -1.15 | -1.15 | 1.15 | 1.15 |
| IL8..tip side\_load | 1.15 | -1.15 | 1.15 | -1.15 | - | - | - | - | - | - |
| IL9..middle\_bridge\_side\_load | - | - | - | - | 1.15 | -1.15 | 1.15 | -1.15 | - | - |
| IL10..back side\_side\_load | - | - | - | - | - | - | - | - | 1.15 | -1.15 |
| IL13..Crane\_ride | 1.15 | -1.15 | 1.15 | -1.15 | 1.15 | -1.15 | 1.15 | -1.15 | 1.15 | -1.15 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Individual Load | LS11 | LS12 | LS13 | LS14 | LS15 | LS16 | LS17 | LS18 | LS19 | LS20 |
| IL1..gravity | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| IL4..back side | 1.35 | 1.35 | - | - | - | - | - | - | - | - |
| IL5..at\_forestay | - | - | 1.35 | 1.35 | 1.35 | 1.35 | - | - | - | - |
| IL6..at\_hinge\_point | - | - | - | - | - | - | 1.35 | 1.35 | 1.35 | 1.35 |
| IL7..Trolley\_ride | -1.15 | -1.15 | 1.15 | 1.15 | -1.15 | -1.15 | 1.15 | 1.15 | -1.15 | -1.15 |
| IL10..back side\_side\_load | 1.15 | -1.15 | - | - | - | - | - | - | - | - |
| IL11..at\_forestay\_side\_load | - | - | 1.15 | -1.15 | 1.15 | -1.15 | - | - | - | - |
| IL12..at\_hinge\_point\_side\_load | - | - | - | - | - | - | 1.15 | -1.15 | 1.15 | -1.15 |
| IL13..Crane\_ride | 1.15 | -1.15 | 1.15 | -1.15 | 1.15 | -1.15 | 1.15 | -1.15 | 1.15 | -1.15 |

(LS) AbsMax Overall Stress

|  |  |  |  |
| --- | --- | --- | --- |
| Loads Count | 20 | Category | Stress |
| Selection | All Entities | Type | Extreme |
| Parameter | Abs |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Load | X | Y | Z | XY | YZ | ZX | Equivalent |
| LS1..LC1s\_Tip load.1 | 129.42e+6 |  |  |  |  |  | 129.42e+6 |
| LS2..LC1s\_Tip load.2 | 129.42e+6 |  |  |  |  |  | 129.42e+6 |
| LS3..LC1s\_Tip load.3 | 127.52e+6 |  |  |  |  |  | 127.52e+6 |
| LS4..LC1s\_Tip load.4 | 127.52e+6 |  |  |  |  |  | 127.52e+6 |
| LS5..LC1s\_Middle Bridge.1 | 116.18e+6 |  |  |  |  |  | 116.18e+6 |
| LS6..LC1s\_Middle Bridge.2 | 116.18e+6 |  |  |  |  |  | 116.18e+6 |
| LS7..LC1s\_Middle Bridge.3 | 114.28e+6 |  |  |  |  |  | 114.28e+6 |
| LS8..LC1s\_Middle Bridge.4 | 114.28e+6 |  |  |  |  |  | 114.28e+6 |
| LS9..LC1s\_Backside.1 | 110.59e+6 |  |  |  |  |  | 110.59e+6 |
| LS10..LC1s\_Backside.2 | 110.59e+6 |  |  |  |  |  | 110.59e+6 |
| LS11..LC1s\_Backside.3 | 108.70e+6 |  |  |  |  |  | 108.70e+6 |
| LS12..LC1s\_Backside.4 | 108.70e+6 |  |  |  |  |  | 108.70e+6 |
| LS13..LC1s\_At\_forestay.1 | 127.40e+6 |  |  |  |  |  | 127.40e+6 |
| LS14..LC1s\_At\_forestay.2 | 127.40e+6 |  |  |  |  |  | 127.40e+6 |
| LS15..LC1s\_At\_forestay.3 | 125.51e+6 |  |  |  |  |  | 125.51e+6 |
| LS16..LC1s\_At\_forestay.4 | 125.51e+6 |  |  |  |  |  | 125.51e+6 |
| LS17..LC1s\_at\_hinge\_point.1 | 119.70e+6 |  |  |  |  |  | 119.70e+6 |
| LS18..LC1s\_at\_hinge\_point.2 | 119.70e+6 |  |  |  |  |  | 119.70e+6 |
| LS19..LC1s\_at\_hinge\_point.3 | 117.81e+6 |  |  |  |  |  | 117.81e+6 |
| LS20..LC1s\_at\_hinge\_point.4 | 117.81e+6 |  |  |  |  |  | 117.81e+6 |

(LS) AbsMax Overall Displacement

|  |  |  |  |
| --- | --- | --- | --- |
| Loads Count | 20 | Category | Displacement |
| Selection | All Entities | Type | Extreme |
| Parameter | Abs |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Load | Ux | Uy | Uz | Usum | Rx | Ry | Rz | Rsum |
| LS1..LC1s\_Tip load.1 | 0.149 | -0.156 | -0.338 | 0.341 | 0.009 | 0.009 | 0.009 | 0.009 |
| LS2..LC1s\_Tip load.2 | 0.149 | 0.156 | -0.338 | 0.341 | -0.009 | 0.009 | -0.009 | 0.009 |
| LS3..LC1s\_Tip load.3 | 0.137 | -0.156 | -0.337 | 0.339 | 0.009 | 0.009 | 0.009 | 0.009 |
| LS4..LC1s\_Tip load.4 | 0.137 | 0.156 | -0.337 | 0.339 | -0.009 | 0.009 | -0.009 | 0.009 |
| LS5..LC1s\_Middle Bridge.1 | 0.091 | -0.140 | 0.206 | 0.244 | 0.008 | 0.004 | 0.008 | 0.008 |
| LS6..LC1s\_Middle Bridge.2 | 0.091 | 0.140 | 0.206 | 0.244 | -0.008 | 0.004 | -0.008 | 0.008 |
| LS7..LC1s\_Middle Bridge.3 | 0.079 | -0.140 | 0.207 | 0.244 | 0.008 | 0.004 | 0.008 | 0.008 |
| LS8..LC1s\_Middle Bridge.4 | 0.079 | 0.140 | 0.207 | 0.244 | -0.008 | 0.004 | -0.008 | 0.008 |
| LS9..LC1s\_Backside.1 | 0.086 | -0.140 | 0.102 | 0.159 | 0.007 | 0.004 | 0.008 | 0.009 |
| LS10..LC1s\_Backside.2 | 0.086 | 0.140 | 0.102 | 0.159 | -0.007 | 0.004 | -0.008 | 0.009 |
| LS11..LC1s\_Backside.3 | 0.074 | -0.140 | 0.103 | 0.157 | 0.007 | 0.004 | 0.008 | 0.009 |
| LS12..LC1s\_Backside.4 | 0.074 | 0.140 | 0.103 | 0.157 | -0.007 | 0.004 | -0.008 | 0.009 |
| LS13..LC1s\_At\_forestay.1 | 0.136 | -0.153 | -0.243 | 0.261 | 0.009 | 0.005 | 0.009 | 0.009 |
| LS14..LC1s\_At\_forestay.2 | 0.136 | 0.153 | -0.243 | 0.261 | -0.009 | 0.005 | -0.009 | 0.009 |
| LS15..LC1s\_At\_forestay.3 | 0.124 | -0.154 | -0.243 | 0.260 | 0.009 | 0.005 | 0.009 | 0.009 |
| LS16..LC1s\_At\_forestay.4 | 0.124 | 0.154 | -0.243 | 0.260 | -0.009 | 0.005 | -0.009 | 0.009 |
| LS17..LC1s\_at\_hinge\_point.1 | 0.098 | -0.144 | 0.202 | 0.244 | 0.008 | 0.004 | 0.008 | 0.008 |
| LS18..LC1s\_at\_hinge\_point.2 | 0.098 | 0.144 | 0.202 | 0.244 | -0.008 | 0.004 | -0.008 | 0.008 |
| LS19..LC1s\_at\_hinge\_point.3 | 0.086 | -0.145 | 0.203 | 0.243 | 0.008 | 0.004 | 0.008 | 0.008 |
| LS20..LC1s\_at\_hinge\_point.4 | 0.086 | 0.145 | 0.203 | 0.243 | -0.008 | 0.004 | -0.008 | 0.008 |

(LS) Reaction Forces Summation

|  |  |  |  |
| --- | --- | --- | --- |
| Loads Count | 20 | Parameter | Reaction Force |
| Selection | All Entities | Type | Expand |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Load | Fx | Fy | Fz | Fsum | Mx | My | Mz | Msum |
| LS1..LC1s\_Tip load.1 | -223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS2..LC1s\_Tip load.2 | -223100 | -948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS3..LC1s\_Tip load.3 | 223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS4..LC1s\_Tip load.4 | 223100 | -948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS5..LC1s\_Middle Bridge.1 | -223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS6..LC1s\_Middle Bridge.2 | -223100 | -948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS7..LC1s\_Middle Bridge.3 | 223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS8..LC1s\_Middle Bridge.4 | 223100 | -948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS9..LC1s\_Backside.1 | -223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS10..LC1s\_Backside.2 | -223100 | -948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS11..LC1s\_Backside.3 | 223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS12..LC1s\_Backside.4 | 223100 | -948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS13..LC1s\_At\_forestay.1 | -223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS14..LC1s\_At\_forestay.2 | -223100 | -948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS15..LC1s\_At\_forestay.3 | 223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS16..LC1s\_At\_forestay.4 | 223100 | -948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS17..LC1s\_at\_hinge\_point.1 | -223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS18..LC1s\_at\_hinge\_point.2 | -223100 | -948501 | -37760780 | 37773350 | 0 | 0 | 0 | 0 |
| LS19..LC1s\_at\_hinge\_point.3 | 223100 | 948501 | -37760780 | 37773340 | 0 | 0 | 0 | 0 |
| LS20..LC1s\_at\_hinge\_point.4 | 223100 | -948501 | -37760780 | 37773350 | 0 | 0 | 0 | 0 |

### 1..Static Stress Check

|  |  |
| --- | --- |
| Property | Value |
| Category | Elemental Custom Check |
| Selection | All Entities |
| Parameters | 3 |

X (LG1, All Entities)

|  |  |  |  |
| --- | --- | --- | --- |
| Standard | 1..Static Check | Check | [S1] 1..Static Stress Check |
| Load Group | LG1..Overall | Selection | All Entities |

|  |  |  |  |
| --- | --- | --- | --- |
| Extreme | Stress | Allowable Stress | Utilization Factor |
| Minimum |  |  |  |
| Value | -52.18e+6 | 240.00e+6 | 0.00 |
| Element ID | 385 | 1 | 265 |
| Maximum |  |  |  |
| Value | 129.42e+6 | 240.00e+6 | 0.54 |
| Element ID | 2 | 1 | 2 |
| Absolute |  |  |  |
| Value | 129.42e+6 | 240.00e+6 | 0.54 |
| Element ID | 2 | 1 | 2 |

Overall Utilization Factor (LG1, All Entities, v1, Total)

|  |
| --- |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| Check | [S1] 1..Static Stress Check | Point | Total |
| Load Group | LG1..Overall | Parameter | Overall Utilization Factor |
| Selection | All Entities | View | 1..Default View |

Overall Utilization Factor (LG1, All Entities, v3, Total)

|  |
| --- |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| Check | [S1] 1..Static Stress Check | Point | Total |
| Load Group | LG1..Overall | Parameter | Overall Utilization Factor |
| Selection | All Entities | View | 3..Front |

Overall Utilization Factor (LG1, All Entities, v4, Total)

|  |
| --- |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| Check | [S1] 1..Static Stress Check | Point | Total |
| Load Group | LG1..Overall | Parameter | Overall Utilization Factor |
| Selection | All Entities | View | 4..Top |