

# ALLEGATI

/ \_\_\_\_\_

/ Straus7 MODEL EXCHANGE FILE

/ TIMESTAMP: 7:20:43 pm, 20 marzo 2022

/ \_\_\_\_\_

/ MODEL INFORMATION

FileFormat      Straus7.2.3.0  
ModelName        "BVPE - IV35\_SISMICA DT50\_UB"  
Title            ""  
Project          ""  
Author            ""  
Reference        ""  
Comments         ""

/ \_\_\_\_\_

/ UNITS

LengthUnit      m  
MassUnit        kg  
EnergyUnit      J  
PressureUnit    MPa  
ForceUnit       kN  
TemperatureUnit K

/ \_\_\_\_\_

/ GROUP DEFINITIONS

Group            1 16711680 "\\Model"

/ \_\_\_\_\_

/ FREEDOM CASE DEFINITIONS

FreedomCase        1    0    1 "Freedom Case 1"

/ \_\_\_\_\_

/ LOAD CASE DEFINITIONS

LoadCase            1    1 "PESO PROPRIO"

Gravity            3 -1.000000000000000E+1

LCInclude          3

LoadCase            2    0 "AZIONE TERMICA"

LCInclude          3

LoadCase            3    0 "RITIRO"

LCInclude          3

/ \_\_\_\_\_

/ RESULT CASE ENVELOPES

LoadCaseEnvelope   "SLC LONG" Abs

ON                  1

ON                  2

ON                  3

ON                  4

ON                  5

ON                  6

ON	7
ON	8
ON	25
ON	26
ON	27
ON	28
ON	29
ON	30
ON	31
ON	32

LoadCaseEnvelope "SLC TRASV" Abs

ON	9
ON	10
ON	11
ON	12
ON	13
ON	14
ON	15
ON	16
ON	33
ON	34
ON	35
ON	36
ON	37
ON	38
ON	39
ON	40

LoadCaseEnvelope "SLC VERT" Abs

ON	17
----	----

ON	18
ON	19
ON	20
ON	21
ON	22
ON	23
ON	24
ON	41
ON	42
ON	43
ON	44
ON	45
ON	46
ON	47
ON	48

LoadCaseEnvelope "SLV LONG" Abs

ON	49
ON	50
ON	51
ON	52
ON	53
ON	54
ON	55
ON	56
ON	73
ON	74
ON	75
ON	76
ON	77
ON	78

ON 79

ON 80

LoadCaseEnvelope "SLV TRASV" Abs

ON 57

ON 58

ON 59

ON 60

ON 61

ON 62

ON 63

ON 64

ON 81

ON 82

ON 83

ON 84

ON 85

ON 86

ON 87

ON 88

LoadCaseEnvelope "SLV VERT" Abs

ON 65

ON 66

ON 67

ON 68

ON 69

ON 70

ON 71

ON 72

ON 89

ON	90
ON	91
ON	92
ON	93
ON	94
ON	95
ON	96

LoadCaseEnvelope "SLD LONG" Abs

ON	97
ON	98
ON	99
ON	100
ON	101
ON	102
ON	103
ON	104
ON	121
ON	122
ON	123
ON	124
ON	125
ON	126
ON	127
ON	128

LoadCaseEnvelope "SLD TRASV" Abs

ON	105
ON	106
ON	107
ON	108

ON 109  
ON 110  
ON 111  
ON 112  
ON 129  
ON 130  
ON 131  
ON 132  
ON 133  
ON 134  
ON 135  
ON 136

/ \_\_\_\_\_

/ COORDINATE SYSTEM DEFINITIONS

CoordSys 1 "Global XYZ" GlobalXYZ

/ \_\_\_\_\_

/ NODE COORDINATES

Node 1 0.000000000000000E+0 0.000000000000000E+0  
0.000000000000000E+0  
Node 2 5.760000000000000E+1 0.000000000000000E+0  
0.000000000000000E+0  
Node 3 5.940000000000000E+1 0.000000000000000E+0  
0.000000000000000E+0  
Node 4 1.170000000000000E+2 0.000000000000000E+0  
0.000000000000000E+0  
Node 5 0.000000000000000E+0 5.625000000000000E+0  
0.000000000000000E+0



Node	6	5.76000000000000E+1	5.62500000000000E+0	
0.00000000000000E+0				
Node	7	5.94000000000000E+1	5.62500000000000E+0	
0.00000000000000E+0				
Node	8	1.17000000000000E+2	5.62500000000000E+0	
0.00000000000000E+0				
Node	9	0.00000000000000E+0	-5.62500000000000E+0	
0.00000000000000E+0				
Node	10	5.76000000000000E+1	-5.62500000000000E+0	
0.00000000000000E+0				
Node	11	5.94000000000000E+1	-5.62500000000000E+0	
0.00000000000000E+0				
Node	12	1.17000000000000E+2	-5.62500000000000E+0	
0.00000000000000E+0				
Node	13	0.00000000000000E+0	5.62500000000000E+0	-
3.50000000000000E-1				
Node	14	5.76000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	15	5.94000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	16	1.17000000000000E+2	5.62500000000000E+0	-
3.50000000000000E-1				
Node	17	0.00000000000000E+0	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	18	5.76000000000000E+1	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	19	5.94000000000000E+1	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	20	1.17000000000000E+2	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	21	0.00000000000000E+0	0.00000000000000E+0	-
3.50000000000000E-1				
Node	22	1.17000000000000E+2	0.00000000000000E+0	-
3.50000000000000E-1				
Node	23	5.85000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	24	5.85000000000000E+1	5.62500000000000E+0	-
8.25000000000000E+0				

Node	25	5.850000000000000E+1	-5.625000000000000E+0	-
		3.500000000000000E-1		
Node	26	5.850000000000000E+1	-5.625000000000000E+0	-
		8.250000000000000E+0		
Node	27	5.850000000000000E+1	0.000000000000000E+0	-
		8.250000000000000E+0		
Node	28	5.850000000000000E+1	5.625000000000000E+0	-
		1.930000000000000E+0		
Node	29	5.850000000000000E+1	5.625000000000000E+0	-
		3.510000000000000E+0		
Node	30	5.850000000000000E+1	5.625000000000000E+0	-
		5.090000000000000E+0		
Node	31	5.850000000000000E+1	5.625000000000000E+0	-
		6.670000000000000E+0		
Node	32	5.850000000000000E+1	-5.625000000000000E+0	-
		6.670000000000000E+0		
Node	33	5.850000000000000E+1	-5.625000000000000E+0	-
		5.090000000000000E+0		
Node	34	5.850000000000000E+1	-5.625000000000000E+0	-
		3.510000000000000E+0		
Node	35	5.850000000000000E+1	-5.625000000000000E+0	-
		1.930000000000000E+0		
Node	36	5.850000000000000E+1	0.000000000000000E+0	-
		1.045000000000000E+1		

/

---

/ BEAM ELEMENTS

Beam	1	1	1	1	2
Beam	2	1	1	3	4
Beam	3	1	2	5	13
Beam	4	1	2	6	14
Beam	5	1	2	7	15
Beam	6	1	2	8	16
Beam	7	1	2	9	17

Beam	8	1	2	10	18
Beam	9	1	2	11	19
Beam	10	1	2	12	20
Beam	11	1	3	31	24
Beam	12	1	3	35	25
Beam	13	1	3	23	28
Beam	14	1	3	28	29
Beam	15	1	3	29	30
Beam	16	1	3	30	31
Beam	17	1	3	26	32
Beam	18	1	3	32	33
Beam	19	1	3	33	34
Beam	20	1	3	34	35
Beam	21	1	6	27	36

/ \_\_\_\_\_

/ BEAM ANGLES

BmAngle	11	9.000000000000000E+1
BmAngle	12	-9.000000000000000E+1
BmAngle	13	9.000000000000000E+1
BmAngle	14	9.000000000000000E+1
BmAngle	15	9.000000000000000E+1
BmAngle	16	9.000000000000000E+1
BmAngle	17	-9.000000000000000E+1
BmAngle	18	-9.000000000000000E+1
BmAngle	19	-9.000000000000000E+1
BmAngle	20	-9.000000000000000E+1

/ \_\_\_\_\_

/ RIGID LINKS

RigidLink	1	9	1	XYZ
RigidLink	1	1	5	XYZ
RigidLink	1	12	4	XYZ
RigidLink	1	4	8	XYZ
RigidLink	1	17	21	XYZ
RigidLink	1	21	13	XYZ
RigidLink	1	20	22	XYZ
RigidLink	1	22	16	XYZ
RigidLink	1	10	2	XYZ
RigidLink	1	2	6	XYZ
RigidLink	1	11	3	XYZ
RigidLink	1	3	7	XYZ
RigidLink	1	14	23	XYZ
RigidLink	1	23	15	XYZ
RigidLink	1	18	25	XYZ
RigidLink	1	25	19	XYZ
RigidLink	1	24	27	XYZ
RigidLink	1	27	26	XYZ

---

/ NODE RESTRAINTS (ROTATION AS RADIAN)

/ Freedom Case 1

NdFreedom	1	21	1	DX DY DZ RX RY RZ
NdFreedom	1	22	1	DX DY DZ RX RY RZ
NdFreedom	1	36	1	DX DY DZ RX RY RZ

---

/ BEAM NON-STRUCTURAL MASSES

/ PESO PROPRIO

BmNSMass 1 1 1 1.60000000000000E+4 1.60000000000000E+4  
0.00000000000000E+0 0.00000000000000E+0 0.00000000000000E+0  
0.00000000000000E+0 1.00000000000000E+0

BmNSMass 1 2 1 1.60000000000000E+4 1.60000000000000E+4  
0.00000000000000E+0 0.00000000000000E+0 0.00000000000000E+0  
0.00000000000000E+0 1.00000000000000E+0

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ AZIONE TERMICA

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ RITIRO

/ \_\_\_\_\_

/ BEAM PROPERTIES

BeamProp 1 "CAMPATE"  
MaterialName "Steel - Modified"  
Modulus 2.10000000000000E+5  
ShearMod 8.00000000000000E+4  
Poisson 2.50000000000000E-1  
UsePoisson TRUE  
Expansion 1.15000000000000E-5  
ThermalCond 5.10000000000000E+1  
SpecificHeat 5.00000000000000E+2  
InstantAlpha FALSE  
Area 4.31250000000000E-1  
MomentI11 4.55000000000000E+0  
MomentI22 5.28000000000000E-1  
MomentJ 1.80000000000000E-2  
SectionType Null

NonLinType Elasticplastic

Hardening Isotropic

SpringProp 2 "ISOLATORI"

MaterialName "Unknown material"

InstantAlpha FALSE

AxialStiff 2.00000000000000E+6

LateralStiff 3.48000000000000E+3

SectionType Null

NonLinType Elasticplastic

Hardening Isotropic

BeamProp 3 "FUSTO"

MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa - Modified"

Modulus 1.54800000000000E+4

ShearMod 1.29000000000000E+4

Poisson 2.00000000000000E-1

UsePoisson TRUE

Density 2.50000000000000E+3

Expansion 1.00000000000000E-5

ThermalCond 1.37000000000000E+0

SpecificHeat 8.80000000000000E+2

InstantAlpha FALSE

Area 5.28000000000000E+0

MomentI11 8.51840000000000E+0

MomentI22 6.33600000000000E-1

MomentJ 2.10874647272700E+0

SectionType SolidRect

B 1.20000000000000E+0

D 4.40000000000000E+0

CT FALSE

NonLinType Elasticplastic

Hardening Isotropic

UserDefBeamProp 5 "MATRICE PALIFICATA SENZA LIQUEFAZIONE"

MaterialName "Unknown Material - Modified"

BeamMatrixA

2.73000000000000E+5 0.00000000000000E+0 0.00000000000000E+0

2.45000000000000E+5 0.00000000000000E+0

3.08000000000000E+6

BeamMatrixB

0.00000000000000E+0 1.00000000000000E+6 0.00000000000000E+0

-9.40000000000000E+5 0.00000000000000E+0 0.00000000000000E+0

0.00000000000000E+0 0.00000000000000E+0 0.00000000000000E+0

BeamMatrixC

2.26000000000000E+8 0.00000000000000E+0 0.00000000000000E+0

8.22000000000000E+7 0.00000000000000E+0

2.43000000000000E+7

MatrixType Stiffness

BeamProp 6 "PLINTO"

MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa"

Modulus 3.09600000000000E+4

ShearMod 1.29000000000000E+4

Poisson 2.00000000000000E-1

UsePoisson TRUE

Density 2.40000000000000E+3

Expansion 1.00000000000000E-5

ThermalCond 1.37000000000000E+0

SpecificHeat 8.80000000000000E+2

InstantAlpha FALSE

Area 1.16130000000000E+2

MomentI11 2.41589110000000E+3  
MomentI22 5.22802743750000E+2  
MomentJ 1.50187272352900E+3  
SectionType SolidRect  
B 7.35000000000000E+0  
D 1.58000000000000E+1  
CT FALSE  
NonLinType Elasticplastic  
Hardening Isotropic

/

---

/ FREQUENCY-PERIOD TABLES

PeriodTbl 1 "SLC\_orizz"  
0.00000000000000E+0 3.90000000000000E-1  
2.25000000000000E-1 9.42000000000000E-1  
6.74000000000000E-1 9.42000000000000E-1  
7.73000000000000E-1 8.22000000000000E-1  
8.71000000000000E-1 7.29000000000000E-1  
9.70000000000000E-1 6.55000000000000E-1  
1.06900000000000E+0 5.94000000000000E-1  
1.16700000000000E+0 5.44000000000000E-1  
1.26600000000000E+0 5.02000000000000E-1  
1.26600000000000E+0 3.12000000000000E-1  
1.46300000000000E+0 2.70000000000000E-1  
1.56100000000000E+0 2.53000000000000E-1  
1.66000000000000E+0 2.38000000000000E-1  
1.75800000000000E+0 2.25000000000000E-1  
1.85700000000000E+0 2.13000000000000E-1  
1.95600000000000E+0 2.02000000000000E-1



2.05400000000000E+0	1.92000000000000E-1
2.15300000000000E+0	1.83000000000000E-1
2.25100000000000E+0	1.75000000000000E-1
2.35000000000000E+0	1.68000000000000E-1
2.44800000000000E+0	1.61000000000000E-1
2.54700000000000E+0	1.55000000000000E-1
2.64500000000000E+0	1.49000000000000E-1
2.74400000000000E+0	1.44000000000000E-1
2.78700000000000E+0	1.40000000000000E-1
2.83100000000000E+0	1.35000000000000E-1
2.87400000000000E+0	1.31000000000000E-1
2.91700000000000E+0	1.27000000000000E-1
2.96100000000000E+0	1.24000000000000E-1
3.00400000000000E+0	1.20000000000000E-1
3.04700000000000E+0	1.17000000000000E-1
3.09000000000000E+0	1.13000000000000E-1
3.13400000000000E+0	1.10000000000000E-1
3.17700000000000E+0	1.07000000000000E-1
3.22000000000000E+0	1.05000000000000E-1
3.26400000000000E+0	1.02000000000000E-1
3.30700000000000E+0	9.90000000000000E-2
3.35000000000000E+0	9.70000000000000E-2
3.39400000000000E+0	9.40000000000000E-2
3.43700000000000E+0	9.20000000000000E-2
3.48000000000000E+0	8.90000000000000E-2
3.52400000000000E+0	8.70000000000000E-2
3.56700000000000E+0	8.50000000000000E-2
3.61000000000000E+0	8.30000000000000E-2
3.65400000000000E+0	8.10000000000000E-2
3.69700000000000E+0	7.90000000000000E-2
3.74000000000000E+0	7.70000000000000E-2

3.783000000000000E+0	7.600000000000000E-2
3.827000000000000E+0	7.400000000000000E-2
3.870000000000000E+0	7.200000000000000E-2
3.913000000000000E+0	7.100000000000000E-2
3.957000000000000E+0	6.900000000000000E-2
4.000000000000000E+0	6.800000000000000E-2

PeriodTbl            3 "SLV\_Orizz"

0.000000000000000E+0	3.600000000000000E-1
2.220000000000000E-1	8.860000000000000E-1
6.650000000000000E-1	8.860000000000000E-1
7.540000000000000E-1	7.810000000000000E-1
8.440000000000000E-1	6.980000000000000E-1
9.330000000000000E-1	6.320000000000000E-1
1.022000000000000E+0	5.760000000000000E-1
1.111000000000000E+0	5.300000000000000E-1
1.201000000000000E+0	4.910000000000000E-1
1.290000000000000E+0	4.570000000000000E-1
1.290000000000000E+0	2.840000000000000E-1
1.469000000000000E+0	2.490000000000000E-1
1.558000000000000E+0	2.350000000000000E-1
1.647000000000000E+0	2.220000000000000E-1
1.736000000000000E+0	2.110000000000000E-1
1.826000000000000E+0	2.010000000000000E-1
1.915000000000000E+0	1.910000000000000E-1
2.004000000000000E+0	1.830000000000000E-1
2.094000000000000E+0	1.750000000000000E-1
2.183000000000000E+0	1.680000000000000E-1
2.272000000000000E+0	1.610000000000000E-1
2.361000000000000E+0	1.550000000000000E-1
2.451000000000000E+0	1.490000000000000E-1

2.54000000000000E+0	1.44000000000000E-1
2.59000000000000E+0	1.39000000000000E-1
2.64100000000000E+0	1.33000000000000E-1
2.69100000000000E+0	1.29000000000000E-1
2.74100000000000E+0	1.24000000000000E-1
2.79200000000000E+0	1.19000000000000E-1
2.84200000000000E+0	1.15000000000000E-1
2.89200000000000E+0	1.11000000000000E-1
2.94300000000000E+0	1.07000000000000E-1
2.99300000000000E+0	1.04000000000000E-1
3.04300000000000E+0	1.00000000000000E-1
3.09400000000000E+0	9.70000000000000E-2
3.14400000000000E+0	9.40000000000000E-2
3.19400000000000E+0	9.10000000000000E-2
3.24500000000000E+0	8.80000000000000E-2
3.29500000000000E+0	8.60000000000000E-2
3.34600000000000E+0	8.30000000000000E-2
3.39600000000000E+0	8.10000000000000E-2
3.44600000000000E+0	7.80000000000000E-2
3.49700000000000E+0	7.60000000000000E-2
3.54700000000000E+0	7.40000000000000E-2
3.59700000000000E+0	7.20000000000000E-2
3.64800000000000E+0	7.00000000000000E-2
3.69800000000000E+0	6.80000000000000E-2
3.74800000000000E+0	6.60000000000000E-2
3.79900000000000E+0	6.40000000000000E-2
3.84900000000000E+0	6.30000000000000E-2
3.89900000000000E+0	6.10000000000000E-2
3.95000000000000E+0	6.00000000000000E-2
4.00000000000000E+0	5.80000000000000E-2

PeriodTbl            5 "SLD\_Orizz"

0.000000000000000E+0	1.760000000000000E-1
2.110000000000000E-1	4.360000000000000E-1
6.340000000000000E-1	4.360000000000000E-1
6.980000000000000E-1	3.960000000000000E-1
7.630000000000000E-1	3.620000000000000E-1
8.280000000000000E-1	3.340000000000000E-1
8.920000000000000E-1	3.100000000000000E-1
9.570000000000000E-1	2.890000000000000E-1
1.022000000000000E+0	2.700000000000000E-1
1.086000000000000E+0	2.540000000000000E-1
1.151000000000000E+0	2.400000000000000E-1
1.216000000000000E+0	2.270000000000000E-1
1.281000000000000E+0	2.160000000000000E-1
1.281000000000000E+0	1.340000000000000E-1
1.410000000000000E+0	1.220000000000000E-1
1.475000000000000E+0	1.160000000000000E-1
1.539000000000000E+0	1.120000000000000E-1
1.604000000000000E+0	1.070000000000000E-1
1.669000000000000E+0	1.030000000000000E-1
1.733000000000000E+0	9.900000000000000E-2
1.798000000000000E+0	9.600000000000000E-2
1.863000000000000E+0	9.200000000000000E-2
1.927000000000000E+0	8.900000000000000E-2
1.992000000000000E+0	8.600000000000000E-2
2.061000000000000E+0	8.100000000000000E-2
2.130000000000000E+0	7.500000000000000E-2
2.200000000000000E+0	7.100000000000000E-2
2.269000000000000E+0	6.600000000000000E-2
2.338000000000000E+0	6.300000000000000E-2
2.407000000000000E+0	5.900000000000000E-2

2.477000000000000E+0	5.600000000000000E-2
2.546000000000000E+0	5.300000000000000E-2
2.615000000000000E+0	5.000000000000000E-2
2.684000000000000E+0	4.700000000000000E-2
2.754000000000000E+0	4.500000000000000E-2
2.823000000000000E+0	4.300000000000000E-2
2.892000000000000E+0	4.100000000000000E-2
2.961000000000000E+0	3.900000000000000E-2
3.031000000000000E+0	3.700000000000000E-2
3.100000000000000E+0	3.600000000000000E-2
3.169000000000000E+0	3.400000000000000E-2
3.238000000000000E+0	3.300000000000000E-2
3.308000000000000E+0	3.100000000000000E-2
3.377000000000000E+0	3.000000000000000E-2
3.446000000000000E+0	2.900000000000000E-2
3.515000000000000E+0	2.800000000000000E-2
3.585000000000000E+0	2.700000000000000E-2
3.654000000000000E+0	2.600000000000000E-2
3.723000000000000E+0	2.500000000000000E-2
3.792000000000000E+0	2.400000000000000E-2
3.862000000000000E+0	2.300000000000000E-2
3.931000000000000E+0	2.200000000000000E-2
4.000000000000000E+0	2.100000000000000E-2

PeriodTbl            2 "SLC\_Vert"

0.000000000000000E+0	2.120000000000000E-1
5.000000000000000E-2	5.050000000000000E-1
1.500000000000000E-1	5.050000000000000E-1
2.350000000000000E-1	3.220000000000000E-1
3.200000000000000E-1	2.370000000000000E-1
4.050000000000000E-1	1.870000000000000E-1

4.900000000000000E-1	1.550000000000000E-1
5.750000000000000E-1	1.320000000000000E-1
6.600000000000000E-1	1.150000000000000E-1
7.450000000000000E-1	1.020000000000000E-1
8.300000000000000E-1	9.100000000000000E-2
9.150000000000000E-1	8.300000000000000E-2
1.000000000000000E+0	7.600000000000000E-2
1.075000000000000E+0	6.600000000000000E-2
1.150000000000000E+0	5.700000000000000E-2
1.225000000000000E+0	5.000000000000000E-2
1.300000000000000E+0	4.500000000000000E-2
1.375000000000000E+0	4.000000000000000E-2
1.450000000000000E+0	3.600000000000000E-2
1.525000000000000E+0	3.300000000000000E-2
1.600000000000000E+0	3.000000000000000E-2
1.675000000000000E+0	2.700000000000000E-2
1.750000000000000E+0	2.500000000000000E-2
1.825000000000000E+0	2.300000000000000E-2
1.900000000000000E+0	2.100000000000000E-2
1.975000000000000E+0	1.900000000000000E-2
2.050000000000000E+0	1.800000000000000E-2
2.125000000000000E+0	1.700000000000000E-2
2.200000000000000E+0	1.600000000000000E-2
2.275000000000000E+0	1.500000000000000E-2
2.350000000000000E+0	1.400000000000000E-2
2.425000000000000E+0	1.300000000000000E-2
2.500000000000000E+0	1.200000000000000E-2
2.575000000000000E+0	1.100000000000000E-2
2.650000000000000E+0	1.100000000000000E-2
2.725000000000000E+0	1.000000000000000E-2
2.800000000000000E+0	1.000000000000000E-2

2.87500000000000E+0	9.00000000000000E-3
2.95000000000000E+0	9.00000000000000E-3
3.02500000000000E+0	8.00000000000000E-3
3.10000000000000E+0	8.00000000000000E-3
3.17500000000000E+0	8.00000000000000E-3
3.25000000000000E+0	7.00000000000000E-3
3.32500000000000E+0	7.00000000000000E-3
3.40000000000000E+0	7.00000000000000E-3
3.47500000000000E+0	6.00000000000000E-3
3.55000000000000E+0	6.00000000000000E-3
3.62500000000000E+0	6.00000000000000E-3
3.70000000000000E+0	6.00000000000000E-3
3.77500000000000E+0	5.00000000000000E-3
3.85000000000000E+0	5.00000000000000E-3
3.92500000000000E+0	5.00000000000000E-3
4.00000000000000E+0	5.00000000000000E-3

PeriodTbl            4 "SLV\_Vert"

0.00000000000000E+0	1.57000000000000E-1
5.00000000000000E-2	3.83000000000000E-1
1.50000000000000E-1	3.83000000000000E-1
2.35000000000000E-1	2.44000000000000E-1
3.20000000000000E-1	1.79000000000000E-1
4.05000000000000E-1	1.42000000000000E-1
4.90000000000000E-1	1.17000000000000E-1
5.75000000000000E-1	1.00000000000000E-1
6.60000000000000E-1	8.70000000000000E-2
7.45000000000000E-1	7.70000000000000E-2
8.30000000000000E-1	6.90000000000000E-2
9.15000000000000E-1	6.30000000000000E-2
1.00000000000000E+0	5.70000000000000E-2

1.07500000000000E+0	5.00000000000000E-2
1.15000000000000E+0	4.30000000000000E-2
1.22500000000000E+0	3.80000000000000E-2
1.30000000000000E+0	3.40000000000000E-2
1.37500000000000E+0	3.00000000000000E-2
1.45000000000000E+0	2.70000000000000E-2
1.52500000000000E+0	2.50000000000000E-2
1.60000000000000E+0	2.20000000000000E-2
1.67500000000000E+0	2.00000000000000E-2
1.75000000000000E+0	1.90000000000000E-2
1.82500000000000E+0	1.70000000000000E-2
1.90000000000000E+0	1.60000000000000E-2
1.97500000000000E+0	1.50000000000000E-2
2.05000000000000E+0	1.40000000000000E-2
2.12500000000000E+0	1.30000000000000E-2
2.20000000000000E+0	1.20000000000000E-2
2.27500000000000E+0	1.10000000000000E-2
2.35000000000000E+0	1.00000000000000E-2
2.42500000000000E+0	1.00000000000000E-2
2.50000000000000E+0	9.00000000000000E-3
2.57500000000000E+0	9.00000000000000E-3
2.65000000000000E+0	8.00000000000000E-3
2.72500000000000E+0	8.00000000000000E-3
2.80000000000000E+0	7.00000000000000E-3
2.87500000000000E+0	7.00000000000000E-3
2.95000000000000E+0	7.00000000000000E-3
3.02500000000000E+0	6.00000000000000E-3
3.10000000000000E+0	6.00000000000000E-3
3.17500000000000E+0	6.00000000000000E-3
3.25000000000000E+0	5.00000000000000E-3
3.32500000000000E+0	5.00000000000000E-3



3.4000000000000000E+0	5.0000000000000000E-3
3.4750000000000000E+0	5.0000000000000000E-3
3.5500000000000000E+0	5.0000000000000000E-3
3.6250000000000000E+0	4.0000000000000000E-3
3.7000000000000000E+0	4.0000000000000000E-3
3.7750000000000000E+0	4.0000000000000000E-3
3.8500000000000000E+0	4.0000000000000000E-3
3.9250000000000000E+0	4.0000000000000000E-3
4.0000000000000000E+0	4.0000000000000000E-3

/

---

/ SPECTRAL RESPONSE SOLVER DATA

SpectralDirectionVector "1: SISMA SLV oriz X"

3	9.8100000000000000E+0	0.0000000000000000E+0	0.0000000000000000E+0
---	-----------------------	-----------------------	-----------------------

SpectralDirectionVector "1: SISMA SLV oriz Y"

3	0.0000000000000000E+0	9.8100000000000000E+0	0.0000000000000000E+0
---	-----------------------	-----------------------	-----------------------

SpectralDirectionVector "2: SISMA SLV vert"

4	0.0000000000000000E+0	0.0000000000000000E+0	9.8100000000000000E+0
---	-----------------------	-----------------------	-----------------------

SpectralDirectionVector "3: SISMA SLC oriz X"

1	9.8100000000000000E+0	0.0000000000000000E+0	0.0000000000000000E+0
---	-----------------------	-----------------------	-----------------------

SpectralDirectionVector "3: SISMA SLC oriz Y"

1	0.0000000000000000E+0	9.8100000000000000E+0	0.0000000000000000E+0
---	-----------------------	-----------------------	-----------------------

SpectralDirectionVector "4: SISMA SLC vert"

2	0.0000000000000000E+0	0.0000000000000000E+0	9.8100000000000000E+0
---	-----------------------	-----------------------	-----------------------

SpectralDirectionVector "5: SISMA SLD oriz X"

5 9.810000000000000E+0 0.000000000000000E+0 0.000000000000000E+0

SpectralDirectionVector "5: SISMA SLD oriz Y"

5 0.000000000000000E+0 9.810000000000000E+0 0.000000000000000E+0

/ \_\_\_\_\_

/ Straus7 MODEL EXCHANGE FILE

/ TIMESTAMP: 7:21:33 pm, 20 marzo 2022

/ \_\_\_\_\_

/ MODEL INFORMATION

FileFormat      Straus7.2.3.0

ModelName        "BVPE - IV35\_SISMICA DT50\_NOM"

Title            ""

Project          ""

Author           ""

Reference        ""

Comments        ""

/ \_\_\_\_\_

/ UNITS

LengthUnit      m

MassUnit        kg

EnergyUnit      J

PressureUnit    MPa

ForceUnit       kN

TemperatureUnit K

/ \_\_\_\_\_

/ GROUP DEFINITIONS

Group            1 16711680 "\\Model"

/ \_\_\_\_\_

/ FREEDOM CASE DEFINITIONS

FreedomCase        1    0    1 "Freedom Case 1"

/ \_\_\_\_\_

/ LOAD CASE DEFINITIONS

LoadCase            1    1 "PESO PROPRIO"

  Gravity            3 -1.000000000000000E+1

  LCInclude          3

LoadCase            2    0 "AZIONE TERMICA"

  LCInclude          3

LoadCase            3    0 "RITIRO"

  LCInclude          3

/ \_\_\_\_\_

/ RESULT CASE ENVELOPES

LoadCaseEnvelope    "SLC LONG" Abs

ON                    1

ON                    2

ON                    3

ON                    4

ON                    5

ON                    6

ON                    7

ON                    8

ON	25
ON	26
ON	27
ON	28
ON	29
ON	30
ON	31
ON	32

LoadCaseEnvelope "SLC TRASV" Abs

ON	9
ON	10
ON	11
ON	12
ON	13
ON	14
ON	15
ON	16
ON	33
ON	34
ON	35
ON	36
ON	37
ON	38
ON	39
ON	40

LoadCaseEnvelope "SLC VERT" Abs

ON	17
ON	18
ON	19

ON	20
ON	21
ON	22
ON	23
ON	24
ON	41
ON	42
ON	43
ON	44
ON	45
ON	46
ON	47
ON	48

LoadCaseEnvelope "SLV LONG" Abs

ON	49
ON	50
ON	51
ON	52
ON	53
ON	54
ON	55
ON	56
ON	73
ON	74
ON	75
ON	76
ON	77
ON	78
ON	79
ON	80

LoadCaseEnvelope "SLV TRASV" Abs

ON	57
ON	58
ON	59
ON	60
ON	61
ON	62
ON	63
ON	64
ON	81
ON	82
ON	83
ON	84
ON	85
ON	86
ON	87
ON	88

LoadCaseEnvelope "SLV VERT" Abs

ON	65
ON	66
ON	67
ON	68
ON	69
ON	70
ON	71
ON	72
ON	89
ON	90
ON	91

ON	92
ON	93
ON	94
ON	95
ON	96

LoadCaseEnvelope "SLD LONG" Abs

ON	97
ON	98
ON	99
ON	100
ON	101
ON	102
ON	103
ON	104
ON	121
ON	122
ON	123
ON	124
ON	125
ON	126
ON	127
ON	128

LoadCaseEnvelope "SLD TRASV" Abs

ON	105
ON	106
ON	107
ON	108
ON	109
ON	110



ON 111  
ON 112  
ON 129  
ON 130  
ON 131  
ON 132  
ON 133  
ON 134  
ON 135  
ON 136

/ \_\_\_\_\_

/ COORDINATE SYSTEM DEFINITIONS

CoordSys 1 "Global XYZ" GlobalXYZ

/ \_\_\_\_\_

/ NODE COORDINATES

Node 1 0.000000000000000E+0 0.000000000000000E+0  
0.000000000000000E+0  
Node 2 5.760000000000000E+1 0.000000000000000E+0  
0.000000000000000E+0  
Node 3 5.940000000000000E+1 0.000000000000000E+0  
0.000000000000000E+0  
Node 4 1.170000000000000E+2 0.000000000000000E+0  
0.000000000000000E+0  
Node 5 0.000000000000000E+0 5.625000000000000E+0  
0.000000000000000E+0  
Node 6 5.760000000000000E+1 5.625000000000000E+0  
0.000000000000000E+0

Node	7	5.94000000000000E+1	5.62500000000000E+0	
0.00000000000000E+0				
Node	8	1.17000000000000E+2	5.62500000000000E+0	
0.00000000000000E+0				
Node	9	0.00000000000000E+0	-5.62500000000000E+0	
0.00000000000000E+0				
Node	10	5.76000000000000E+1	-5.62500000000000E+0	
0.00000000000000E+0				
Node	11	5.94000000000000E+1	-5.62500000000000E+0	
0.00000000000000E+0				
Node	12	1.17000000000000E+2	-5.62500000000000E+0	
0.00000000000000E+0				
Node	13	0.00000000000000E+0	5.62500000000000E+0	-
3.50000000000000E-1				
Node	14	5.76000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	15	5.94000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	16	1.17000000000000E+2	5.62500000000000E+0	-
3.50000000000000E-1				
Node	17	0.00000000000000E+0	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	18	5.76000000000000E+1	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	19	5.94000000000000E+1	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	20	1.17000000000000E+2	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	21	0.00000000000000E+0	0.00000000000000E+0	-
3.50000000000000E-1				
Node	22	1.17000000000000E+2	0.00000000000000E+0	-
3.50000000000000E-1				
Node	23	5.85000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	24	5.85000000000000E+1	5.62500000000000E+0	-
8.25000000000000E+0				
Node	25	5.85000000000000E+1	-5.62500000000000E+0	-
3.50000000000000E-1				

Node	26	5.850000000000000E+1	-5.625000000000000E+0	-
8.250000000000000E+0				
Node	27	5.850000000000000E+1	0.000000000000000E+0	-
8.250000000000000E+0				
Node	28	5.850000000000000E+1	5.625000000000000E+0	-
1.930000000000000E+0				
Node	29	5.850000000000000E+1	5.625000000000000E+0	-
3.510000000000000E+0				
Node	30	5.850000000000000E+1	5.625000000000000E+0	-
5.090000000000000E+0				
Node	31	5.850000000000000E+1	5.625000000000000E+0	-
6.670000000000000E+0				
Node	32	5.850000000000000E+1	-5.625000000000000E+0	-
6.670000000000000E+0				
Node	33	5.850000000000000E+1	-5.625000000000000E+0	-
5.090000000000000E+0				
Node	34	5.850000000000000E+1	-5.625000000000000E+0	-
3.510000000000000E+0				
Node	35	5.850000000000000E+1	-5.625000000000000E+0	-
1.930000000000000E+0				
Node	36	5.850000000000000E+1	0.000000000000000E+0	-
1.045000000000000E+1				

/

---

/ BEAM ELEMENTS

Beam	1	1	1	1	2
Beam	2	1	1	3	4
Beam	3	1	2	5	13
Beam	4	1	2	6	14
Beam	5	1	2	7	15
Beam	6	1	2	8	16
Beam	7	1	2	9	17
Beam	8	1	2	10	18
Beam	9	1	2	11	19

Beam	10	1	2	12	20
Beam	11	1	3	31	24
Beam	12	1	3	35	25
Beam	13	1	3	23	28
Beam	14	1	3	28	29
Beam	15	1	3	29	30
Beam	16	1	3	30	31
Beam	17	1	3	26	32
Beam	18	1	3	32	33
Beam	19	1	3	33	34
Beam	20	1	3	34	35
Beam	21	1	6	27	36

---

/ BEAM ANGLES

BmAngle	11	9.000000000000000E+1
BmAngle	12	-9.000000000000000E+1
BmAngle	13	9.000000000000000E+1
BmAngle	14	9.000000000000000E+1
BmAngle	15	9.000000000000000E+1
BmAngle	16	9.000000000000000E+1
BmAngle	17	-9.000000000000000E+1
BmAngle	18	-9.000000000000000E+1
BmAngle	19	-9.000000000000000E+1
BmAngle	20	-9.000000000000000E+1

---

/ RIGID LINKS

RigidLink	1	9	1	XYZ
-----------	---	---	---	-----

RigidLink	1	1	5	XYZ
RigidLink	1	12	4	XYZ
RigidLink	1	4	8	XYZ
RigidLink	1	17	21	XYZ
RigidLink	1	21	13	XYZ
RigidLink	1	20	22	XYZ
RigidLink	1	22	16	XYZ
RigidLink	1	10	2	XYZ
RigidLink	1	2	6	XYZ
RigidLink	1	11	3	XYZ
RigidLink	1	3	7	XYZ
RigidLink	1	14	23	XYZ
RigidLink	1	23	15	XYZ
RigidLink	1	18	25	XYZ
RigidLink	1	25	19	XYZ
RigidLink	1	24	27	XYZ
RigidLink	1	27	26	XYZ

---

/ NODE RESTRAINTS (ROTATION AS RADIAN)

/ Freedom Case 1

NdFreedom	1	21	1	DX DY DZ RX RY RZ
NdFreedom	1	22	1	DX DY DZ RX RY RZ
NdFreedom	1	36	1	DX DY DZ RX RY RZ

---

/ BEAM NON-STRUCTURAL MASSES

/ PESO PROPRIO

BmNSMass	1	1	1	1.6000000000000000E+4	1.6000000000000000E+4
	0.0000000000000000E+0	0.0000000000000000E+0	0.0000000000000000E+0		
	0.0000000000000000E+0	1.0000000000000000E+0			

BmNSMass           1    2    1  1.600000000000000E+4  1.600000000000000E+4  
0.000000000000000E+0  0.000000000000000E+0  0.000000000000000E+0  
0.000000000000000E+0  1.000000000000000E+0

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ AZIONE TERMICA

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ RITIRO

/ \_\_\_\_\_

/ BEAM PROPERTIES

BeamProp           1  "CAMPATE"  
MaterialName       "Steel - Modified"  
Modulus            2.100000000000000E+5  
ShearMod           8.000000000000000E+4  
Poisson            2.500000000000000E-1  
UsePoisson         TRUE  
Expansion          1.150000000000000E-5  
ThermalCond        5.100000000000000E+1  
SpecificHeat       5.000000000000000E+2  
InstantAlpha       FALSE  
Area               4.312500000000000E-1  
MomentI11          4.550000000000000E+0  
MomentI22          5.280000000000000E-1  
MomentJ            1.800000000000000E-2  
SectionType        Null  
NonLinType         Elasticplastic  
Hardening          Isotropic

SpringProp 2 "ISOLATORI"  
MaterialName "Unknown material"  
InstantAlpha FALSE  
AxialStiff 2.00000000000000E+6  
LateralStiff 2.50000000000000E+3  
SectionType Null  
NonLinType Elasticplastic  
Hardening Isotropic

BeamProp 3 "FUSTO"  
MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa - Modified"  
Modulus 1.54800000000000E+4  
ShearMod 1.29000000000000E+4  
Poisson 2.00000000000000E-1  
UsePoisson TRUE  
Density 2.50000000000000E+3  
Expansion 1.00000000000000E-5  
ThermalCond 1.37000000000000E+0  
SpecificHeat 8.80000000000000E+2  
InstantAlpha FALSE  
Area 5.28000000000000E+0  
MomentI11 8.51840000000000E+0  
MomentI22 6.33600000000000E-1  
MomentJ 2.10874647272700E+0  
SectionType SolidRect  
B 1.20000000000000E+0  
D 4.40000000000000E+0  
CT FALSE  
NonLinType Elasticplastic  
Hardening Isotropic

UserDefBeamProp 5 "MATRICE PALIFICATA SENZA LIQUEFAZIONE"

MaterialName "Unknown Material - Modified"

BeamMatrixA

2.73000000000000E+5 0.00000000000000E+0 0.00000000000000E+0  
2.45000000000000E+5 0.00000000000000E+0  
3.08000000000000E+6

BeamMatrixB

0.00000000000000E+0 1.00000000000000E+6 0.00000000000000E+0  
-9.40000000000000E+5 0.00000000000000E+0 0.00000000000000E+0  
0.00000000000000E+0 0.00000000000000E+0 0.00000000000000E+0

BeamMatrixC

2.26000000000000E+8 0.00000000000000E+0 0.00000000000000E+0  
8.22000000000000E+7 0.00000000000000E+0  
2.43000000000000E+7

MatrixType Stiffness

BeamProp 6 "PLINTO"

MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa"

Modulus 3.09600000000000E+4

ShearMod 1.29000000000000E+4

Poisson 2.00000000000000E-1

UsePoisson TRUE

Density 2.40000000000000E+3

Expansion 1.00000000000000E-5

ThermalCond 1.37000000000000E+0

SpecificHeat 8.80000000000000E+2

InstantAlpha FALSE

Area 1.16130000000000E+2

MomentI11 2.41589110000000E+3

MomentI22 5.22802743750000E+2



MomentJ 1.50187272352900E+3  
SectionType SolidRect  
B 7.35000000000000E+0  
D 1.58000000000000E+1  
CT FALSE  
NonLinType Elasticplastic  
Hardening Isotropic

/

---

/ FREQUENCY-PERIOD TABLES

PeriodTbl	1 "SLC_orizz"
0.00000000000000E+0	3.90000000000000E-1
2.25000000000000E-1	9.42000000000000E-1
6.74000000000000E-1	9.42000000000000E-1
7.73000000000000E-1	8.22000000000000E-1
8.71000000000000E-1	7.29000000000000E-1
9.70000000000000E-1	6.55000000000000E-1
1.06900000000000E+0	5.94000000000000E-1
1.16700000000000E+0	5.44000000000000E-1
1.26600000000000E+0	5.02000000000000E-1
1.36400000000000E+0	4.66000000000000E-1
1.46300000000000E+0	4.34000000000000E-1
1.46300000000000E+0	3.07000000000000E-1
1.66000000000000E+0	2.71000000000000E-1
1.75800000000000E+0	2.55000000000000E-1
1.85700000000000E+0	2.42000000000000E-1
1.95600000000000E+0	2.30000000000000E-1
2.05400000000000E+0	2.19000000000000E-1
2.15300000000000E+0	2.09000000000000E-1

2.25100000000000E+0	2.00000000000000E-1
2.35000000000000E+0	1.91000000000000E-1
2.44800000000000E+0	1.83000000000000E-1
2.54700000000000E+0	1.76000000000000E-1
2.64500000000000E+0	1.70000000000000E-1
2.74400000000000E+0	1.64000000000000E-1
2.78700000000000E+0	1.59000000000000E-1
2.83100000000000E+0	1.54000000000000E-1
2.87400000000000E+0	1.49000000000000E-1
2.91700000000000E+0	1.45000000000000E-1
2.96100000000000E+0	1.41000000000000E-1
3.00400000000000E+0	1.37000000000000E-1
3.04700000000000E+0	1.33000000000000E-1
3.09000000000000E+0	1.29000000000000E-1
3.13400000000000E+0	1.25000000000000E-1
3.17700000000000E+0	1.22000000000000E-1
3.22000000000000E+0	1.19000000000000E-1
3.26400000000000E+0	1.16000000000000E-1
3.30700000000000E+0	1.13000000000000E-1
3.35000000000000E+0	1.10000000000000E-1
3.39400000000000E+0	1.07000000000000E-1
3.43700000000000E+0	1.04000000000000E-1
3.48000000000000E+0	1.02000000000000E-1
3.52400000000000E+0	9.90000000000000E-2
3.56700000000000E+0	9.70000000000000E-2
3.61000000000000E+0	9.50000000000000E-2
3.65400000000000E+0	9.20000000000000E-2
3.69700000000000E+0	9.00000000000000E-2
3.74000000000000E+0	8.80000000000000E-2
3.78300000000000E+0	8.60000000000000E-2
3.82700000000000E+0	8.40000000000000E-2

3.870000000000000E+0	8.200000000000000E-2
3.913000000000000E+0	8.000000000000000E-2
3.957000000000000E+0	7.900000000000000E-2
4.000000000000000E+0	7.700000000000000E-2

PeriodTbl            3 "SLV\_Orizz"

0.000000000000000E+0	3.600000000000000E-1
2.220000000000000E-1	8.860000000000000E-1
6.650000000000000E-1	8.860000000000000E-1
7.540000000000000E-1	7.810000000000000E-1
8.440000000000000E-1	6.980000000000000E-1
9.330000000000000E-1	6.320000000000000E-1
1.022000000000000E+0	5.760000000000000E-1
1.111000000000000E+0	5.300000000000000E-1
1.201000000000000E+0	4.910000000000000E-1
1.290000000000000E+0	4.570000000000000E-1
1.379000000000000E+0	4.270000000000000E-1
1.469000000000000E+0	4.010000000000000E-1
1.469000000000000E+0	2.840000000000000E-1
1.647000000000000E+0	2.530000000000000E-1
1.736000000000000E+0	2.400000000000000E-1
1.826000000000000E+0	2.280000000000000E-1
1.915000000000000E+0	2.180000000000000E-1
2.004000000000000E+0	2.080000000000000E-1
2.094000000000000E+0	1.990000000000000E-1
2.183000000000000E+0	1.910000000000000E-1
2.272000000000000E+0	1.830000000000000E-1
2.361000000000000E+0	1.760000000000000E-1
2.451000000000000E+0	1.700000000000000E-1
2.540000000000000E+0	1.640000000000000E-1
2.590000000000000E+0	1.580000000000000E-1

2.641000000000000E+0	1.520000000000000E-1
2.691000000000000E+0	1.460000000000000E-1
2.741000000000000E+0	1.410000000000000E-1
2.792000000000000E+0	1.360000000000000E-1
2.842000000000000E+0	1.310000000000000E-1
2.892000000000000E+0	1.260000000000000E-1
2.943000000000000E+0	1.220000000000000E-1
2.993000000000000E+0	1.180000000000000E-1
3.043000000000000E+0	1.140000000000000E-1
3.094000000000000E+0	1.110000000000000E-1
3.144000000000000E+0	1.070000000000000E-1
3.194000000000000E+0	1.040000000000000E-1
3.245000000000000E+0	1.000000000000000E-1
3.295000000000000E+0	9.700000000000000E-2
3.346000000000000E+0	9.500000000000000E-2
3.396000000000000E+0	9.200000000000000E-2
3.446000000000000E+0	8.900000000000000E-2
3.497000000000000E+0	8.700000000000000E-2
3.547000000000000E+0	8.400000000000000E-2
3.597000000000000E+0	8.200000000000000E-2
3.648000000000000E+0	8.000000000000000E-2
3.698000000000000E+0	7.700000000000000E-2
3.748000000000000E+0	7.500000000000000E-2
3.799000000000000E+0	7.300000000000000E-2
3.849000000000000E+0	7.100000000000000E-2
3.899000000000000E+0	7.000000000000000E-2
3.950000000000000E+0	6.800000000000000E-2
4.000000000000000E+0	6.600000000000000E-2

PeriodTbl            5 "SLD\_Orizz"

0.000000000000000E+0	1.760000000000000E-1
----------------------	----------------------

2.11000000000000E-1	4.36000000000000E-1
6.34000000000000E-1	4.36000000000000E-1
6.98000000000000E-1	3.96000000000000E-1
7.63000000000000E-1	3.62000000000000E-1
8.28000000000000E-1	3.34000000000000E-1
8.92000000000000E-1	3.10000000000000E-1
9.57000000000000E-1	2.89000000000000E-1
1.02200000000000E+0	2.70000000000000E-1
1.08600000000000E+0	2.54000000000000E-1
1.15100000000000E+0	2.40000000000000E-1
1.21600000000000E+0	2.27000000000000E-1
1.28100000000000E+0	2.16000000000000E-1
1.34500000000000E+0	2.05000000000000E-1
1.41000000000000E+0	1.96000000000000E-1
1.47500000000000E+0	1.87000000000000E-1
1.47500000000000E+0	1.32000000000000E-1
1.60400000000000E+0	1.22000000000000E-1
1.66900000000000E+0	1.17000000000000E-1
1.73300000000000E+0	1.13000000000000E-1
1.79800000000000E+0	1.09000000000000E-1
1.86300000000000E+0	1.05000000000000E-1
1.92700000000000E+0	1.01000000000000E-1
1.99200000000000E+0	9.80000000000000E-2
2.06100000000000E+0	9.20000000000000E-2
2.13000000000000E+0	8.60000000000000E-2
2.20000000000000E+0	8.00000000000000E-2
2.26900000000000E+0	7.60000000000000E-2
2.33800000000000E+0	7.10000000000000E-2
2.40700000000000E+0	6.70000000000000E-2
2.47700000000000E+0	6.30000000000000E-2
2.54600000000000E+0	6.00000000000000E-2

2.61500000000000E+0	5.70000000000000E-2
2.68400000000000E+0	5.40000000000000E-2
2.75400000000000E+0	5.10000000000000E-2
2.82300000000000E+0	4.90000000000000E-2
2.89200000000000E+0	4.70000000000000E-2
2.96100000000000E+0	4.40000000000000E-2
3.03100000000000E+0	4.20000000000000E-2
3.10000000000000E+0	4.00000000000000E-2
3.16900000000000E+0	3.90000000000000E-2
3.23800000000000E+0	3.70000000000000E-2
3.30800000000000E+0	3.60000000000000E-2
3.37700000000000E+0	3.40000000000000E-2
3.44600000000000E+0	3.30000000000000E-2
3.51500000000000E+0	3.10000000000000E-2
3.58500000000000E+0	3.00000000000000E-2
3.65400000000000E+0	2.90000000000000E-2
3.72300000000000E+0	2.80000000000000E-2
3.79200000000000E+0	2.70000000000000E-2
3.86200000000000E+0	2.60000000000000E-2
3.93100000000000E+0	2.50000000000000E-2
4.00000000000000E+0	2.40000000000000E-2

PeriodTbl            2 "SLC\_Vert"

0.00000000000000E+0	2.12000000000000E-1
5.00000000000000E-2	5.05000000000000E-1
1.50000000000000E-1	5.05000000000000E-1
2.35000000000000E-1	3.22000000000000E-1
3.20000000000000E-1	2.37000000000000E-1
4.05000000000000E-1	1.87000000000000E-1
4.90000000000000E-1	1.55000000000000E-1
5.75000000000000E-1	1.32000000000000E-1

6.600000000000000E-1	1.150000000000000E-1
7.450000000000000E-1	1.020000000000000E-1
8.300000000000000E-1	9.100000000000000E-2
9.150000000000000E-1	8.300000000000000E-2
1.000000000000000E+0	7.600000000000000E-2
1.075000000000000E+0	6.600000000000000E-2
1.150000000000000E+0	5.700000000000000E-2
1.225000000000000E+0	5.000000000000000E-2
1.300000000000000E+0	4.500000000000000E-2
1.375000000000000E+0	4.000000000000000E-2
1.450000000000000E+0	3.600000000000000E-2
1.525000000000000E+0	3.300000000000000E-2
1.600000000000000E+0	3.000000000000000E-2
1.675000000000000E+0	2.700000000000000E-2
1.750000000000000E+0	2.500000000000000E-2
1.825000000000000E+0	2.300000000000000E-2
1.900000000000000E+0	2.100000000000000E-2
1.975000000000000E+0	1.900000000000000E-2
2.050000000000000E+0	1.800000000000000E-2
2.125000000000000E+0	1.700000000000000E-2
2.200000000000000E+0	1.600000000000000E-2
2.275000000000000E+0	1.500000000000000E-2
2.350000000000000E+0	1.400000000000000E-2
2.425000000000000E+0	1.300000000000000E-2
2.500000000000000E+0	1.200000000000000E-2
2.575000000000000E+0	1.100000000000000E-2
2.650000000000000E+0	1.100000000000000E-2
2.725000000000000E+0	1.000000000000000E-2
2.800000000000000E+0	1.000000000000000E-2
2.875000000000000E+0	9.000000000000000E-3
2.950000000000000E+0	9.000000000000000E-3

3.02500000000000E+0	8.00000000000000E-3
3.10000000000000E+0	8.00000000000000E-3
3.17500000000000E+0	8.00000000000000E-3
3.25000000000000E+0	7.00000000000000E-3
3.32500000000000E+0	7.00000000000000E-3
3.40000000000000E+0	7.00000000000000E-3
3.47500000000000E+0	6.00000000000000E-3
3.55000000000000E+0	6.00000000000000E-3
3.62500000000000E+0	6.00000000000000E-3
3.70000000000000E+0	6.00000000000000E-3
3.77500000000000E+0	5.00000000000000E-3
3.85000000000000E+0	5.00000000000000E-3
3.92500000000000E+0	5.00000000000000E-3
4.00000000000000E+0	5.00000000000000E-3

PeriodTbl            4 "SLV\_Vert"

0.00000000000000E+0	1.57000000000000E-1
5.00000000000000E-2	3.83000000000000E-1
1.50000000000000E-1	3.83000000000000E-1
2.35000000000000E-1	2.44000000000000E-1
3.20000000000000E-1	1.79000000000000E-1
4.05000000000000E-1	1.42000000000000E-1
4.90000000000000E-1	1.17000000000000E-1
5.75000000000000E-1	1.00000000000000E-1
6.60000000000000E-1	8.70000000000000E-2
7.45000000000000E-1	7.70000000000000E-2
8.30000000000000E-1	6.90000000000000E-2
9.15000000000000E-1	6.30000000000000E-2
1.00000000000000E+0	5.70000000000000E-2
1.07500000000000E+0	5.00000000000000E-2
1.15000000000000E+0	4.30000000000000E-2



1.22500000000000E+0	3.80000000000000E-2
1.30000000000000E+0	3.40000000000000E-2
1.37500000000000E+0	3.00000000000000E-2
1.45000000000000E+0	2.70000000000000E-2
1.52500000000000E+0	2.50000000000000E-2
1.60000000000000E+0	2.20000000000000E-2
1.67500000000000E+0	2.00000000000000E-2
1.75000000000000E+0	1.90000000000000E-2
1.82500000000000E+0	1.70000000000000E-2
1.90000000000000E+0	1.60000000000000E-2
1.97500000000000E+0	1.50000000000000E-2
2.05000000000000E+0	1.40000000000000E-2
2.12500000000000E+0	1.30000000000000E-2
2.20000000000000E+0	1.20000000000000E-2
2.27500000000000E+0	1.10000000000000E-2
2.35000000000000E+0	1.00000000000000E-2
2.42500000000000E+0	1.00000000000000E-2
2.50000000000000E+0	9.00000000000000E-3
2.57500000000000E+0	9.00000000000000E-3
2.65000000000000E+0	8.00000000000000E-3
2.72500000000000E+0	8.00000000000000E-3
2.80000000000000E+0	7.00000000000000E-3
2.87500000000000E+0	7.00000000000000E-3
2.95000000000000E+0	7.00000000000000E-3
3.02500000000000E+0	6.00000000000000E-3
3.10000000000000E+0	6.00000000000000E-3
3.17500000000000E+0	6.00000000000000E-3
3.25000000000000E+0	5.00000000000000E-3
3.32500000000000E+0	5.00000000000000E-3
3.40000000000000E+0	5.00000000000000E-3
3.47500000000000E+0	5.00000000000000E-3

3.550000000000000E+0	5.000000000000000E-3
3.625000000000000E+0	4.000000000000000E-3
3.700000000000000E+0	4.000000000000000E-3
3.775000000000000E+0	4.000000000000000E-3
3.850000000000000E+0	4.000000000000000E-3
3.925000000000000E+0	4.000000000000000E-3
4.000000000000000E+0	4.000000000000000E-3

/

---

/ SPECTRAL RESPONSE SOLVER DATA

SpectralDirectionVector "1: SISMA SLV oriz X"

3	9.810000000000000E+0	0.000000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "1: SISMA SLV oriz Y"

3	0.000000000000000E+0	9.810000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "2: SISMA SLV vert"

4	0.000000000000000E+0	0.000000000000000E+0	9.810000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "3: SISMA SLC oriz X"

1	9.810000000000000E+0	0.000000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "3: SISMA SLC oriz Y"

1	0.000000000000000E+0	9.810000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "4: SISMA SLC vert"

2	0.000000000000000E+0	0.000000000000000E+0	9.810000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "5: SISMA SLD oriz X"

5	9.810000000000000E+0	0.000000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "5: SISMA SLD oriz Y"

5 0.000000000000000E+0 9.810000000000000E+0 0.000000000000000E+0

---

/ Straus7 MODEL EXCHANGE FILE  
/ TIMESTAMP: 7:21:46 pm, 20 marzo 2022

---

/ MODEL INFORMATION

FileFormat       Straus7.2.3.0  
ModelName        "BVPE - IV35\_SISMICA DT50\_LB"  
Title            "  
Project          "  
Author           "  
Reference        "  
Comments         "

---

/ UNITS

LengthUnit      m  
MassUnit        kg  
EnergyUnit      J  
PressureUnit    MPa  
ForceUnit       kN  
TemperatureUnit K

---

/ GROUP DEFINITIONS

Group           1 16711680 "\\Model"

---

/ FREEDOM CASE DEFINITIONS

FreedomCase        1    0    1 "Freedom Case 1"

/ \_\_\_\_\_

/ LOAD CASE DEFINITIONS

LoadCase            1    1 "PESO PROPRIO"

Gravity            3 -1.000000000000000E+1

LCInclude          3

LoadCase            2    0 "AZIONE TERMICA"

LCInclude          3

LoadCase            3    0 "RITIRO"

LCInclude          3

/ \_\_\_\_\_

/ RESULT CASE ENVELOPES

LoadCaseEnvelope    "SLC LONG" Abs

ON                  1

ON                  2

ON                  3

ON                  4

ON                  5

ON                  6

ON                  7

ON                  8

ON	25
ON	26
ON	27
ON	28
ON	29
ON	30
ON	31
ON	32

LoadCaseEnvelope "SLC TRASV" Abs

ON	9
ON	10
ON	11
ON	12
ON	13
ON	14
ON	15
ON	16
ON	33
ON	34
ON	35
ON	36
ON	37
ON	38
ON	39
ON	40

LoadCaseEnvelope "SLC VERT" Abs

ON	17
ON	18
ON	19

ON	20
ON	21
ON	22
ON	23
ON	24
ON	41
ON	42
ON	43
ON	44
ON	45
ON	46
ON	47
ON	48

LoadCaseEnvelope "SLV LONG" Abs

ON	49
ON	50
ON	51
ON	52
ON	53
ON	54
ON	55
ON	56
ON	73
ON	74
ON	75
ON	76
ON	77
ON	78
ON	79
ON	80

LoadCaseEnvelope "SLV TRASV" Abs

ON	57
ON	58
ON	59
ON	60
ON	61
ON	62
ON	63
ON	64
ON	81
ON	82
ON	83
ON	84
ON	85
ON	86
ON	87
ON	88

LoadCaseEnvelope "SLV VERT" Abs

ON	65
ON	66
ON	67
ON	68
ON	69
ON	70
ON	71
ON	72
ON	89
ON	90
ON	91



ON	92
ON	93
ON	94
ON	95
ON	96

LoadCaseEnvelope "SLD LONG" Abs

ON	97
ON	98
ON	99
ON	100
ON	101
ON	102
ON	103
ON	104
ON	121
ON	122
ON	123
ON	124
ON	125
ON	126
ON	127
ON	128

LoadCaseEnvelope "SLD TRASV" Abs

ON	105
ON	106
ON	107
ON	108
ON	109
ON	110

ON 111  
ON 112  
ON 129  
ON 130  
ON 131  
ON 132  
ON 133  
ON 134  
ON 135  
ON 136

/ \_\_\_\_\_

/ COORDINATE SYSTEM DEFINITIONS

CoordSys 1 "Global XYZ" GlobalXYZ

/ \_\_\_\_\_

/ NODE COORDINATES

Node	1	0.000000000000000E+0	0.000000000000000E+0
		0.000000000000000E+0	
Node	2	5.760000000000000E+1	0.000000000000000E+0
		0.000000000000000E+0	
Node	3	5.940000000000000E+1	0.000000000000000E+0
		0.000000000000000E+0	
Node	4	1.170000000000000E+2	0.000000000000000E+0
		0.000000000000000E+0	
Node	5	0.000000000000000E+0	5.625000000000000E+0
		0.000000000000000E+0	
Node	6	5.760000000000000E+1	5.625000000000000E+0
		0.000000000000000E+0	

Node	7	5.94000000000000E+1	5.62500000000000E+0	
0.00000000000000E+0				
Node	8	1.17000000000000E+2	5.62500000000000E+0	
0.00000000000000E+0				
Node	9	0.00000000000000E+0	-5.62500000000000E+0	
0.00000000000000E+0				
Node	10	5.76000000000000E+1	-5.62500000000000E+0	
0.00000000000000E+0				
Node	11	5.94000000000000E+1	-5.62500000000000E+0	
0.00000000000000E+0				
Node	12	1.17000000000000E+2	-5.62500000000000E+0	
0.00000000000000E+0				
Node	13	0.00000000000000E+0	5.62500000000000E+0	-
3.50000000000000E-1				
Node	14	5.76000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	15	5.94000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	16	1.17000000000000E+2	5.62500000000000E+0	-
3.50000000000000E-1				
Node	17	0.00000000000000E+0	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	18	5.76000000000000E+1	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	19	5.94000000000000E+1	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	20	1.17000000000000E+2	-5.62500000000000E+0	-
3.50000000000000E-1				
Node	21	0.00000000000000E+0	0.00000000000000E+0	-
3.50000000000000E-1				
Node	22	1.17000000000000E+2	0.00000000000000E+0	-
3.50000000000000E-1				
Node	23	5.85000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	24	5.85000000000000E+1	5.62500000000000E+0	-
8.25000000000000E+0				
Node	25	5.85000000000000E+1	-5.62500000000000E+0	-
3.50000000000000E-1				

Node	26	5.850000000000000E+1	-5.625000000000000E+0	-
8.250000000000000E+0				
Node	27	5.850000000000000E+1	0.000000000000000E+0	-
8.250000000000000E+0				
Node	28	5.850000000000000E+1	0.000000000000000E+0	-
1.045000000000000E+1				
Node	29	5.850000000000000E+1	5.625000000000000E+0	-
1.930000000000000E+0				
Node	30	5.850000000000000E+1	5.625000000000000E+0	-
3.510000000000000E+0				
Node	31	5.850000000000000E+1	5.625000000000000E+0	-
5.090000000000000E+0				
Node	32	5.850000000000000E+1	5.625000000000000E+0	-
6.670000000000000E+0				
Node	33	5.850000000000000E+1	-5.625000000000000E+0	-
6.670000000000000E+0				
Node	34	5.850000000000000E+1	-5.625000000000000E+0	-
5.090000000000000E+0				
Node	35	5.850000000000000E+1	-5.625000000000000E+0	-
3.510000000000000E+0				
Node	36	5.850000000000000E+1	-5.625000000000000E+0	-
1.930000000000000E+0				

/

---

/ BEAM ELEMENTS

Beam	1	1	1	1	2
Beam	2	1	1	3	4
Beam	3	1	2	5	13
Beam	4	1	2	6	14
Beam	5	1	2	7	15
Beam	6	1	2	8	16
Beam	7	1	2	9	17
Beam	8	1	2	10	18
Beam	9	1	2	11	19

Beam	10	1	2	12	20
Beam	11	1	3	32	24
Beam	12	1	3	36	25
Beam	13	1	6	27	28
Beam	14	1	3	23	29
Beam	15	1	3	29	30
Beam	16	1	3	30	31
Beam	17	1	3	31	32
Beam	18	1	3	26	33
Beam	19	1	3	33	34
Beam	20	1	3	34	35
Beam	21	1	3	35	36

---

/ BEAM ANGLES

BmAngle	11	9.000000000000000E+1
BmAngle	12	-9.000000000000000E+1
BmAngle	14	9.000000000000000E+1
BmAngle	15	9.000000000000000E+1
BmAngle	16	9.000000000000000E+1
BmAngle	17	9.000000000000000E+1
BmAngle	18	-9.000000000000000E+1
BmAngle	19	-9.000000000000000E+1
BmAngle	20	-9.000000000000000E+1
BmAngle	21	-9.000000000000000E+1

---

/ RIGID LINKS

RigidLink	1	9	1	XYZ
-----------	---	---	---	-----

RigidLink	1	1	5	XYZ
RigidLink	1	12	4	XYZ
RigidLink	1	4	8	XYZ
RigidLink	1	17	21	XYZ
RigidLink	1	21	13	XYZ
RigidLink	1	20	22	XYZ
RigidLink	1	22	16	XYZ
RigidLink	1	10	2	XYZ
RigidLink	1	2	6	XYZ
RigidLink	1	11	3	XYZ
RigidLink	1	3	7	XYZ
RigidLink	1	14	23	XYZ
RigidLink	1	23	15	XYZ
RigidLink	1	18	25	XYZ
RigidLink	1	25	19	XYZ
RigidLink	1	24	27	XYZ
RigidLink	1	27	26	XYZ

---

/ NODE RESTRAINTS (ROTATION AS RADIAN)

/ Freedom Case 1

NdFreedom	1	21	1	DX DY DZ RX RY RZ
NdFreedom	1	22	1	DX DY DZ RX RY RZ
NdFreedom	1	28	1	DX DY DZ RX RY RZ

---

/ BEAM NON-STRUCTURAL MASSES

/ PESO PROPRIO

BmNSMass	1	1	1	1.6000000000000000E+4	1.6000000000000000E+4
	0.0000000000000000E+0	0.0000000000000000E+0	0.0000000000000000E+0		
	0.0000000000000000E+0	1.0000000000000000E+0			

BmNSMass 1 2 1 1.60000000000000E+4 1.60000000000000E+4  
0.00000000000000E+0 0.00000000000000E+0 0.00000000000000E+0  
0.00000000000000E+0 1.00000000000000E+0

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ AZIONE TERMICA

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ RITIRO

/ \_\_\_\_\_

/ BEAM PROPERTIES

BeamProp 1 "CAMPATE"  
MaterialName "Steel - Modified"  
Modulus 2.10000000000000E+5  
ShearMod 8.00000000000000E+4  
Poisson 2.50000000000000E-1  
UsePoisson TRUE  
Expansion 1.15000000000000E-5  
ThermalCond 5.10000000000000E+1  
SpecificHeat 5.00000000000000E+2  
InstantAlpha FALSE  
Area 4.31250000000000E-1  
MomentI11 4.55000000000000E+0  
MomentI22 5.28000000000000E-1  
MomentJ 1.80000000000000E-2  
SectionType Null  
NonLinType Elasticplastic  
Hardening Isotropic

SpringProp 2 "ISOLATORI"  
MaterialName "Unknown material"  
InstantAlpha FALSE  
AxialStiff 2.00000000000000E+6  
LateralStiff 1.72000000000000E+3  
SectionType Null  
NonLinType Elasticplastic  
Hardening Isotropic

BeamProp 3 "FUSTO"  
MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa - Modified"  
Modulus 1.54800000000000E+4  
ShearMod 1.29000000000000E+4  
Poisson 2.00000000000000E-1  
UsePoisson TRUE  
Density 2.50000000000000E+3  
Expansion 1.00000000000000E-5  
ThermalCond 1.37000000000000E+0  
SpecificHeat 8.80000000000000E+2  
InstantAlpha FALSE  
Area 5.28000000000000E+0  
MomentI11 8.51840000000000E+0  
MomentI22 6.33600000000000E-1  
MomentJ 2.10874647272700E+0  
SectionType SolidRect  
B 1.20000000000000E+0  
D 4.40000000000000E+0  
CT FALSE  
NonLinType Elasticplastic  
Hardening Isotropic



UserDefBeamProp 5 "MATRICE PALIFICATA SENZA LIQUEFAZIONE"

MaterialName "Unknown Material - Modified"

BeamMatrixA

2.73000000000000E+5 0.00000000000000E+0 0.00000000000000E+0  
2.45000000000000E+5 0.00000000000000E+0  
3.08000000000000E+6

BeamMatrixB

0.00000000000000E+0 1.00000000000000E+6 0.00000000000000E+0  
-9.40000000000000E+5 0.00000000000000E+0 0.00000000000000E+0  
0.00000000000000E+0 0.00000000000000E+0 0.00000000000000E+0

BeamMatrixC

2.26000000000000E+8 0.00000000000000E+0 0.00000000000000E+0  
8.22000000000000E+7 0.00000000000000E+0  
2.43000000000000E+7

MatrixType Stiffness

BeamProp 6 "PLINTO"

MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa"

Modulus 3.09600000000000E+4

ShearMod 1.29000000000000E+4

Poisson 2.00000000000000E-1

UsePoisson TRUE

Density 2.40000000000000E+3

Expansion 1.00000000000000E-5

ThermalCond 1.37000000000000E+0

SpecificHeat 8.80000000000000E+2

InstantAlpha FALSE

Area 1.16130000000000E+2

MomentI11 2.41589110000000E+3

MomentI22 5.22802743750000E+2

MomentJ 1.50187272352900E+3  
SectionType SolidRect  
B 7.35000000000000E+0  
D 1.58000000000000E+1  
CT FALSE  
NonLinType Elasticplastic  
Hardening Isotropic

/

---

/ FREQUENCY-PERIOD TABLES

PeriodTbl	1 "SLC_orizz"
0.00000000000000E+0	3.90000000000000E-1
2.25000000000000E-1	9.42000000000000E-1
6.74000000000000E-1	9.42000000000000E-1
7.73000000000000E-1	8.22000000000000E-1
8.71000000000000E-1	7.29000000000000E-1
9.70000000000000E-1	6.55000000000000E-1
1.06900000000000E+0	5.94000000000000E-1
1.16700000000000E+0	5.44000000000000E-1
1.26600000000000E+0	5.02000000000000E-1
1.36400000000000E+0	4.66000000000000E-1
1.46300000000000E+0	4.34000000000000E-1
1.56100000000000E+0	4.07000000000000E-1
1.66000000000000E+0	3.83000000000000E-1
1.75800000000000E+0	3.61000000000000E-1
1.85700000000000E+0	3.42000000000000E-1
1.85700000000000E+0	2.76000000000000E-1
2.05400000000000E+0	2.50000000000000E-1
2.15300000000000E+0	2.38000000000000E-1

2.25100000000000E+0	2.28000000000000E-1
2.35000000000000E+0	2.18000000000000E-1
2.44800000000000E+0	2.10000000000000E-1
2.54700000000000E+0	2.01000000000000E-1
2.64500000000000E+0	1.94000000000000E-1
2.74400000000000E+0	1.87000000000000E-1
2.78700000000000E+0	1.81000000000000E-1
2.83100000000000E+0	1.76000000000000E-1
2.87400000000000E+0	1.70000000000000E-1
2.91700000000000E+0	1.65000000000000E-1
2.96100000000000E+0	1.61000000000000E-1
3.00400000000000E+0	1.56000000000000E-1
3.04700000000000E+0	1.52000000000000E-1
3.09000000000000E+0	1.47000000000000E-1
3.13400000000000E+0	1.43000000000000E-1
3.17700000000000E+0	1.40000000000000E-1
3.22000000000000E+0	1.36000000000000E-1
3.26400000000000E+0	1.32000000000000E-1
3.30700000000000E+0	1.29000000000000E-1
3.35000000000000E+0	1.25000000000000E-1
3.39400000000000E+0	1.22000000000000E-1
3.43700000000000E+0	1.19000000000000E-1
3.48000000000000E+0	1.16000000000000E-1
3.52400000000000E+0	1.13000000000000E-1
3.56700000000000E+0	1.11000000000000E-1
3.61000000000000E+0	1.08000000000000E-1
3.65400000000000E+0	1.05000000000000E-1
3.69700000000000E+0	1.03000000000000E-1
3.74000000000000E+0	1.01000000000000E-1
3.78300000000000E+0	9.80000000000000E-2
3.82700000000000E+0	9.60000000000000E-2

3.87000000000000E+0	9.40000000000000E-2
3.91300000000000E+0	9.20000000000000E-2
3.95700000000000E+0	9.00000000000000E-2
4.00000000000000E+0	8.80000000000000E-2

PeriodTbl            3 "SLV\_Orizz"

0.00000000000000E+0	3.60000000000000E-1
2.22000000000000E-1	8.86000000000000E-1
6.65000000000000E-1	8.86000000000000E-1
7.54000000000000E-1	7.81000000000000E-1
8.44000000000000E-1	6.98000000000000E-1
9.33000000000000E-1	6.32000000000000E-1
1.02200000000000E+0	5.76000000000000E-1
1.11100000000000E+0	5.30000000000000E-1
1.20100000000000E+0	4.91000000000000E-1
1.29000000000000E+0	4.57000000000000E-1
1.37900000000000E+0	4.27000000000000E-1
1.46900000000000E+0	4.01000000000000E-1
1.55800000000000E+0	3.78000000000000E-1
1.64700000000000E+0	3.58000000000000E-1
1.73600000000000E+0	3.39000000000000E-1
1.82600000000000E+0	3.23000000000000E-1
1.82600000000000E+0	2.61000000000000E-1
2.00400000000000E+0	2.37000000000000E-1
2.09400000000000E+0	2.27000000000000E-1
2.18300000000000E+0	2.18000000000000E-1
2.27200000000000E+0	2.09000000000000E-1
2.36100000000000E+0	2.02000000000000E-1
2.45100000000000E+0	1.94000000000000E-1
2.54000000000000E+0	1.87000000000000E-1
2.59000000000000E+0	1.80000000000000E-1

2.64100000000000E+0	1.73000000000000E-1
2.69100000000000E+0	1.67000000000000E-1
2.74100000000000E+0	1.61000000000000E-1
2.79200000000000E+0	1.55000000000000E-1
2.84200000000000E+0	1.50000000000000E-1
2.89200000000000E+0	1.45000000000000E-1
2.94300000000000E+0	1.40000000000000E-1
2.99300000000000E+0	1.35000000000000E-1
3.04300000000000E+0	1.31000000000000E-1
3.09400000000000E+0	1.26000000000000E-1
3.14400000000000E+0	1.22000000000000E-1
3.19400000000000E+0	1.18000000000000E-1
3.24500000000000E+0	1.15000000000000E-1
3.29500000000000E+0	1.11000000000000E-1
3.34600000000000E+0	1.08000000000000E-1
3.39600000000000E+0	1.05000000000000E-1
3.44600000000000E+0	1.02000000000000E-1
3.49700000000000E+0	9.90000000000000E-2
3.54700000000000E+0	9.60000000000000E-2
3.59700000000000E+0	9.30000000000000E-2
3.64800000000000E+0	9.10000000000000E-2
3.69800000000000E+0	8.80000000000000E-2
3.74800000000000E+0	8.60000000000000E-2
3.79900000000000E+0	8.40000000000000E-2
3.84900000000000E+0	8.20000000000000E-2
3.89900000000000E+0	8.00000000000000E-2
3.95000000000000E+0	7.80000000000000E-2
4.00000000000000E+0	7.60000000000000E-2

PeriodTbl            5 "SLD\_Orizz"

0.00000000000000E+0	1.76000000000000E-1
---------------------	---------------------

2.11000000000000E-1	4.36000000000000E-1
6.34000000000000E-1	4.36000000000000E-1
6.98000000000000E-1	3.96000000000000E-1
7.63000000000000E-1	3.62000000000000E-1
8.28000000000000E-1	3.34000000000000E-1
8.92000000000000E-1	3.10000000000000E-1
9.57000000000000E-1	2.89000000000000E-1
1.02200000000000E+0	2.70000000000000E-1
1.08600000000000E+0	2.54000000000000E-1
1.15100000000000E+0	2.40000000000000E-1
1.21600000000000E+0	2.27000000000000E-1
1.28100000000000E+0	2.16000000000000E-1
1.34500000000000E+0	2.05000000000000E-1
1.41000000000000E+0	1.96000000000000E-1
1.47500000000000E+0	1.87000000000000E-1
1.53900000000000E+0	1.79000000000000E-1
1.60400000000000E+0	1.72000000000000E-1
1.66900000000000E+0	1.66000000000000E-1
1.73300000000000E+0	1.59000000000000E-1
1.79800000000000E+0	1.54000000000000E-1
1.79800000000000E+0	1.24000000000000E-1
1.92700000000000E+0	1.16000000000000E-1
1.99200000000000E+0	1.12000000000000E-1
2.06100000000000E+0	1.05000000000000E-1
2.13000000000000E+0	9.80000000000000E-2
2.20000000000000E+0	9.20000000000000E-2
2.26900000000000E+0	8.60000000000000E-2
2.33800000000000E+0	8.10000000000000E-2
2.40700000000000E+0	7.70000000000000E-2
2.47700000000000E+0	7.20000000000000E-2
2.54600000000000E+0	6.90000000000000E-2

2.61500000000000E+0	6.50000000000000E-2
2.68400000000000E+0	6.20000000000000E-2
2.75400000000000E+0	5.90000000000000E-2
2.82300000000000E+0	5.60000000000000E-2
2.89200000000000E+0	5.30000000000000E-2
2.96100000000000E+0	5.10000000000000E-2
3.03100000000000E+0	4.80000000000000E-2
3.10000000000000E+0	4.60000000000000E-2
3.16900000000000E+0	4.40000000000000E-2
3.23800000000000E+0	4.20000000000000E-2
3.30800000000000E+0	4.10000000000000E-2
3.37700000000000E+0	3.90000000000000E-2
3.44600000000000E+0	3.70000000000000E-2
3.51500000000000E+0	3.60000000000000E-2
3.58500000000000E+0	3.50000000000000E-2
3.65400000000000E+0	3.30000000000000E-2
3.72300000000000E+0	3.20000000000000E-2
3.79200000000000E+0	3.10000000000000E-2
3.86200000000000E+0	3.00000000000000E-2
3.93100000000000E+0	2.90000000000000E-2
4.00000000000000E+0	2.80000000000000E-2

PeriodTbl            2 "SLC\_Vert"

0.00000000000000E+0	2.12000000000000E-1
5.00000000000000E-2	5.05000000000000E-1
1.50000000000000E-1	5.05000000000000E-1
2.35000000000000E-1	3.22000000000000E-1
3.20000000000000E-1	2.37000000000000E-1
4.05000000000000E-1	1.87000000000000E-1
4.90000000000000E-1	1.55000000000000E-1
5.75000000000000E-1	1.32000000000000E-1

6.600000000000000E-1	1.150000000000000E-1
7.450000000000000E-1	1.020000000000000E-1
8.300000000000000E-1	9.100000000000000E-2
9.150000000000000E-1	8.300000000000000E-2
1.000000000000000E+0	7.600000000000000E-2
1.075000000000000E+0	6.600000000000000E-2
1.150000000000000E+0	5.700000000000000E-2
1.225000000000000E+0	5.000000000000000E-2
1.300000000000000E+0	4.500000000000000E-2
1.375000000000000E+0	4.000000000000000E-2
1.450000000000000E+0	3.600000000000000E-2
1.525000000000000E+0	3.300000000000000E-2
1.600000000000000E+0	3.000000000000000E-2
1.675000000000000E+0	2.700000000000000E-2
1.750000000000000E+0	2.500000000000000E-2
1.825000000000000E+0	2.300000000000000E-2
1.900000000000000E+0	2.100000000000000E-2
1.975000000000000E+0	1.900000000000000E-2
2.050000000000000E+0	1.800000000000000E-2
2.125000000000000E+0	1.700000000000000E-2
2.200000000000000E+0	1.600000000000000E-2
2.275000000000000E+0	1.500000000000000E-2
2.350000000000000E+0	1.400000000000000E-2
2.425000000000000E+0	1.300000000000000E-2
2.500000000000000E+0	1.200000000000000E-2
2.575000000000000E+0	1.100000000000000E-2
2.650000000000000E+0	1.100000000000000E-2
2.725000000000000E+0	1.000000000000000E-2
2.800000000000000E+0	1.000000000000000E-2
2.875000000000000E+0	9.000000000000000E-3
2.950000000000000E+0	9.000000000000000E-3



3.02500000000000E+0	8.00000000000000E-3
3.10000000000000E+0	8.00000000000000E-3
3.17500000000000E+0	8.00000000000000E-3
3.25000000000000E+0	7.00000000000000E-3
3.32500000000000E+0	7.00000000000000E-3
3.40000000000000E+0	7.00000000000000E-3
3.47500000000000E+0	6.00000000000000E-3
3.55000000000000E+0	6.00000000000000E-3
3.62500000000000E+0	6.00000000000000E-3
3.70000000000000E+0	6.00000000000000E-3
3.77500000000000E+0	5.00000000000000E-3
3.85000000000000E+0	5.00000000000000E-3
3.92500000000000E+0	5.00000000000000E-3
4.00000000000000E+0	5.00000000000000E-3

PeriodTbl            4 "SLV\_Vert"

0.00000000000000E+0	1.57000000000000E-1
5.00000000000000E-2	3.83000000000000E-1
1.50000000000000E-1	3.83000000000000E-1
2.35000000000000E-1	2.44000000000000E-1
3.20000000000000E-1	1.79000000000000E-1
4.05000000000000E-1	1.42000000000000E-1
4.90000000000000E-1	1.17000000000000E-1
5.75000000000000E-1	1.00000000000000E-1
6.60000000000000E-1	8.70000000000000E-2
7.45000000000000E-1	7.70000000000000E-2
8.30000000000000E-1	6.90000000000000E-2
9.15000000000000E-1	6.30000000000000E-2
1.00000000000000E+0	5.70000000000000E-2
1.07500000000000E+0	5.00000000000000E-2
1.15000000000000E+0	4.30000000000000E-2

1.22500000000000E+0	3.80000000000000E-2
1.30000000000000E+0	3.40000000000000E-2
1.37500000000000E+0	3.00000000000000E-2
1.45000000000000E+0	2.70000000000000E-2
1.52500000000000E+0	2.50000000000000E-2
1.60000000000000E+0	2.20000000000000E-2
1.67500000000000E+0	2.00000000000000E-2
1.75000000000000E+0	1.90000000000000E-2
1.82500000000000E+0	1.70000000000000E-2
1.90000000000000E+0	1.60000000000000E-2
1.97500000000000E+0	1.50000000000000E-2
2.05000000000000E+0	1.40000000000000E-2
2.12500000000000E+0	1.30000000000000E-2
2.20000000000000E+0	1.20000000000000E-2
2.27500000000000E+0	1.10000000000000E-2
2.35000000000000E+0	1.00000000000000E-2
2.42500000000000E+0	1.00000000000000E-2
2.50000000000000E+0	9.00000000000000E-3
2.57500000000000E+0	9.00000000000000E-3
2.65000000000000E+0	8.00000000000000E-3
2.72500000000000E+0	8.00000000000000E-3
2.80000000000000E+0	7.00000000000000E-3
2.87500000000000E+0	7.00000000000000E-3
2.95000000000000E+0	7.00000000000000E-3
3.02500000000000E+0	6.00000000000000E-3
3.10000000000000E+0	6.00000000000000E-3
3.17500000000000E+0	6.00000000000000E-3
3.25000000000000E+0	5.00000000000000E-3
3.32500000000000E+0	5.00000000000000E-3
3.40000000000000E+0	5.00000000000000E-3
3.47500000000000E+0	5.00000000000000E-3

3.550000000000000E+0	5.000000000000000E-3
3.625000000000000E+0	4.000000000000000E-3
3.700000000000000E+0	4.000000000000000E-3
3.775000000000000E+0	4.000000000000000E-3
3.850000000000000E+0	4.000000000000000E-3
3.925000000000000E+0	4.000000000000000E-3
4.000000000000000E+0	4.000000000000000E-3

/

---

/ SPECTRAL RESPONSE SOLVER DATA

SpectralDirectionVector "1: SISMA SLV oriz X"

3	9.810000000000000E+0	0.000000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "1: SISMA SLV oriz Y"

3	0.000000000000000E+0	9.810000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "2: SISMA SLV vert"

4	0.000000000000000E+0	0.000000000000000E+0	9.810000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "3: SISMA SLC oriz X"

1	9.810000000000000E+0	0.000000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "3: SISMA SLC oriz Y"

1	0.000000000000000E+0	9.810000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "4: SISMA SLC vert"

2	0.000000000000000E+0	0.000000000000000E+0	9.810000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "5: SISMA SLD oriz X"

5	9.810000000000000E+0	0.000000000000000E+0	0.000000000000000E+0
---	----------------------	----------------------	----------------------

SpectralDirectionVector "5: SISMA SLD oriz Y"

5 0.000000000000000E+0 9.810000000000000E+0 0.000000000000000E+0

/ \_\_\_\_\_

/ Straus7 MODEL EXCHANGE FILE

/ TIMESTAMP: 7:22:14 pm, 20 marzo 2022

/ \_\_\_\_\_

/ MODEL INFORMATION

FileFormat       Straus7.2.3.0  
ModelName        "BVPE - IV35\_DT50\_UB"  
Title            "  
Project           "  
Author           "  
Reference        "  
Comments         "

/ \_\_\_\_\_

/ UNITS

LengthUnit       m  
MassUnit         kg  
EnergyUnit       J  
PressureUnit     MPa  
ForceUnit        kN  
TemperatureUnit  K

/ \_\_\_\_\_

/ GROUP DEFINITIONS

Group            1 16711680 "\\Model"

/ \_\_\_\_\_

/ FREEDOM CASE DEFINITIONS

FreedomCase        1    0    1 "Freedom Case 1"

/ \_\_\_\_\_

/ LOAD CASE DEFINITIONS

LoadCase            1    1 "PESO PROPRIO"

  Gravity            3 -1.000000000000000E+1

  LCInclude          3

LoadCase            4    0 "TRAFFICO"

  LCInclude          3

LoadCase            3    0 "VENTO"

  LCInclude          3

LoadCase            5    0 "FRENATURA"

  LCInclude          3

LoadCase            2    0 "AZIONE TERMICA"

  LCInclude          3

LoadCase            6    0 "RITIRO"

  LCInclude          3

/ \_\_\_\_\_

/ COORDINATE SYSTEM DEFINITIONS

CoordSys 1 "Global XYZ" GlobalXYZ

/ \_\_\_\_\_

/ NODE COORDINATES

Node	1	0.000000000000000E+0	0.000000000000000E+0	
		0.000000000000000E+0		
Node	2	5.760000000000000E+1	0.000000000000000E+0	
		0.000000000000000E+0		
Node	3	5.940000000000000E+1	0.000000000000000E+0	
		0.000000000000000E+0		
Node	4	1.170000000000000E+2	0.000000000000000E+0	
		0.000000000000000E+0		
Node	5	0.000000000000000E+0	5.625000000000000E+0	
		0.000000000000000E+0		
Node	6	5.760000000000000E+1	5.625000000000000E+0	
		0.000000000000000E+0		
Node	7	5.940000000000000E+1	5.625000000000000E+0	
		0.000000000000000E+0		
Node	8	1.170000000000000E+2	5.625000000000000E+0	
		0.000000000000000E+0		
Node	9	0.000000000000000E+0	-5.625000000000000E+0	
		0.000000000000000E+0		
Node	10	5.760000000000000E+1	-5.625000000000000E+0	
		0.000000000000000E+0		
Node	11	5.940000000000000E+1	-5.625000000000000E+0	
		0.000000000000000E+0		
Node	12	1.170000000000000E+2	-5.625000000000000E+0	
		0.000000000000000E+0		
Node	13	0.000000000000000E+0	5.625000000000000E+0	-
		3.500000000000000E-1		
Node	14	5.760000000000000E+1	5.625000000000000E+0	-
		3.500000000000000E-1		
Node	15	5.940000000000000E+1	5.625000000000000E+0	-
		3.500000000000000E-1		

Node	16	1.17000000000000E+2	5.62500000000000E+0	-
		3.50000000000000E-1		
Node	17	0.00000000000000E+0	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	18	5.76000000000000E+1	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	19	5.94000000000000E+1	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	20	1.17000000000000E+2	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	21	0.00000000000000E+0	0.00000000000000E+0	-
		3.50000000000000E-1		
Node	22	1.17000000000000E+2	0.00000000000000E+0	-
		3.50000000000000E-1		
Node	23	5.85000000000000E+1	5.62500000000000E+0	-
		3.50000000000000E-1		
Node	24	5.85000000000000E+1	5.62500000000000E+0	-
		8.25000000000000E+0		
Node	25	5.85000000000000E+1	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	26	5.85000000000000E+1	-5.62500000000000E+0	-
		8.25000000000000E+0		
Node	27	5.85000000000000E+1	0.00000000000000E+0	-
		8.25000000000000E+0		
Node	28	5.85000000000000E+1	0.00000000000000E+0	-
		1.04500000000000E+1		
Node	29	5.85000000000000E+1	0.00000000000000E+0	-
		1.14500000000000E+1		

/ \_\_\_\_\_

/ BEAM ELEMENTS

Beam	1	1	1	1	2
Beam	2	1	1	3	4
Beam	3	1	2	5	13
Beam	4	1	2	6	14



Beam	5	1	2	7	15
Beam	6	1	2	8	16
Beam	7	1	2	9	17
Beam	8	1	2	10	18
Beam	9	1	2	11	19
Beam	10	1	2	12	20
Beam	11	1	3	23	24
Beam	12	1	4	28	29
Beam	13	1	3	26	25
Beam	14	1	5	27	28

---

/ BEAM ANGLES

BmAngle	11	9.000000000000000E+1
BmAngle	13	-9.000000000000000E+1

---

/ RIGID LINKS

RigidLink	1	9	1	XYZ
RigidLink	1	1	5	XYZ
RigidLink	1	12	4	XYZ
RigidLink	1	4	8	XYZ
RigidLink	1	17	21	XYZ
RigidLink	1	21	13	XYZ
RigidLink	1	20	22	XYZ
RigidLink	1	22	16	XYZ
RigidLink	1	10	2	XYZ
RigidLink	1	2	6	XYZ
RigidLink	1	11	3	XYZ



/ \_\_\_\_\_

/ BEAM LOCAL DISTRIBUTED MOMENTS

/ VENTO

BmDistMomentL      3    1    3    1   -2.1200000000000E+1   -2.1200000000000E+1  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

BmDistMomentL      3    2    3    1   -2.1200000000000E+1   -2.1200000000000E+1  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

/ \_\_\_\_\_

/ BEAM GLOBAL DISTRIBUTED LOADS

/ FRENATURA

BmDistLoadG        5    1    X   1   5.8200000000000E+0   5.8200000000000E+0  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

BmDistLoadG        5    2    X   1   5.8200000000000E+0   5.8200000000000E+0  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ AZIONE TERMICA

BmPreTension       2    1    1.8112500000000E+4   BmPreTension       2    2  
1.8112500000000E+4

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ RITIRO

/ \_\_\_\_\_

/ BEAM PROPERTIES

BeamProp           1   "CAMPATE"

MaterialName "Steel - Modified"  
Modulus 2.10000000000000E+5  
ShearMod 8.00000000000000E+4  
Poisson 2.50000000000000E-1  
UsePoisson TRUE  
Expansion 1.15000000000000E-5  
ThermalCond 5.10000000000000E+1  
SpecificHeat 5.00000000000000E+2  
InstantAlpha FALSE  
Area 1.43750000000000E-1  
MomentI11 1.51611328125000E+0  
MomentI22 5.28000000000000E-1  
MomentJ 1.80000000000000E-2  
SectionType Null  
NonLinType Elasticplastic  
Hardening Isotropic

SpringProp 2 "ISOLATORI"  
MaterialName "Unknown material"  
InstantAlpha FALSE  
AxialStiff 2.00000000000000E+6  
LateralStiff 3.70000000000000E+3  
SectionType Null  
NonLinType Elasticplastic  
Hardening Isotropic

BeamProp 3 "FUSTO"  
MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa - Modified"  
Modulus 1.54800000000000E+4  
ShearMod 1.29000000000000E+4  
Poisson 2.00000000000000E-1

UsePoisson TRUE  
 Density 2.500000000000000E+3  
 Expansion 1.000000000000000E-5  
 ThermalCond 1.370000000000000E+0  
 SpecificHeat 8.800000000000000E+2  
 InstantAlpha FALSE  
 Area 5.280000000000000E+0  
 MomentI11 8.518400000000000E+0  
 MomentI22 6.336000000000000E-1  
 MomentJ 2.10874647272700E+0  
 SectionType SolidRect  
 B 1.200000000000000E+0  
 D 4.400000000000000E+0  
 CT FALSE  
 NonLinType Elasticplastic  
 Hardening Isotropic

UserDefBeamProp 4 "MATRICE PALIFICATA"

MaterialName "Unknown Material - Modified"

BeamMatrixA

7.300000000000000E+5 0.000000000000000E+0 0.000000000000000E+0  
 6.458000000000000E+5 0.000000000000000E+0  
 3.079000000000000E+6

BeamMatrixB

0.000000000000000E+0 1.922900000000000E+6 0.000000000000000E+0  
 -1.789000000000000E+6 0.000000000000000E+0 0.000000000000000E+0  
 0.000000000000000E+0 0.000000000000000E+0 0.000000000000000E+0

BeamMatrixC

2.313000000000000E+8 0.000000000000000E+0 0.000000000000000E+0  
 8.708800000000000E+7 0.000000000000000E+0  
 5.249000000000000E+7

MatrixType Stiffness

BeamProp 5 "PLINTO"

MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa"

Modulus 3.09600000000000E+4

ShearMod 1.29000000000000E+4

Poisson 2.00000000000000E-1

UsePoisson TRUE

Density 2.40000000000000E+3

Expansion 1.00000000000000E-5

ThermalCond 1.37000000000000E+0

SpecificHeat 8.80000000000000E+2

InstantAlpha FALSE

Area 1.17600000000000E+2

MomentI11 2.50880000000000E+3

MomentI22 5.29420500000000E+2

MomentJ 1.52804959659400E+3

SectionType SolidRect

B 7.35000000000000E+0

D 1.60000000000000E+1

CT FALSE

NonLinType Elasticplastic

Hardening Isotropic

/ \_\_\_\_\_

/ Straus7 MODEL EXCHANGE FILE

/ TIMESTAMP: 7:22:24 pm, 20 marzo 2022

/ \_\_\_\_\_

/ MODEL INFORMATION

FileFormat      Straus7.2.3.0  
ModelName        "BVPE - IV35\_DT50\_NOM"  
Title            ""  
Project          ""  
Author           ""  
Reference        ""  
Comments        ""

/ \_\_\_\_\_

/ UNITS

LengthUnit      m  
MassUnit        kg  
EnergyUnit      J  
PressureUnit    MPa  
ForceUnit       kN  
TemperatureUnit K

/ \_\_\_\_\_

/ GROUP DEFINITIONS

Group            1 16711680 "\\Model"

/ \_\_\_\_\_

/ FREEDOM CASE DEFINITIONS

FreedomCase        1    0    1 "Freedom Case 1"

/ \_\_\_\_\_

/ LOAD CASE DEFINITIONS

LoadCase            1    1 "PESO PROPRIO"

  Gravity            3 -1.000000000000000E+1

  LCInclude          3

LoadCase            4    0 "TRAFFICO"

  LCInclude          3

LoadCase            3    0 "VENTO"

  LCInclude          3

LoadCase            5    0 "FRENATURA"

  LCInclude          3

LoadCase            2    0 "AZIONE TERMICA"

  LCInclude          3

LoadCase            6    0 "RITIRO"

  LCInclude          3

/ \_\_\_\_\_

/ COORDINATE SYSTEM DEFINITIONS



CoordSys 1 "Global XYZ" GlobalXYZ

/ \_\_\_\_\_

/ NODE COORDINATES

Node	1	0.00000000000000E+0	0.00000000000000E+0	
0.00000000000000E+0				
Node	2	5.76000000000000E+1	0.00000000000000E+0	
0.00000000000000E+0				
Node	3	5.94000000000000E+1	0.00000000000000E+0	
0.00000000000000E+0				
Node	4	1.17000000000000E+2	0.00000000000000E+0	
0.00000000000000E+0				
Node	5	0.00000000000000E+0	5.62500000000000E+0	
0.00000000000000E+0				
Node	6	5.76000000000000E+1	5.62500000000000E+0	
0.00000000000000E+0				
Node	7	5.94000000000000E+1	5.62500000000000E+0	
0.00000000000000E+0				
Node	8	1.17000000000000E+2	5.62500000000000E+0	
0.00000000000000E+0				
Node	9	0.00000000000000E+0	-5.62500000000000E+0	
0.00000000000000E+0				
Node	10	5.76000000000000E+1	-5.62500000000000E+0	
0.00000000000000E+0				
Node	11	5.94000000000000E+1	-5.62500000000000E+0	
0.00000000000000E+0				
Node	12	1.17000000000000E+2	-5.62500000000000E+0	
0.00000000000000E+0				
Node	13	0.00000000000000E+0	5.62500000000000E+0	-
3.50000000000000E-1				
Node	14	5.76000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				
Node	15	5.94000000000000E+1	5.62500000000000E+0	-
3.50000000000000E-1				

Node	16	1.17000000000000E+2	5.62500000000000E+0	-
		3.50000000000000E-1		
Node	17	0.00000000000000E+0	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	18	5.76000000000000E+1	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	19	5.94000000000000E+1	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	20	1.17000000000000E+2	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	21	0.00000000000000E+0	0.00000000000000E+0	-
		3.50000000000000E-1		
Node	22	1.17000000000000E+2	0.00000000000000E+0	-
		3.50000000000000E-1		
Node	23	5.85000000000000E+1	5.62500000000000E+0	-
		3.50000000000000E-1		
Node	24	5.85000000000000E+1	5.62500000000000E+0	-
		8.25000000000000E+0		
Node	25	5.85000000000000E+1	-5.62500000000000E+0	-
		3.50000000000000E-1		
Node	26	5.85000000000000E+1	-5.62500000000000E+0	-
		8.25000000000000E+0		
Node	27	5.85000000000000E+1	0.00000000000000E+0	-
		8.25000000000000E+0		
Node	28	5.85000000000000E+1	0.00000000000000E+0	-
		1.04500000000000E+1		
Node	29	5.85000000000000E+1	0.00000000000000E+0	-
		1.14500000000000E+1		

/ \_\_\_\_\_

/ BEAM ELEMENTS

Beam	1	1	1	1	2
Beam	2	1	1	3	4
Beam	3	1	2	5	13
Beam	4	1	2	6	14

Beam	5	1	2	7	15
Beam	6	1	2	8	16
Beam	7	1	2	9	17
Beam	8	1	2	10	18
Beam	9	1	2	11	19
Beam	10	1	2	12	20
Beam	11	1	3	23	24
Beam	12	1	4	28	29
Beam	13	1	3	26	25
Beam	14	1	5	27	28

---

/ BEAM ANGLES

BmAngle	11	9.000000000000000E+1
BmAngle	13	-9.000000000000000E+1

---

/ RIGID LINKS

RigidLink	1	9	1	XYZ
RigidLink	1	1	5	XYZ
RigidLink	1	12	4	XYZ
RigidLink	1	4	8	XYZ
RigidLink	1	17	21	XYZ
RigidLink	1	21	13	XYZ
RigidLink	1	20	22	XYZ
RigidLink	1	22	16	XYZ
RigidLink	1	10	2	XYZ
RigidLink	1	2	6	XYZ
RigidLink	1	11	3	XYZ



/ \_\_\_\_\_

/ BEAM LOCAL DISTRIBUTED MOMENTS

/ VENTO

BmDistMomentL      3    1    3    1   -2.1200000000000E+1   -2.1200000000000E+1  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

BmDistMomentL      3    2    3    1   -2.1200000000000E+1   -2.1200000000000E+1  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

/ \_\_\_\_\_

/ BEAM GLOBAL DISTRIBUTED LOADS

/ FRENATURA

BmDistLoadG        5    1    X    1   5.8200000000000E+0   5.8200000000000E+0  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

BmDistLoadG        5    2    X    1   5.8200000000000E+0   5.8200000000000E+0  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ AZIONE TERMICA

BmPreTension        2    1    1.8112500000000E+4   BmPreTension        2    2  
1.8112500000000E+4

/ \_\_\_\_\_

/ BEAM PRE-LOADS

/ RITIRO

/ \_\_\_\_\_

/ BEAM PROPERTIES

BeamProp            1   "CAMPATE"

MaterialName	"Steel - Modified"
Modulus	2.10000000000000E+5
ShearMod	8.00000000000000E+4
Poisson	2.50000000000000E-1
UsePoisson	TRUE
Expansion	1.15000000000000E-5
ThermalCond	5.10000000000000E+1
SpecificHeat	5.00000000000000E+2
InstantAlpha	FALSE
Area	1.43750000000000E-1
MomentI11	1.51611328125000E+0
MomentI22	5.28000000000000E-1
MomentJ	1.80000000000000E-2
SectionType	Null
NonLinType	Elasticplastic
Hardening	Isotropic
SpringProp	2 "ISOLATORI"
MaterialName	"Unknown material"
InstantAlpha	FALSE
AxialStiff	2.00000000000000E+6
LateralStiff	2.50000000000000E+3
SectionType	Null
NonLinType	Elasticplastic
Hardening	Isotropic
BeamProp	3 "FUSTO"
MaterialName	"Concrete: Compressive Strength $f_c = 32$ MPa - Modified"
Modulus	1.54800000000000E+4
ShearMod	1.29000000000000E+4
Poisson	2.00000000000000E-1

UsePoisson TRUE  
 Density 2.500000000000000E+3  
 Expansion 1.000000000000000E-5  
 ThermalCond 1.370000000000000E+0  
 SpecificHeat 8.800000000000000E+2  
 InstantAlpha FALSE  
 Area 5.280000000000000E+0  
 MomentI11 8.518400000000000E+0  
 MomentI22 6.336000000000000E-1  
 MomentJ 2.10874647272700E+0  
 SectionType SolidRect  
 B 1.200000000000000E+0  
 D 4.400000000000000E+0  
 CT FALSE  
 NonLinType Elasticplastic  
 Hardening Isotropic

UserDefBeamProp 4 "MATRICE PALIFICATA"

MaterialName "Unknown Material - Modified"

BeamMatrixA

7.300000000000000E+5 0.000000000000000E+0 0.000000000000000E+0  
 6.458000000000000E+5 0.000000000000000E+0  
 3.079000000000000E+6

BeamMatrixB

0.000000000000000E+0 1.922900000000000E+6 0.000000000000000E+0  
 -1.789000000000000E+6 0.000000000000000E+0 0.000000000000000E+0  
 0.000000000000000E+0 0.000000000000000E+0 0.000000000000000E+0

BeamMatrixC

2.313000000000000E+8 0.000000000000000E+0 0.000000000000000E+0  
 8.708800000000000E+7 0.000000000000000E+0  
 5.249000000000000E+7

MatrixType Stiffness

BeamProp 5 "PLINTO"

MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa"

Modulus 3.09600000000000E+4

ShearMod 1.29000000000000E+4

Poisson 2.00000000000000E-1

UsePoisson TRUE

Density 2.40000000000000E+3

Expansion 1.00000000000000E-5

ThermalCond 1.37000000000000E+0

SpecificHeat 8.80000000000000E+2

InstantAlpha FALSE

Area 1.17600000000000E+2

MomentI11 2.50880000000000E+3

MomentI22 5.29420500000000E+2

MomentJ 1.52804959659400E+3

SectionType SolidRect

B 7.35000000000000E+0

D 1.60000000000000E+1

CT FALSE

NonLinType Elasticplastic

Hardening Isotropic



/ \_\_\_\_\_

/ Straus7 MODEL EXCHANGE FILE

/ TIMESTAMP: 7:22:33 pm, 20 marzo 2022

/ \_\_\_\_\_

/ MODEL INFORMATION

FileFormat       Straus7.2.3.0  
ModelName        "BVPE - IV35\_DT50\_LB"  
Title            "  
Project          "  
Author           "  
Reference        "  
Comments         "

/ \_\_\_\_\_

/ UNITS

LengthUnit      m  
MassUnit        kg  
EnergyUnit      J  
PressureUnit    MPa  
ForceUnit       kN  
TemperatureUnit K

/ \_\_\_\_\_

/ GROUP DEFINITIONS

Group           1 16711680 "\\Model"

/ \_\_\_\_\_

/ FREEDOM CASE DEFINITIONS

FreedomCase        1    0    1 "Freedom Case 1"

/ \_\_\_\_\_

/ LOAD CASE DEFINITIONS

LoadCase            1    1 "PESO PROPRIO"

  Gravity            3 -1.000000000000000E+1

  LCInclude          3

LoadCase            4    0 "TRAFFICO"

  LCInclude          3

LoadCase            3    0 "VENTO"

  LCInclude          3

LoadCase            5    0 "FRENATURA"

  LCInclude          3

LoadCase            2    0 "AZIONE TERMICA"

  LCInclude          3

LoadCase            6    0 "RITIRO"

  LCInclude          3

/ \_\_\_\_\_

/ COORDINATE SYSTEM DEFINITIONS

CoordSys 1 "Global XYZ" GlobalXYZ

/ \_\_\_\_\_

/ NODE COORDINATES

Node	1	0.000000000000000E+0	0.000000000000000E+0	
0.000000000000000E+0				
Node	2	5.760000000000000E+1	0.000000000000000E+0	
0.000000000000000E+0				
Node	3	5.940000000000000E+1	0.000000000000000E+0	
0.000000000000000E+0				
Node	4	1.170000000000000E+2	0.000000000000000E+0	
0.000000000000000E+0				
Node	5	0.000000000000000E+0	5.625000000000000E+0	
0.000000000000000E+0				
Node	6	5.760000000000000E+1	5.625000000000000E+0	
0.000000000000000E+0				
Node	7	5.940000000000000E+1	5.625000000000000E+0	
0.000000000000000E+0				
Node	8	1.170000000000000E+2	5.625000000000000E+0	
0.000000000000000E+0				
Node	9	0.000000000000000E+0	-5.625000000000000E+0	
0.000000000000000E+0				
Node	10	5.760000000000000E+1	-5.625000000000000E+0	
0.000000000000000E+0				
Node	11	5.940000000000000E+1	-5.625000000000000E+0	
0.000000000000000E+0				
Node	12	1.170000000000000E+2	-5.625000000000000E+0	
0.000000000000000E+0				
Node	13	0.000000000000000E+0	5.625000000000000E+0	-
3.500000000000000E-1				
Node	14	5.760000000000000E+1	5.625000000000000E+0	-
3.500000000000000E-1				
Node	15	5.940000000000000E+1	5.625000000000000E+0	-
3.500000000000000E-1				

Node	16	1.1700000000000000E+2	5.6250000000000000E+0	-
		3.5000000000000000E-1		
Node	17	0.0000000000000000E+0	-5.6250000000000000E+0	-
		3.5000000000000000E-1		
Node	18	5.7600000000000000E+1	-5.6250000000000000E+0	-
		3.5000000000000000E-1		
Node	19	5.9400000000000000E+1	-5.6250000000000000E+0	-
		3.5000000000000000E-1		
Node	20	1.1700000000000000E+2	-5.6250000000000000E+0	-
		3.5000000000000000E-1		
Node	21	0.0000000000000000E+0	0.0000000000000000E+0	-
		3.5000000000000000E-1		
Node	22	1.1700000000000000E+2	0.0000000000000000E+0	-
		3.5000000000000000E-1		
Node	23	5.8500000000000000E+1	5.6250000000000000E+0	-
		3.5000000000000000E-1		
Node	24	5.8500000000000000E+1	5.6250000000000000E+0	-
		8.2500000000000000E+0		
Node	25	5.8500000000000000E+1	-5.6250000000000000E+0	-
		3.5000000000000000E-1		
Node	26	5.8500000000000000E+1	-5.6250000000000000E+0	-
		8.2500000000000000E+0		
Node	27	5.8500000000000000E+1	0.0000000000000000E+0	-
		8.2500000000000000E+0		
Node	28	5.8500000000000000E+1	0.0000000000000000E+0	-
		1.0450000000000000E+1		
Node	29	5.8500000000000000E+1	0.0000000000000000E+0	-
		1.1450000000000000E+1		

/

---

/ BEAM ELEMENTS

Beam	1	1	1	1	2
Beam	2	1	1	3	4
Beam	3	1	2	5	13
Beam	4	1	2	6	14

Beam	5	1	2	7	15
Beam	6	1	2	8	16
Beam	7	1	2	9	17
Beam	8	1	2	10	18
Beam	9	1	2	11	19
Beam	10	1	2	12	20
Beam	11	1	3	23	24
Beam	12	1	4	28	29
Beam	13	1	3	26	25
Beam	14	1	5	27	28

---

/ BEAM ANGLES

BmAngle	11	9.000000000000000E+1
BmAngle	13	-9.000000000000000E+1

---

/ RIGID LINKS

RigidLink	1	9	1	XYZ
RigidLink	1	1	5	XYZ
RigidLink	1	12	4	XYZ
RigidLink	1	4	8	XYZ
RigidLink	1	17	21	XYZ
RigidLink	1	21	13	XYZ
RigidLink	1	20	22	XYZ
RigidLink	1	22	16	XYZ
RigidLink	1	10	2	XYZ
RigidLink	1	2	6	XYZ
RigidLink	1	11	3	XYZ



/

---

/ BEAM LOCAL DISTRIBUTED MOMENTS

/ VENTO

BmDistMomentL      3    1    3    1   -2.1200000000000E+1   -2.1200000000000E+1  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

BmDistMomentL      3    2    3    1   -2.1200000000000E+1   -2.1200000000000E+1  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

/

---

/ BEAM GLOBAL DISTRIBUTED LOADS

/ FRENATURA

BmDistLoadG          5    1    X    1   5.8200000000000E+0   5.8200000000000E+0  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

BmDistLoadG          5    2    X    1   5.8200000000000E+0   5.8200000000000E+0  
0.0000000000000E+0   0.0000000000000E+0   0.0000000000000E+0  
0.0000000000000E+0

/

---

/ BEAM PRE-LOADS

/ AZIONE TERMICA

BmPreTension          2    1    1.8112500000000E+4   BmPreTension          2    2  
1.8112500000000E+4

/

---

/ BEAM PRE-LOADS

/ RITIRO

/

---

/ BEAM PROPERTIES

BeamProp            1   "CAMPATE"

MaterialName	"Steel - Modified"
Modulus	2.10000000000000E+5
ShearMod	8.00000000000000E+4
Poisson	2.50000000000000E-1
UsePoisson	TRUE
Expansion	1.15000000000000E-5
ThermalCond	5.10000000000000E+1
SpecificHeat	5.00000000000000E+2
InstantAlpha	FALSE
Area	1.43750000000000E-1
MomentI11	1.51611328125000E+0
MomentI22	5.28000000000000E-1
MomentJ	1.80000000000000E-2
SectionType	Null
NonLinType	Elasticplastic
Hardening	Isotropic
SpringProp	2 "ISOLATORI"
MaterialName	"Unknown material"
InstantAlpha	FALSE
AxialStiff	2.00000000000000E+6
LateralStiff	1.59000000000000E+3
SectionType	Null
NonLinType	Elasticplastic
Hardening	Isotropic
BeamProp	3 "FUSTO"
MaterialName	"Concrete: Compressive Strength $f_c = 32$ MPa - Modified"
Modulus	1.54800000000000E+4
ShearMod	1.29000000000000E+4
Poisson	2.00000000000000E-1



UsePoisson TRUE  
 Density 2.500000000000000E+3  
 Expansion 1.000000000000000E-5  
 ThermalCond 1.370000000000000E+0  
 SpecificHeat 8.800000000000000E+2  
 InstantAlpha FALSE  
 Area 5.280000000000000E+0  
 MomentI11 8.518400000000000E+0  
 MomentI22 6.336000000000000E-1  
 MomentJ 2.10874647272700E+0  
 SectionType SolidRect  
 B 1.200000000000000E+0  
 D 4.400000000000000E+0  
 CT FALSE  
 NonLinType Elasticplastic  
 Hardening Isotropic

UserDefBeamProp 4 "MATRICE PALIFICATA"

MaterialName "Unknown Material - Modified"

BeamMatrixA

7.300000000000000E+5 0.000000000000000E+0 0.000000000000000E+0  
 6.458000000000000E+5 0.000000000000000E+0  
 3.079000000000000E+6

BeamMatrixB

0.000000000000000E+0 1.922900000000000E+6 0.000000000000000E+0  
 -1.789000000000000E+6 0.000000000000000E+0 0.000000000000000E+0  
 0.000000000000000E+0 0.000000000000000E+0 0.000000000000000E+0

BeamMatrixC

2.313000000000000E+8 0.000000000000000E+0 0.000000000000000E+0  
 8.708800000000000E+7 0.000000000000000E+0  
 5.249000000000000E+7

MatrixType Stiffness

BeamProp 5 "PLINTO"

MaterialName "Concrete: Compressive Strength  $f_c = 32$  MPa"

Modulus 3.09600000000000E+4

ShearMod 1.29000000000000E+4

Poisson 2.00000000000000E-1

UsePoisson TRUE

Density 2.40000000000000E+3

Expansion 1.00000000000000E-5

ThermalCond 1.37000000000000E+0

SpecificHeat 8.80000000000000E+2

InstantAlpha FALSE

Area 1.17600000000000E+2

MomentI11 2.50880000000000E+3

MomentI22 5.29420500000000E+2

MomentJ 1.52804959659400E+3

SectionType SolidRect

B 7.35000000000000E+0

D 1.60000000000000E+1

CT FALSE

NonLinType Elasticplastic

Hardening Isotropic