*Heading

** Job name: BC=30 Model name: CopyOfload=600X

** Generated by: Abaqus/CAE 6.13-2

*Preprint, echo=NO, model=NO, history=NO, contact=NO

**

** PARTS

**

*Part, name=BOTTOMPART

*Node

1, 10.019454, 0.

2, 10., -0.400000006

…

4274, 4275, 4276, 4277, 4278, 4279, 4280, 4281, 4282, 4283

*Nset, nset=BOTTOMLOAD

23,

** Section: Section-2-ADHESIVE1

*Solid Section, elset=ADHESIVE1, material=ADHESIVE(STANDARD)

,

** Section: Section-3-ADHESIVE3

*Solid Section, elset=ADHESIVE3, material=ADHESIVE(STANDARD)

,

** Section: Section-4-BOTTOMBEAM

*Solid Section, elset=BOTTOMBEAM, material=ALUMINIUM

,

** Section: Section-5-ADHESIVE2

*Solid Section, elset=ADHESIVE2, material=ADHESIVE(STANDARD)

,

*End Part

**

*Part, name=COHESIVE-MESH-1

*Node

```
     1,       -310.,          0.


*Nset, nset=ADHESIVE1
   1,   2,   3,   4,  33,  34,  35,  36,  37,  38,  39,  40,  41,  42,  43,  44
  45,  46, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028
*Elset, elset=ADHESIVE1
   1,   2,   3,   4,   5,   6,   7, 4324, 4325, 4326, 4327, 4328, 4329, 4330
*Elset, elset=ADHESIVE2, generate
 4284,  4323,     1
*Nset, nset=ADHESIVE3
...
*Nset, nset=TOPPARTTIE
  5,  8,  10,  11,  13, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127
 …
6449, 6450, 6451, 6452
*Nset, nset=TOPLOAD
 22,
** Section: Section-6-ADHESIVE1
*Solid Section, elset=ADHESIVE1, material=ADHESIVE(STANDARD)
,
** Section: Section-7-ADHESIVE3
*Solid Section, elset=ADHESIVE3, material=ADHESIVE(STANDARD)
,
** Section: Section-8-TOPBEAM
*Solid Section, elset=TOPBEAM, material=ALUMINIUM
,
** Section: Section-9-ADHESIVE2
*Solid Section, elset=ADHESIVE2, material=ADHESIVE(STANDARD)
,
*End Part
**
```

```
**
** ASSEMBLY
**
*Assembly, name=Assembly
**
*Instance, name=COHESIVE-MESH-1-1, part=COHESIVE-MESH-1
      370.,          0.,          0.
*End Instance
**
*Instance, name=BOTTOMPART-1, part=BOTTOMPART
*End Instance
**
*Instance, name=TOPPART-1, part=TOPPART
*End Instance
**
*Nset, nset=Set-3, instance=TOPPART-1
  21,   22,   25,   26,   28,   29,   31,   32,  696,  697,  698,  699,  700,  701,  722,  723
 724,  725,  737,  738,  739,  740,  741,  742,  752,  753,  754,  755,  770,  771,  772,  773
 774,  775,  776,  777,  778,  784,  785,  786,  787,  788,  789,  804,  805,  806,  807,  808
 809,  810,  811,  812, 1029, 1030, 1031, 1032, 1033, 1034
*Nset, nset=Set-4, instance=BOTTOMPART-1
  20,   23,   24,   27,   28,   31,   32,   33,  770,  771,  772,  773,  774,  775,  776,  777
 778,  779,  794,  795,  796,  797,  798,  799,  806,  807,  808,  809,  824,  825,  826,  827
 828,  829,  830,  831,  832,  842,  843,  844,  845,  846,  847,  864,  865,  866,  867,  868
 869,  870,  871,  872, 1029, 1030, 1031, 1032, 1033, 1034
*Nset, nset=BOTTOMPART-1_BOTTOMPARTTIE_CNS_, internal, instance=BOTTOMPART-1
  5,   8,  10,  11,  13,  97,  98,  99, 100, 101, 102, 103, 104, 105, 106, 107
 …
934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944
*Nset, nset=TOPPART-1_TOPPARTTIE_CNS_, internal, instance=TOPPART-1
  5,   8,  10,  11,  13, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127
```

…

849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864

865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875

*Surface, type=NODE, name=BOTTOMPART-1_BOTTOMPARTTIE_CNS__CNS_, internal

BOTTOMPART-1_BOTTOMPARTTIE_CNS_, 1.

*Surface, type=NODE, name=TOPPART-1_TOPPARTTIE_CNS__CNS_, internal

TOPPART-1_TOPPARTTIE_CNS_, 1.

** Constraint: BOTTOMCOHESIVE-1

*Tie, name=BOTTOMCOHESIVE-1, adjust=yes

COHESIVE-MESH-1-1.Surf-2, BOTTOMPART-1_BOTTOMPARTTIE_CNS__CNS_

** Constraint: TOPCOHESIVE-1

*Tie, name=TOPCOHESIVE-1, adjust=yes

COHESIVE-MESH-1-1.Surf-1, TOPPART-1_TOPPARTTIE_CNS__CNS_

*End Assembly

**

** ELEMENT CONTROLS

**

*Section Controls, name=EC-1, ELEMENT DELETION=YES

1., 1., 1.

*Amplitude, name=Amp-1

0., 0., 1., 1.

**

** MATERIALS

**

*Material, name=ADHESIVE(STANDARD)

*Elastic

2900., 0.35

*Material, name=ALUMINIUM

*Elastic

70000., 0.3

*Material, name=COHESIVE

*Damage Initiation, criterion=QUADS

60.,60.,60.

*Damage Evolution, type=ENERGY

20.,

*Elastic, type=TRACTION

1e+06, 1e+06, 1e+06

** ----------

**

** STEP: Step-1

**

*Step, name=Step-1, nlgeom=YES, inc=1000000

*Static, stabilize=0.0002, allsdtol=0.05, continue=NO

0.0001, 1., 1e-08, 0.01

**

** BOUNDARY CONDITIONS

**

** Name: BC-1 Type: Displacement/Rotation

*Boundary, amplitude=Amp-1

Set-3, 1, 1

Set-3, 2, 2, 25.

Set-3, 6, 6

** Name: BC-2 Type: Displacement/Rotation

*Boundary, amplitude=Amp-1

Set-4, 1, 1

Set-4, 2, 2, -25.

Set-4, 6, 6

**

** OUTPUT REQUESTS

**

*Restart, write, frequency=0

```
**
** FIELD OUTPUT: F-Output-1
**
*Output, field
*Node Output
CF, RF, U
*Element Output, directions=YES
LE, PE, PEEQ, PEMAG, S, STATUS
*Contact Output
CDISP, CSTRESS
**
** HISTORY OUTPUT: H-Output-3
**
*Output, history
*Node Output, nset=Set-4
RF1, RF2, RF3, RM1, RM2, RM3
**
** HISTORY OUTPUT: H-Output-1
**
*Output, history, frequency=1000
*Node Output, nset=BOTTOMPART-1.BOTTOMLOAD
RF1, RF2, RF3, RM1, RM2, RM3, U1, U2
U3, UR1, UR2, UR3
**
** HISTORY OUTPUT: H-Output-2
**
*Node Output, nset=TOPPART-1.TOPLOAD
RF1, RF2, RF3, RM1, RM2, RM3, U1, U2
U3, UR1, UR2, UR3
*End Step
```