

LSTC 發表 LS-DYNA v971 R2

- Fix for load curve round-off in *MAT_076, *MAT_083, *MAT_099, and *MAT_175.
- Fix bug in *RIGID_TO_DEFORMABLE_INERTIA.
- Fix bug in SPH forces calculation (MPP only).
- Fix minor bug in implicit tied contact that can result in negative eigenvalues.
- Fix bug for *ELEMENT_PLOTEL affecting *CONTACT_SPOTWELD tying.
- Fixed a potential memory error in segment-based (SOFT=2) contact.
- Fix round-off problem with rigid bodies and prescribed rotational motion using the local option.
- Fix minor problem for *MAT_024 with VP=1.
- Fix memory problem affecting *MAT_ADD_EROSION when used with fully integrated solids, type 2 and type 41 (EFG).
- Stop 'too many subgroups' termination when there are eroding solids.
- Eliminate segmentation fault associated with 2 surface force transducers (MPP only).
- Add new materials in EFG 3D.
- Fix bug in d3part database if tshell and stress tensor are written in the database.
- Fix memory clobber related to bulk viscosity energy calculation.
- Add fix for 10-node tet elements comprised of *MAT_059.
- Implement *MAT_ADD_EROSION for EFG element formulation 41.
- Add MADYMO=64 option
- Fix kinetic energy output to d3thdt database (MPP only).
- Fix bug in implicit dynamic relaxation related to thermal.
- Fix bug in *LOAD_MOVING_PRESSURE.
- Make fixes to *MAT_037 and *MAT_186.
- Modify AUTOMATIC_TIEBREAK contact in MPP to better handle slave nodes that are initially below the contact surface.
- Fix deadlock while nodout filtering is on (MPP only).
- Fix secforc output to consider failed beam elements.
- Fix option LCLVL in *CONTROL_ADAPTIVITY where LCLVVL is a load curve controlling the adaptivity level.
- Fix bug in *DEFINE_FUNCTION.
- Fix jobid problem for *PERTURBATION.
- Fix bug in *KEYWORD_ID in which the jobid was always upper case.
- Eliminate false warning of empty segment set by reducing the tolerance for checking segments.



- Fix bulk viscosity problem related to triangular shell elements.
- Fix MPP decomposition error if "silist" is used with any sliding interface other than the first one.
- Fix bug with circular butt welds not tying first/last node (MPP only).
- Fix problems related to degenerate element sorting.
- Fix problem with load curve ID's and airbags.
- Fix load curve round-off problems related to *MAT_FABRIC and *AIRBAG_INTERACTION.
- Fix cross-section force calculation for TSHELL formulations 2 and 3.
- Fix 10-node tetrahedron element for large strain problems.
- Fix *LOAD_THERMAL_LOAD_CURVE when invoked during implicit dynamic relaxation.
- Fix bug in *INITIAL_VOLUME_FRACTION (MPP only).
- Fix to *CONSTRAINED_BUTT_WELD when the nodes of the weld form a closed loop.
- Fix incorrect initial penetration warnings in edge-to-edge contact *CONTACT_AUTOMATIC_GENERAL.
- Shear stresses are zero for *MAT_ANISOTROPIC due to finite strain formulation used for material type 2.
- Element type 18 is linear.
- Added a linear version of *MAT_ANISOTROPIC.
- Fix related to generating the stiffness matrix for *MAT_HONEYCOMB.
- Fix airbag bug related to blockage option (MPP only).
- Fix roundoff problem in rigid bodies in single precision calculations which is causing problems for customers in their transition from Radioss.
- Set pointer in intfor database correctly for each interface if force transducer exists (MPP only).
- Fix a potential MPP problem when 2-surface force transducers are used with segment based contact.
- Fix Rayleigh damping problem when energy calculation is active.
- Fix output issues with ESORT=2 option related to the deforc, elout, and d3plot files.
- Fix thick element check of SOFT=2 single surface contact.
- Exit MPP job cleanly if NaN detected in any of the processors with option checknan=1.
- Fix *INITIAL_STRESS_SHELL where element offset is used instead of set offset.



- Fix MPP problem when deleting both contacts AND parts/elements during a small deck restart.
- Fix bug related to iform=-14 in *MAT_FABRIC.
- Fix memory clobber that could occur when *DEFORMABLE_TO_RIGID is used in combination with beam elements.
- Fix implicit's treatment of *BOUNDARY_CYCLIC for rotating parts.
- Modify memory reporting for MPP so that the proper choices of memory and memory2 are reported.
- Fix MPP problem that caused segmentation violation in some problems with eroding contact involving shell elements.
- Fix MPP problem wherein partial slave node stiffness was used in rigid wall force calculation.
- Update behavior of Toyota beam spot weld failure.
- Minor fixes to automatic tiebreak contact (SMP only).
- Fix hourglass control type 6 problem with NCPU>1 for 2D solid elements.
- Fix bug in restart when SPH elements are used.
- Fix prescribed acceleration problem with scale factor being applied twice.
- Fix memory issue for eroding contact involving 10-node tetrahedral elements.
- Fix problem in MPP whereby using more than 16 or 32 processors resulted in abnormally large amounts of time in rigid body processing, and hence poor scaling.
- Fix bug for SPH/SPH contact option. CONT=1 wasn't working
- Fix guided cable contact to correct small penalty stiffness which led to large penetrations.
- Fix memory clobber that could cause incorrect contact stiffness in MPP if PENOPT 4 or 5 is turned on.
- Enable *MAT_ADD_EROSION for EFG solid type 41 and 42.
- Turn on Gauss integration scheme in EFG shell formulation 41.
- Make SMP and MPP consistent in calculating stiffness of *CONTACT_SHELL_EDGE_TO_SURFACE_BEAM_OFFSET.
- Fix so that zero length tied contacts work for *CONTACT_TIED_SHELL_EDGE_TO_SURFACE_BEAM_OFFSET.
- Fix translation bug for type 22 single_edge contact (MPP only).
- Fix contact time step calculation to ignore infinitesimal masses of nodes created by *INTERFACE_LINKING_SEGMENT. Using their mass was causing an infinitesimal solution time step to be invoked when *CONTACT_ERODING was used.