SAN FRANCISCO BAY AREA RAPID TRANSIT - CASE STUDY

INDUSTRY: RAIL (PASSENGER VEHICLE)

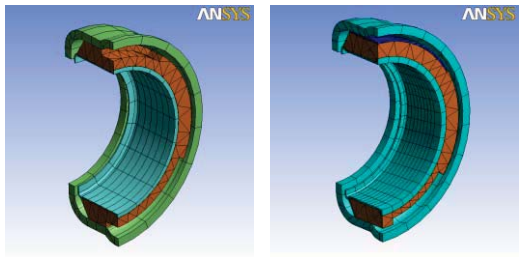
PRODUCT: PRIMARY SUSPENSION

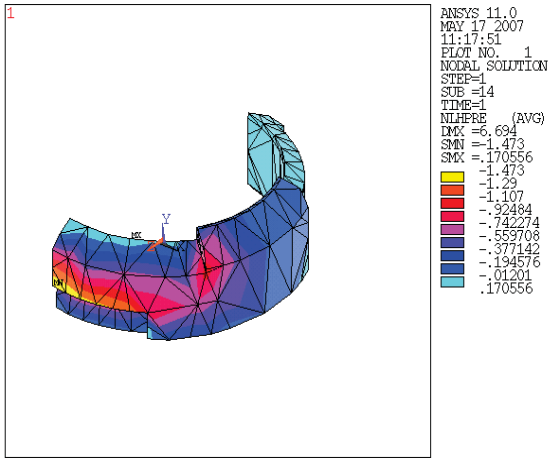
PROBLEM

- Rubber journals used by BART had very low resistance to creep resulting in excessive settlement in a very short period of time after installation (within 6 months).
- Rubber journals were being replaced as early as 6 months of service instead of the original 5 year design life requirement.
- Slow cure process used by the manufacture meant that they could not keep up with the demands of BART.

SOLUTION

- 5mm steel laminate added to the rubber journal to improve spring rate and reduce excessive deformation of the rubber
- Low creep rubber compound used
- ANSYS also used to model heat transfer conditions and mould design to optimize cure times and mould methods.





BENEFIT

- Life expectancy of NEW component is now more than 5 years.
- Improved product cost due to less frequent change out of rubber journal.

ESTIMATED DISMANTLE & ASSEMBLY COST SAVINGS OF APPROX $15 MILLION OVER 5 YEARS

VULCANITE