

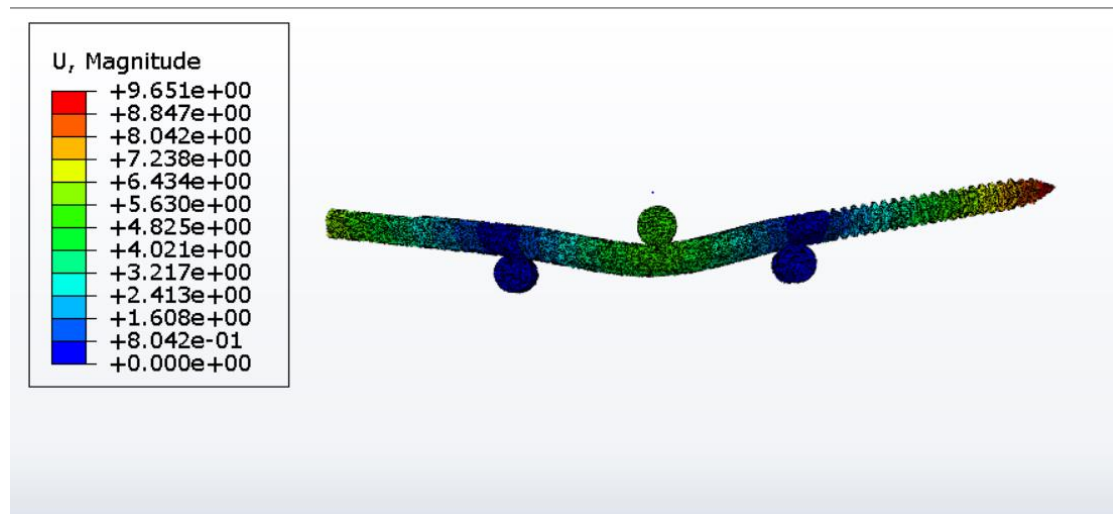
## FEA Testing

### Front Threaded Pins

#### Summary

Front Threaded Pins was subjected to an FEA (Finite Element Analysis) in order to evaluate its Safety Performance which is performed on a validated simulation software Abaqus/CAE 6.13-1 and FE Safe at CSIR-Central Scientific Instrumentation Organization, Chandigarh. This Protocol is equivalent to Testing Standard ASTM F 1541-17 applicable to Pins. Following FEA were performed to evaluate the safety performance of Front Threaded Pins:

1. Preliminary FEA testing as per ASTM F 1541-17



## Results of FEA testing as per ASTM F 1541-17

Following mechanical characteristics are evaluated using FEA as per ASTM F 1541-17 -

| <b>S.N.</b> | <b>Bending Stiffness<br/>(N/mm)</b> | <b>Bending Yield Strength<br/>(Nm)</b> | <b>Displacement at Bending Yield Strength<br/>(mm)</b> |
|-------------|-------------------------------------|--|--|
| 1           | 3005                                | 618                                    | 0.21   |