Gasket Design Analysis Variation Resistance

- Overview -

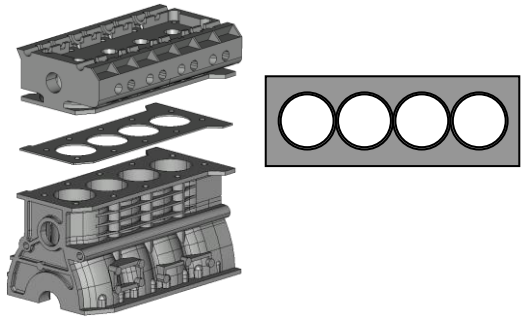
eSeal can evaluate variations in stress and seal performance under conditions of significant temperature changes. It makes sure the seal does not break with the thermal expansion and contraction of the material and it seals at the target position and force.
It makes it possible to review the shape and materials to ensure long-term seal performance reliability.

Rear seals

- Examples of use -

eSeal enables you to calculate materials with various properties such as iron, resin, and rubber.
For chemical plants and medical products, not only the shapes but also the materials that can be used differ depending on the usage environment and fillers.
It is useful in designing resin and rubber gaskets that meet your need.
In addition, you can evaluate metal gaskets used in heat exchangers such as engines and flanges, and single-piece rear seals made of steel and rubber.

Gaskets (Engines)



Gaskets (Flanges)

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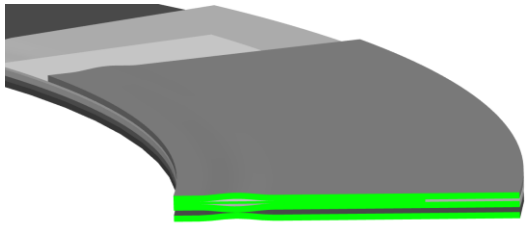
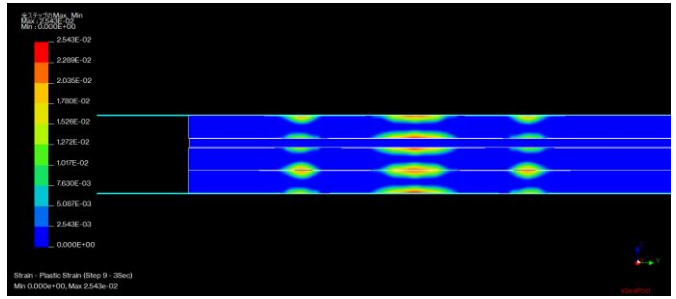
- Gasket deformation and recovery -

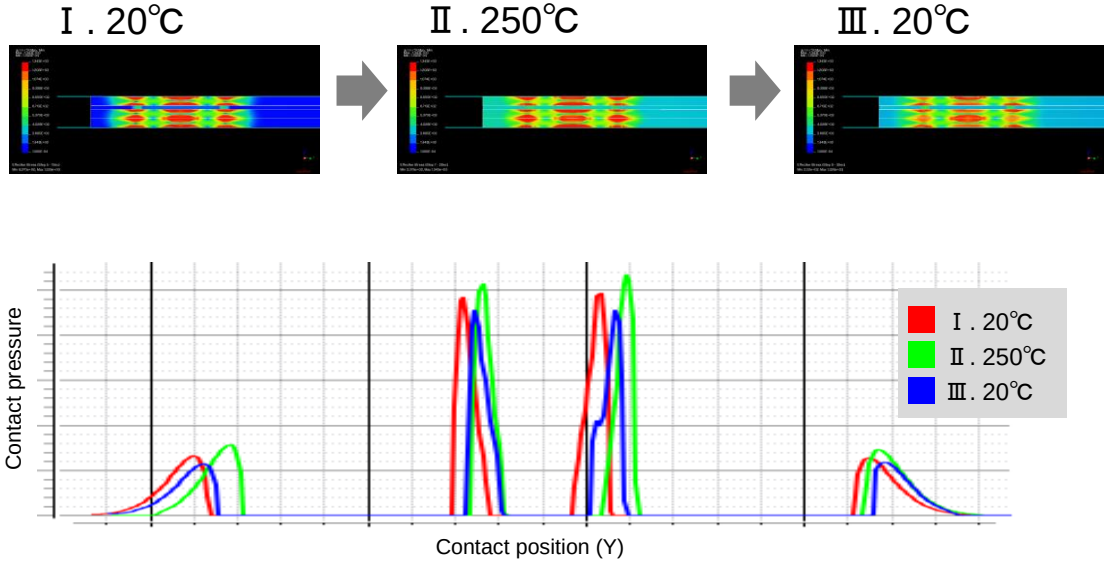


Inner sim type gasket

- **Plastic deformation of sealing materials**
  - Enables you to check the history of plastic deformation of elastoplastic materials.
  - Shows the durability of sealing materials under the cycles of expansion/contraction caused by assembly with heavy loads and significant temperature changes.



- **Temperature variation and Mises stress**
  - Represent temperature cycles in the calculation conditions.
  - Evaluate the variation of internal stress due to the thermal expansion and contraction of the sealing material.
  - Also evaluate the maintenance of sealing performance during thermal cycles based on changes in seal position due to sliding caused by that.



Changes in contact pressure distribution and seal position due to temperature change