

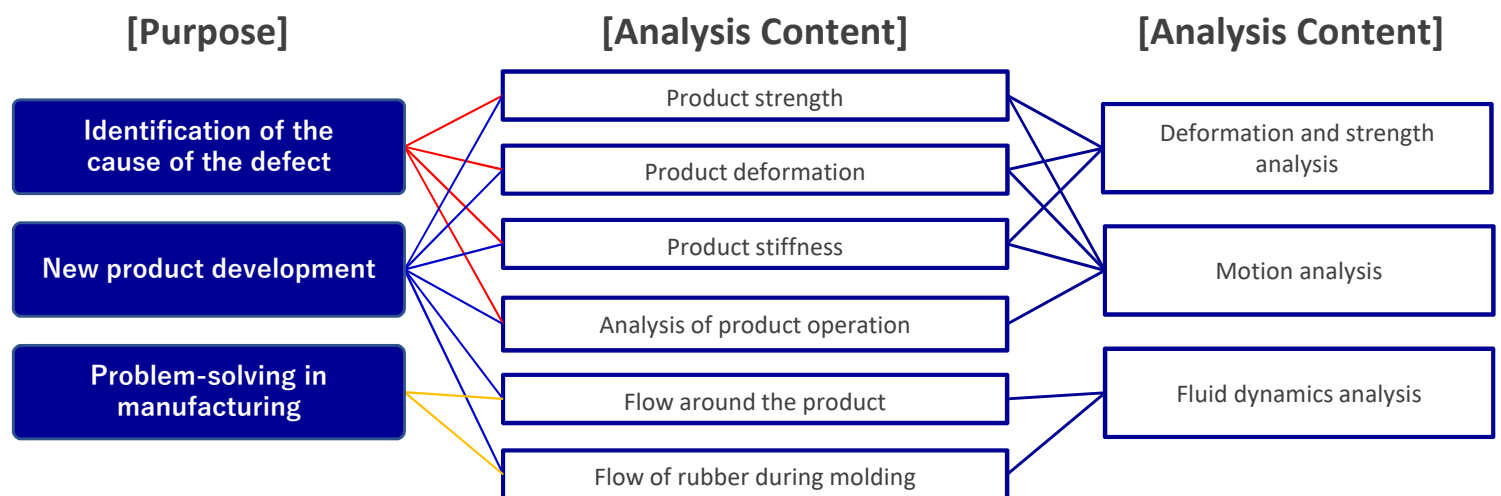
Numerical Analysis of Materials

Supports optimal product design by understanding and improving functionality during the design phase, regardless of material, type, or specification.

Analysis Findings

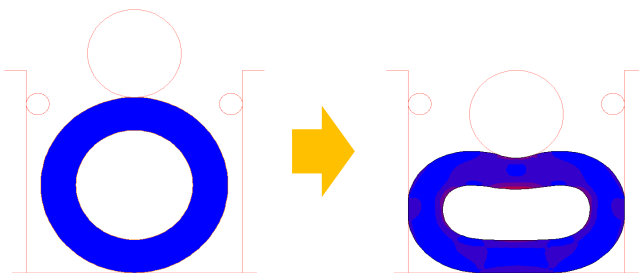
- Pressure : Checking Seal Strength
- Deformation : Confirming Abnormal Deformation
- Internal Stress : Verifying Rubber Damage
- Reaction Force : Force Applied to the Case (Insertion Force)

Overview

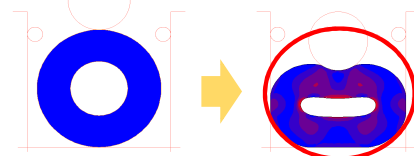


Examples

① Optimal Design of gasket

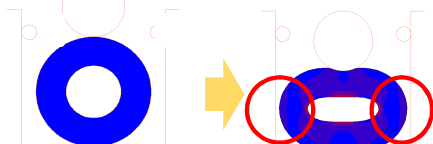


② Thicker Scenario



Heavy Load on Rubber-Fitted Cases

③ Small Diameter Scenario



Weak Sealing Performance

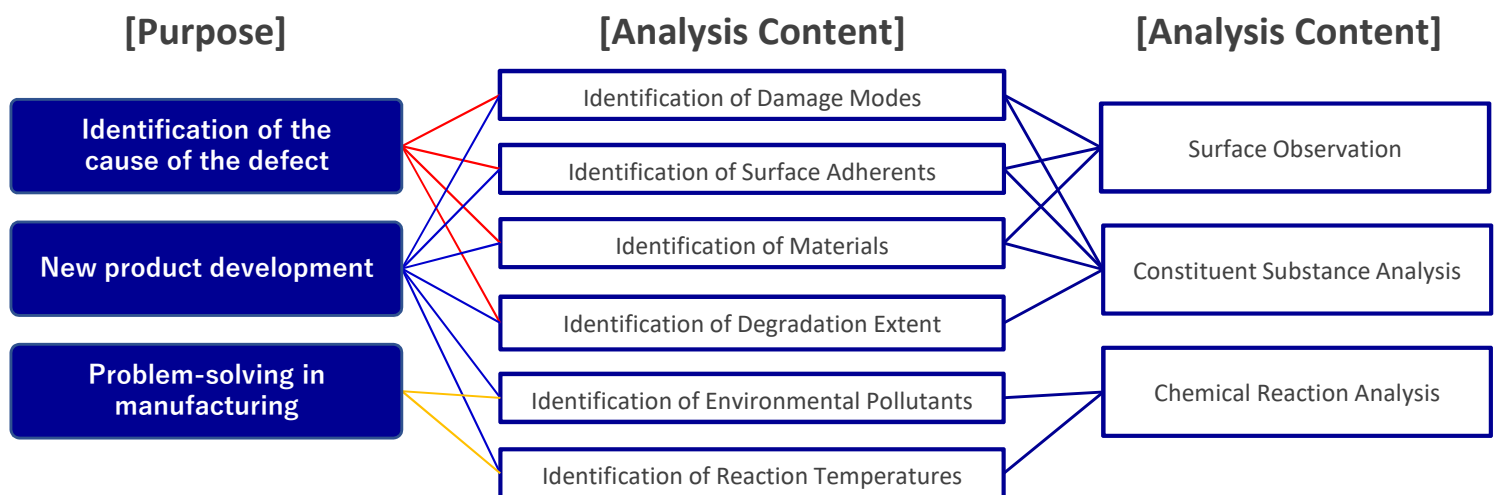
Chemical Analysis of Materials

We conduct investigations, root cause analysis, and countermeasure evaluations for product anomalies and claims to support quality improvement.

Analysis Findings

- Rubber Products: Rubber and additive types, quantities.
- Surface/Interface: Delamination, adhesion, precipitation.
- Environment/Safety: Environmental burdens, emissions.
- Damage: Damage causes, crack progression, deterioration level.
- New Materials: Composition, structure.

Overview



Equipment in Possession



Gas Chromatograph - Mass Spectrometer
Heated Desorption Gas Chromatograph - Mass Spectrometer
Pyrolysis Gas Chromatograph - Mass Spectrometer
High Performance Liquid Chromatograph (HPLC)
Fourier Transform Infrared Spectrometer (FT-IR)
Thermogravimetric / Differential Thermal Analyzer (TGA/DTA)
Differential Scanning Calorimeter (DSC)

Scanning Electron Microscope (SEM)
X-ray Fluorescence Analyzer
Ultraviolet-Visible Spectrophotometer
Atomic Absorption Spectrophotometer
Microwave Sample Decomposition Device
Karl Fischer Moisture Meter
Ion Chromatograph

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TOC East 10F, 3-5-7 Ariake, Koto-ku, Tokyo, Japan 1350063
E-mail: seigyotoiawase.en@fc.fujikura.co.jp

Web: <https://www.fujikura-control.com/english>
Founded: 1901

Sales: \$281 million US dollar (2023 March, consolidated)
ISO certified: 9001, 14001, 13485