Technology to Improve with the Cracking of Ultra High-Tensile Strength Steel Sheet by Stretch Flanging: Double-Punching Technology

Effect
Improving Stretch Flanging Flangibility of Arms and Frames
- Strengthening and weight reduction of parts by adopting ultra high-tensile strength steel sheets

Progress
1. Under Development
2. Development Completed
3. Commercialized

Points
Stretch Flanging is improved by reducing the work hardening of the sheared edge

Sheet Parts have many Stretch Flanging area

Diagram:
- Conventional Piercing
- Double Punching

Graph:
- Hole Expanding Limit vs. Clearance
  - Mild Steel
  - 590MPa
  - 780MPa
  - No Fracture, Cut-off Width: 1mm
  - Machining/780MPa