

# High-Productivity Hot Stamping Steel Sheet

## benefit

Die rapid cooling is not necessary by high hardenability.

- Improvement of the productivity at hot-stamping process by reducing hold time at die during press
- Possible reducing man-hours to adjust clearance of die by high hardenability

## Characteristic

### ■ Improved hardenability

By adjusting the chemistries

- Shift to long term side in nose of soft microstructure transformation (Mn added)
- Inhibition in tempering of martensite microstructure (Si added)

**Hardenability is improved**

Lower dead point retention time is shortened

**Improvement of productivity at hot-stamping process (High Productivity)**

### ■ Stability of Hardness

- Strength (hardness) can be achieved even if contact between steel and die is not sufficient
- It is profitable to get stable hardness at non-contact area in die R and forming parts with different thickness such as TWB, patch-work parts

Clearance in die non-contact area: 0.3 mm

Sample: 1.4t x 150w x 100L  
Die temp.: Room temp. (20-30°C)  
Heating & cooling:  
Heating up to 910°C  
→ cooling to 700°C  
→ die quench  
Holding time at die quench: 10 sec.

