

## Laser Joining of Dissimilar materials Using Cold Spray Process

### Effect

- Ultra-high-tensile steel sheet and extruded aluminum alloy can be joined quickly.
- Pre-drilling of steel sheets and aluminum alloy is unnecessary.

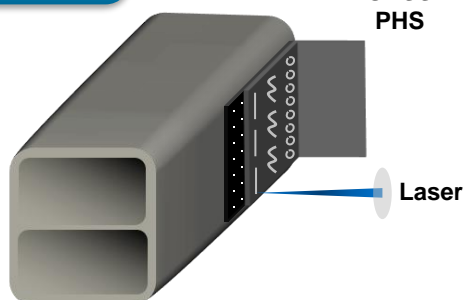
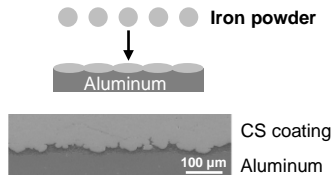
### Construction

### Outline of joining methods

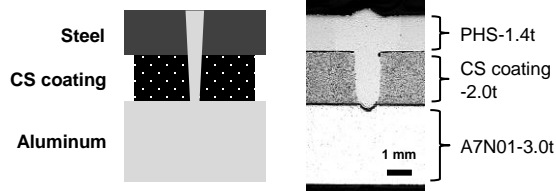
Aluminum extrusion



Cold spray (CS)

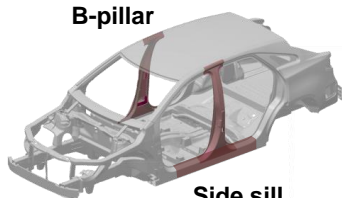


Laser welding



### Assumed application locations

B-pillar



Side sill



Simulated prototype parts

### Joint characteristics

Steel Sheet ; PHS-1.4t, Aluminum ; A7N01-3t (with CS-2 t)  
Heat Source : Fiber laser , Power : 5 kW , Welding speed : 4 m/min

