

Low Routing Materials (Busbar)

Under development

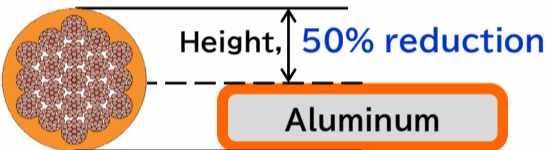
Scheduled to be installed in 2028

Low routing products for extending driving range of EVs and expanding cabin space and vehicle design flexibility

Background or assignment

As automotive parts are becoming larger due to increasing electric currents, products for routing in small spaces are required.

Solutions to Challenges

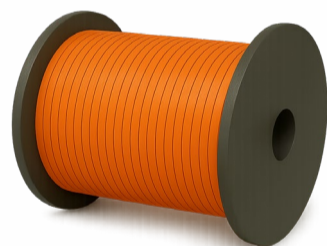
- 1 Reduce the wire height 50% by replacing wires with busbars
 
- 2 End-to-end manufacturing from hoop materials to products, and reduction of stamping scraps by implementing the bending process
- 3 Weight reduction by using aluminum conductors (approx. 35% reduction compared to copper wires)
- 4 Improve flexibility in wiring design by implementing local bending and using highly-flexible low wires

Main performance, specifications and structure

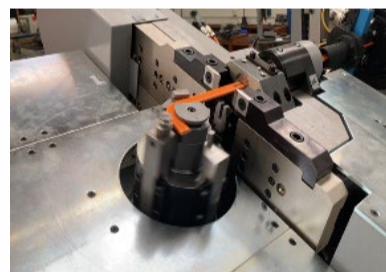
[Integrated production]



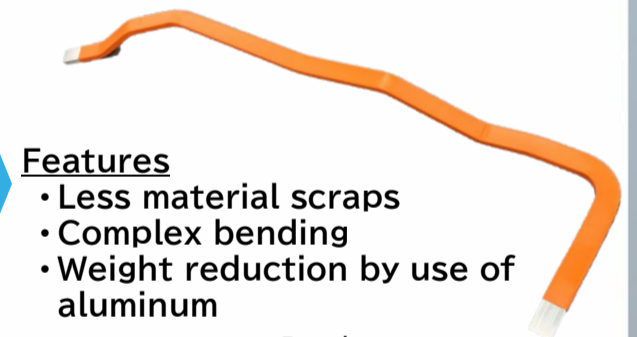
Hoop materials



Insulation coating



Bending

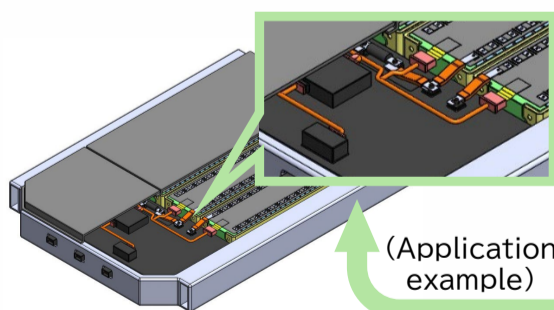


Features

- Less material scraps
- Complex bending
- Weight reduction by use of aluminum

Busbar

[Improvement of flexibility in wiring design]



Battery pack

(Application example)

<Local bending>



Features

- Minimizes pitch between bends
- High dimensional accuracy
- Supports plate thickness, 5mm or more



Highly-flexible low wire



Busbar + Low height wires

Features

- Flexible low routing materials
- Absorbs displacement caused by assembly tolerance and vehicle vibration
- Can be connected and used with busbars

Yazaki provides total support from design, connection, and manufacture of busbars.