Low Routing Materials (Busbar)

Under development
Scheduled to be installed in 2028

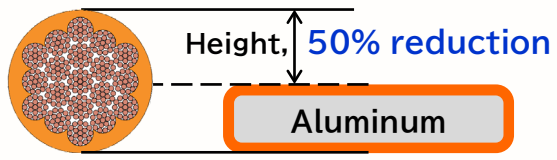
Low routing products for extending driving range of EVs and expanding cabin space and vehicle design flexibility

Background or Challenges

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

Solutions to Challenges or Features

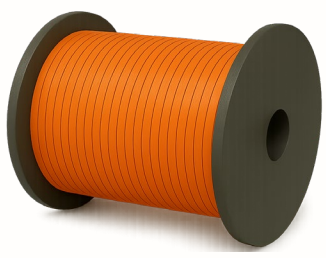
1. Reduce the wire height 50% by replacing wires with busbars



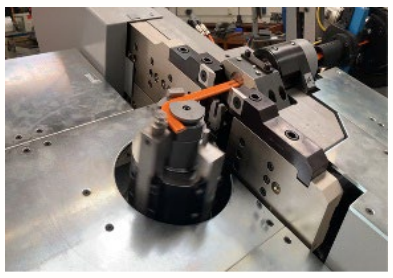
2. End-to-end manufacturing from hoop materials to products, and reduction of stamping scraps by implementing the bending process
3. Weight reduction by using aluminum conductors (approx. 35% reduction compared to copper wires)
4. Improve flexibility in wiring design by implementing local bending and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

[Integrated production]

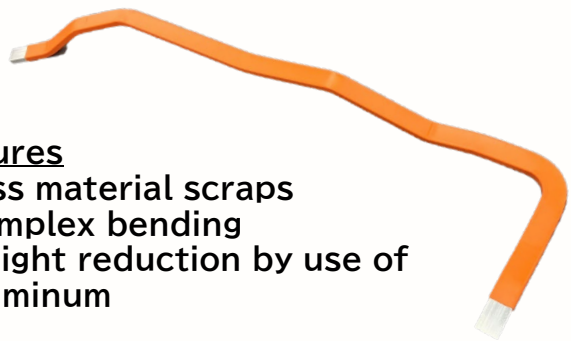
Hoop materials



Insulation coating



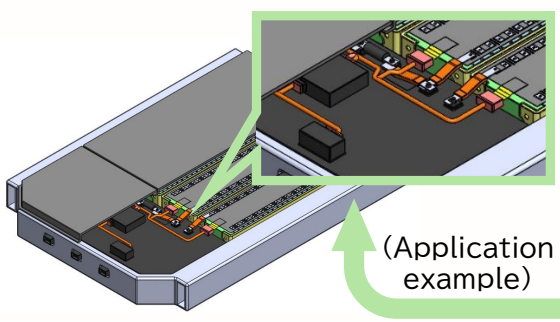
Bending



Busbar

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

[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.

YAZAKI