Sustainable battery protection

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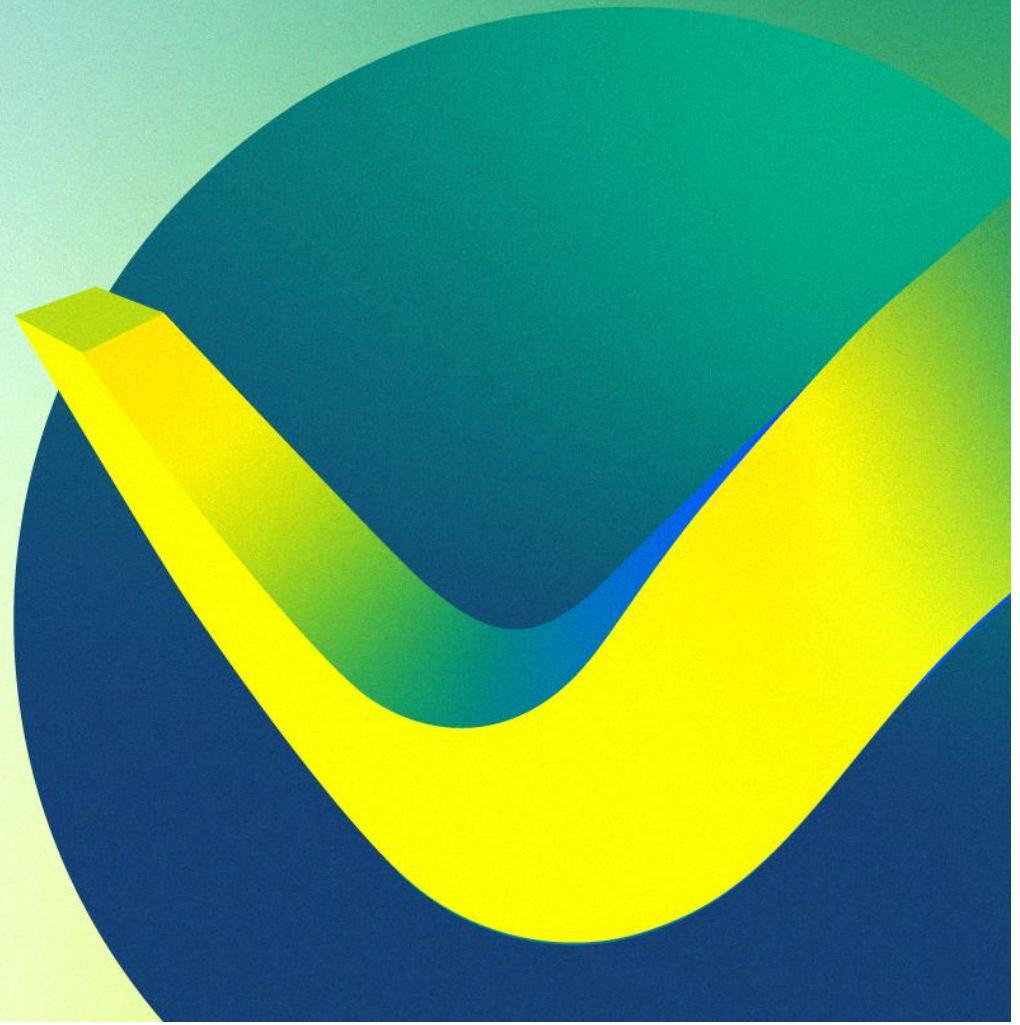
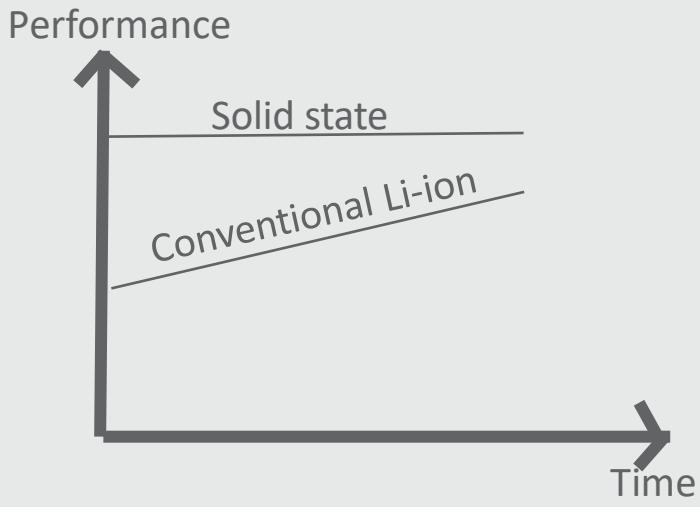
Knowledge Service Center



Does the future battery cell need protection?

SWEDISH STEEL PRIZE

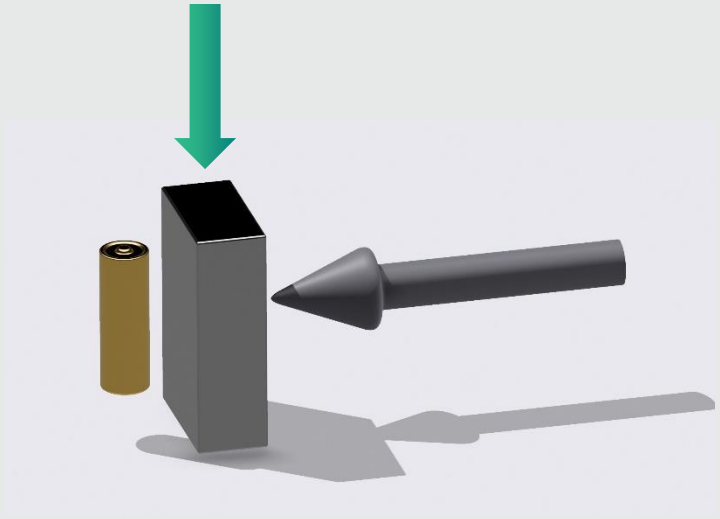
Weight
Performance (peak, long term degradation)
Energy density
Cost (raw material – production)
Environment at mining
Corrosion
Recyclability
Production in large numbers
Reliability (dendrites)
Safety



“Something” made of what?

SWEDISH STEEL PRIZE

Something



- Cost
- Weight
- Sustainability

Steel

Aluminium

Blast furnace

Scrap based

DRI with hydrogen

Aluminum vs Steel

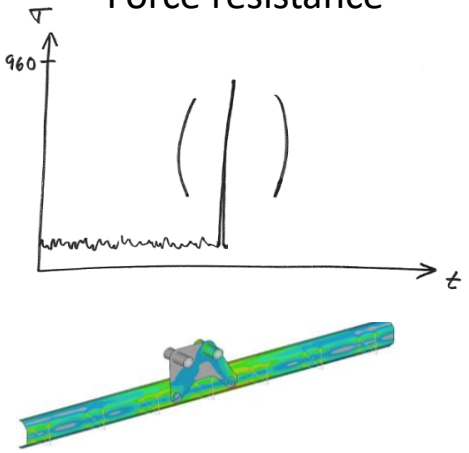
	Aluminium 6082 T6	Docol 1700M
Density [g/cm3]	2.7	7.8
Modulus of Elasticity [GPa]	70	210
Ultimate tensile strength [Mpa]	320	1750

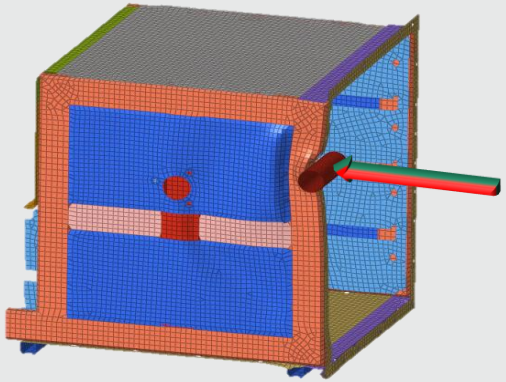
SWEDISH STEEL PRIZE

Load case

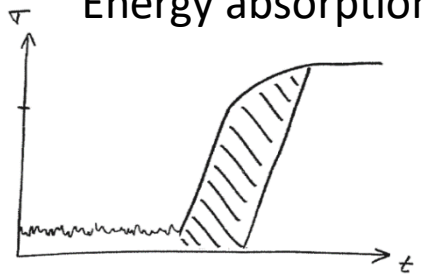
SWEDISH STEEL PRIZE

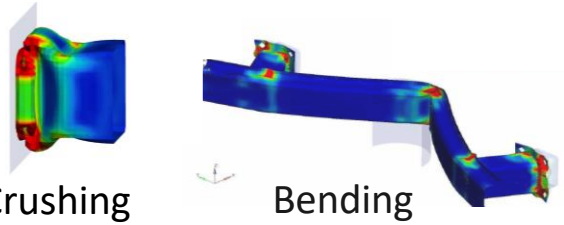
Force resistance





Energy absorption





Crushing

Bending

ENERGY ABSORPTION – SILL STRUCTURE

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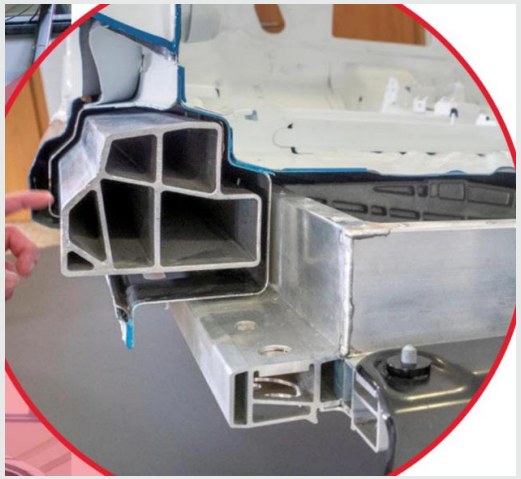
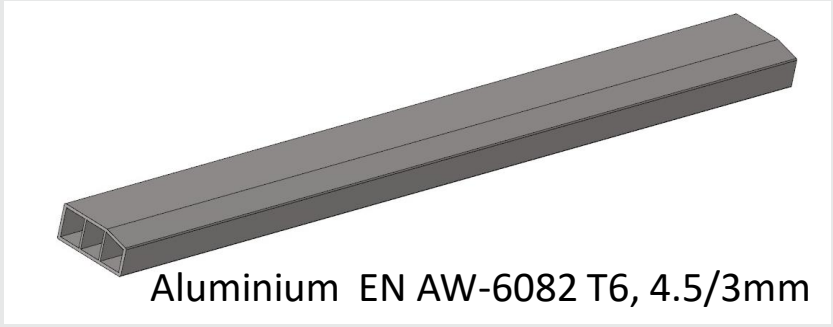
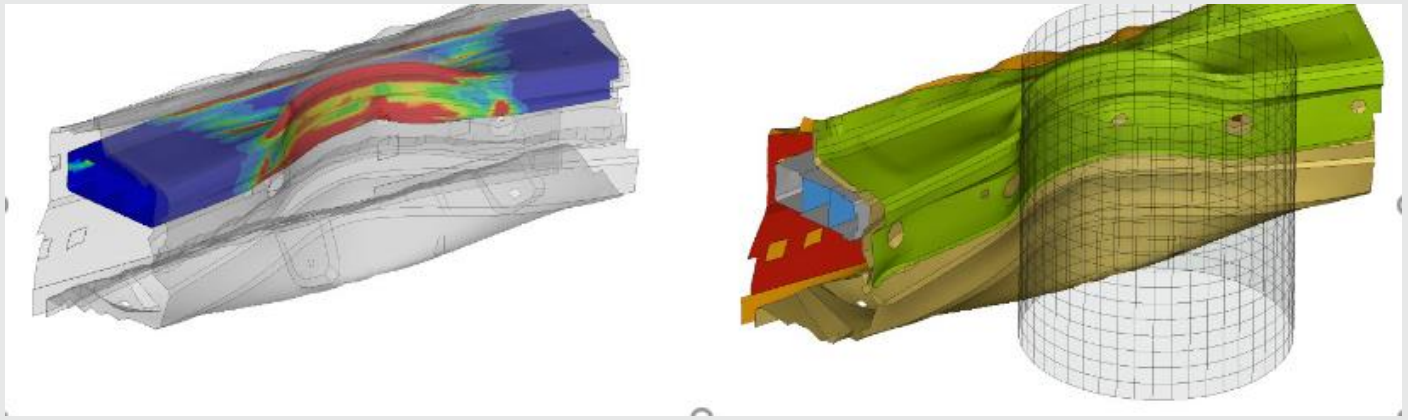
STEEL PRIZE





Aluminium EN AW-6082 T6, 4.5/3mm



Closed profile Docol 1700M

SWEDISH
STEEL PRIZE

Roll forming

Estimated time line

SWEDISH STEEL PRIZE

2025 — Advanced engineering starts

2027 — Product development starts

2030 — 1st carbon neutral cars

2039 — Carbon neutral company and cars

SSAB EV Concept

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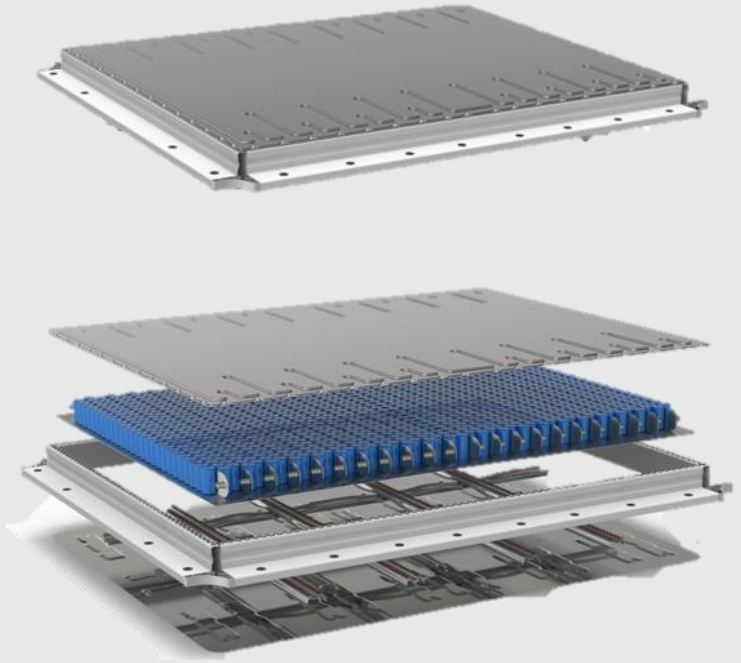

Summary

ROLL FORMED CLOSED WELL DESIGNED PROFILES IN AHSS (FF) IS THE MOST SUSTAINABLE WAY OF PROTECTING BATTERY CELLS.