



ELECTRILABS PTY Ltd.

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ELECTRILABS



(Pty) Ltd



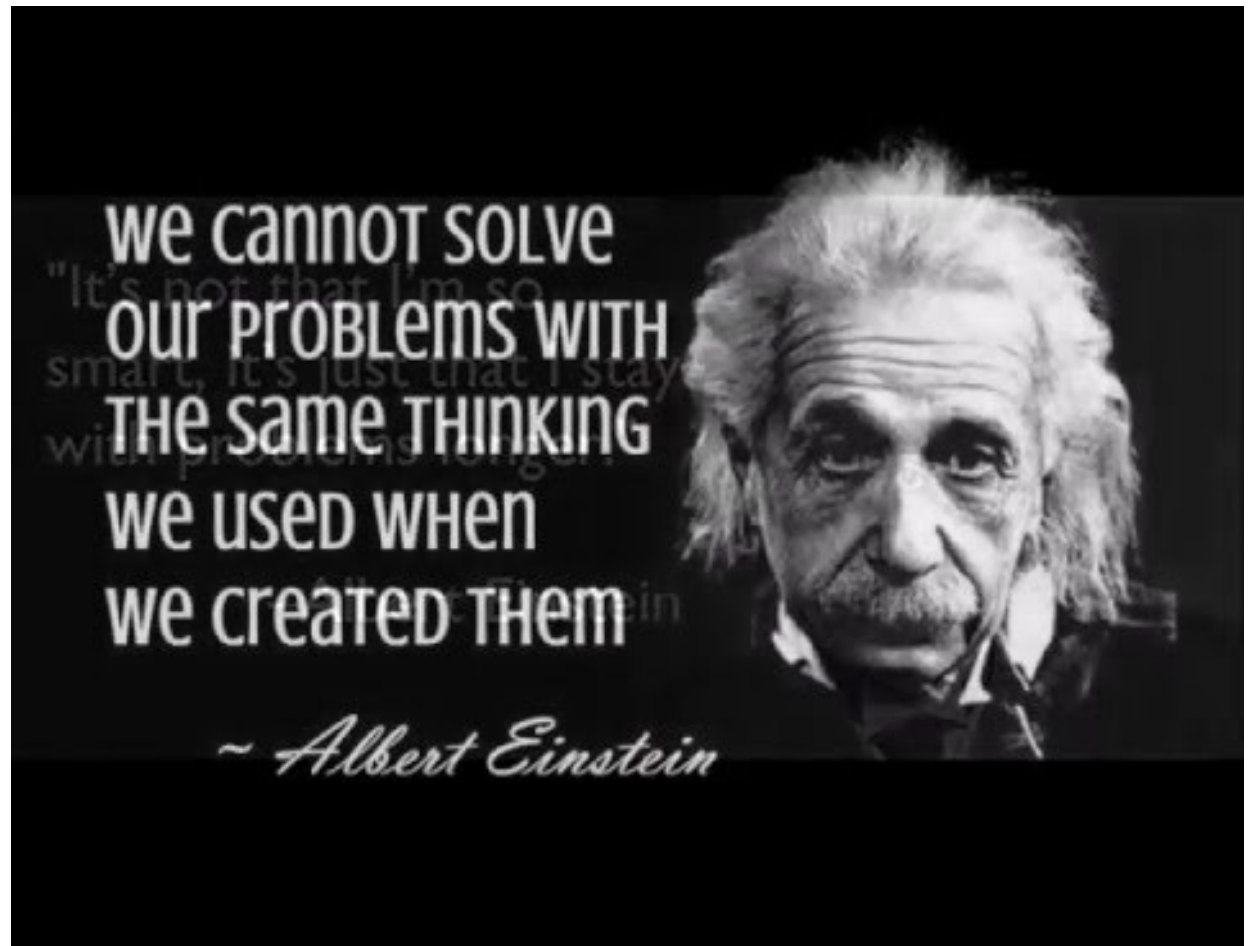
FZSoNick
+ = -

SODIUM NICKEL TECHNOLOGY

- + Established in 1999
- + Strong power protection history and Energy Storage
- + Evolved in solutions provider around the Datacentre
- + Focused on quality and cutting edge technology
- + Strong partnerships and industry alliances
- + Skills and expertise drove national coverage
- + Largest SYPX UPS installation in Africa (80 -500kW monoblocks)
- + SADC focus with installations in DRC, Zambia, Botswana, Mozambique
- + Datacentres for Eskom, SENTECH, SITA, and many more..
- + Flexible and agile

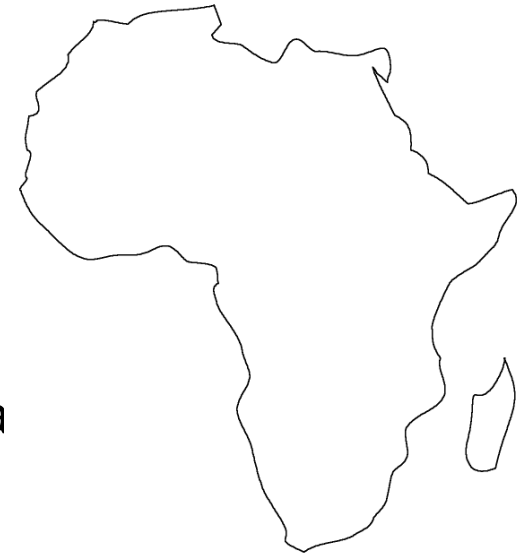


Old Challenges calls for NEW IDEAS



So What are the Challenges we face in Africa...

- + Theft of batteries - cost of replacement and downtime
- + Harsh Environmental African conditions
- + Environmental Impact - GREEN pressure
- + Product life cycles and expected lifespan
- + Faster Recovery time
- + Health and Safety
- + Product Warranties
- + Cyclical applications versus Standby
- + Monitoring capabilities and the cost associa
- + Cost (CAPEX versus OPEX)



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Performances

- ✓ **Temperature Immunity**
(-40 to +60° C)
- ✓ **Cycling Capability**
> 3.000 cycles
(80% DOD)
- ✓ **Battery energy density**
100 to 120Wh/kg
150 to 190Wh/lit
- ✓ **Shelf life (> 20 years)**
- ✓ **Not re-usable** on different applications (theft deterrent)
- ✓ **Remote monitoring**

Safety

- ✓ **Intrinsically safe**,
electrochemical safety
- ✓ **No gas emissions**
- ✓ **No flammable materials**
- ✓ **No fire/water flood**
reaction
- ✓ **Tested in the field**
- ✓ **BMS control**
- ✓ **Cell/Battery Mechanical**
case

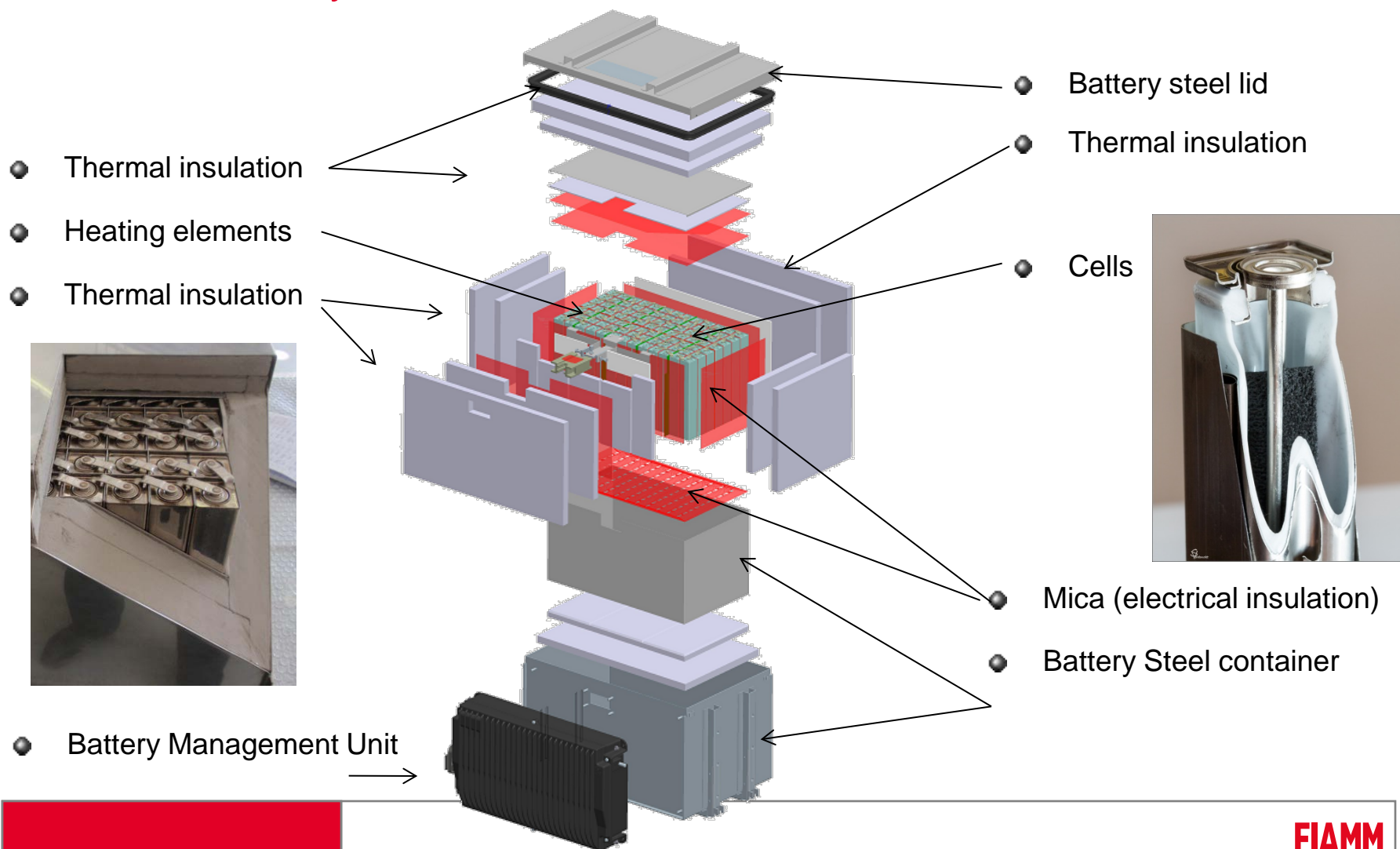
Zero Impact Battery

- ✓ **NO dangerous materials**
- ✓ **100% recyclable**
- ✓ **NO pollution materials**
- ✓ **NO gas emissions**
- ✓ **NO valuable resalable**
materials

Suitable Applications/Markets

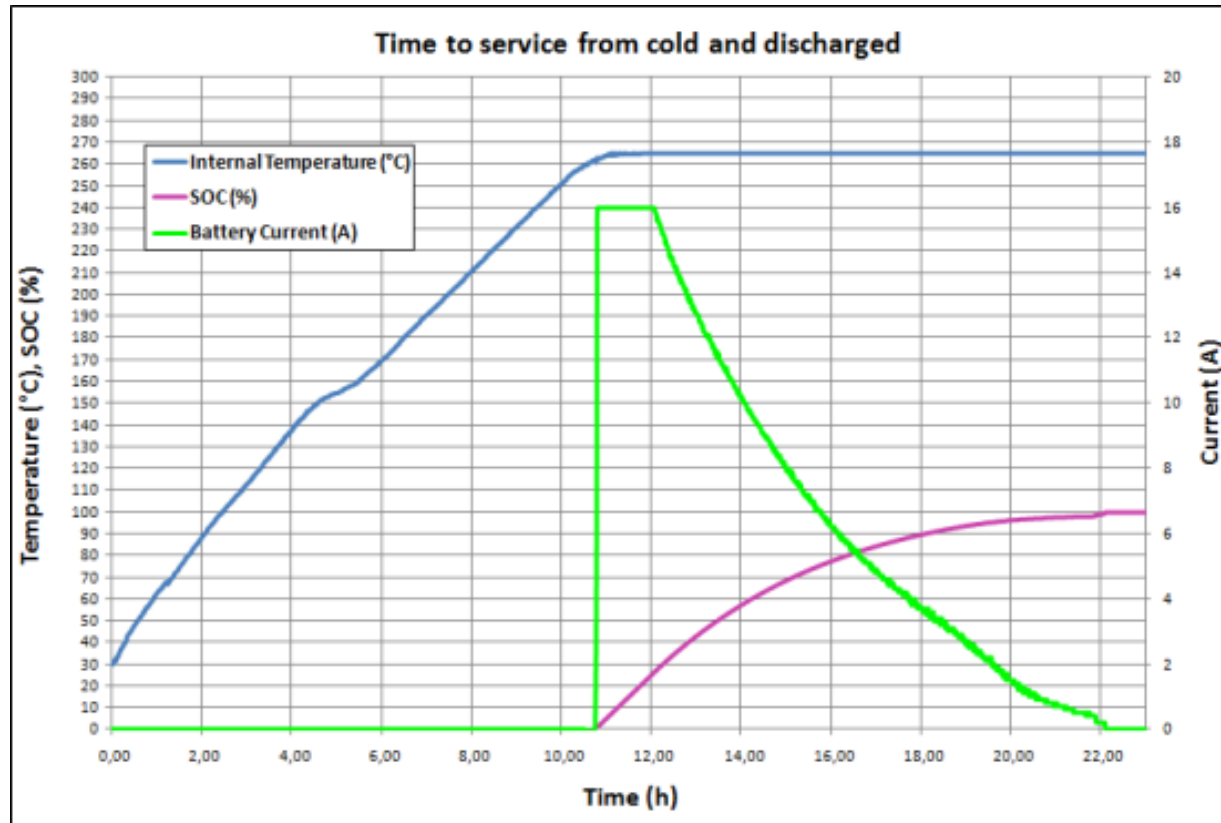
- ✓ **Telecom** – Harsh Environment Outside Plant, High Energy Density Central Office and Off Grid BTS.
- ✓ **Oil & Gas** – On Shore and Off Shore sites.
- ✓ **Railways** – Onboard train back up and harsh environment signaling sites.
- ✓ **Power Generation** – Safety environment

So how do they do it.....



FIAMM SoNick Batteries – Battery Performances

+ Time to service



FIAMM SoNick / Range

- + *Nominal Voltage* 48 VDC
- + *Capacity* 120 / 160 / 200 Ah
- + *Energy* 5,8 / 7,7 / 9,6 kWh
- + *Optimal use* 1 to 12h rate



+ *Main tech characteristics:*

- Operating Voltage Range 40 to 54 VDC
- Heat dissipation 107 / 110 / 117 W
- Max Discharge Current 90 / 120 / 150 (200*) Amps
- Bus Voltage Range 53 ÷ 60 VDC
- Low Voltage Disconnect 40 VDC
- Fuse 200 Amps
- Communication Port RS485 or CAN / USB
- Alarm Contact 230 VAC 2A

- Front 496 mm (19.5 inc)
- Depth 558 mm (21.9 inc)
- Height 320 mm (12.6 inc)
- Weight 80 / 95 / 105 kg (177 / 210 / 243 lb)

Typical applications

Telecom: on grid /
hybrid / outdoor
cabinets / central
offices

- Env. Temperature Range - 20 TO +60 °C (-4 ÷ 140°F)
- IP rate IP 55

* Discharge current up to 150A for the new TL200 with bussbars

FIAMM Sodium Nickel Batteries / Up and Running

MTN RSA- offgrid power for remote BTS in harsh environment (2011)

- photovoltaic sites with 48TL80 systems Onseepkans and Kalahari area
- Key factors:
 - + Immunity to extreme temperatures
 - + Long life under daily cycling
 - + Remote monitoring
 - + No maintenance

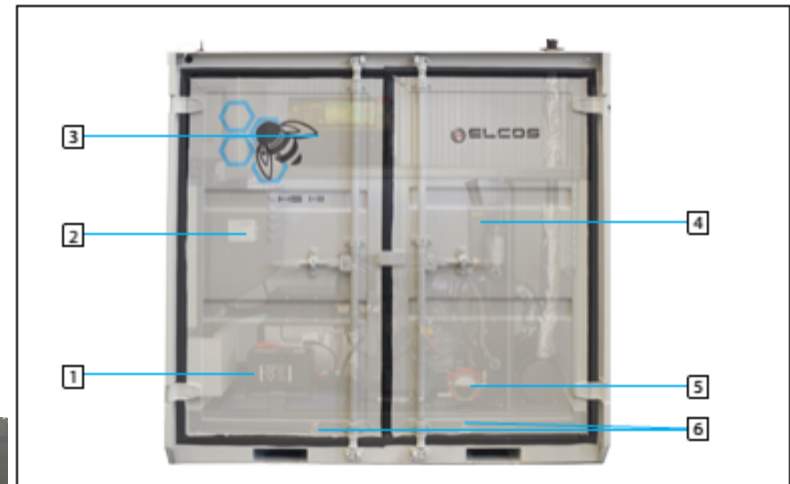


FIAMM SoNick / References - Hybrids

Generator + Batteries

Key Factors:

- + Extended life and reliability
- + Remote monitoring
- + High cyclibility



FIAMM SoNick/ Solution Range

Electrical
Vehicles

Industrial

Energy
Storage





THANK YOU!

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The FZSoNick logo is displayed in a large, red, pixelated font. Below the text is a red graphic consisting of a plus sign on the left, two parallel horizontal lines in the center, and a minus sign on the right.

SODIUM NICKEL TECHNOLOGY