

# AIP - Battery project

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# Rights to a new type of rechargeable electromagnetic induction battery.

- KATA-ANA INVEST AB has acquired all development and trading rights for a completely new type of battery.
- The battery will be made of aluminum and is theoretically estimated to have **33 times better capacity** than currently available lithium batteries.
- The development goal is to reach **20 times better capacity**.
- It is mainly used in electric vehicles, but it works equally well in all other applications that require battery power.

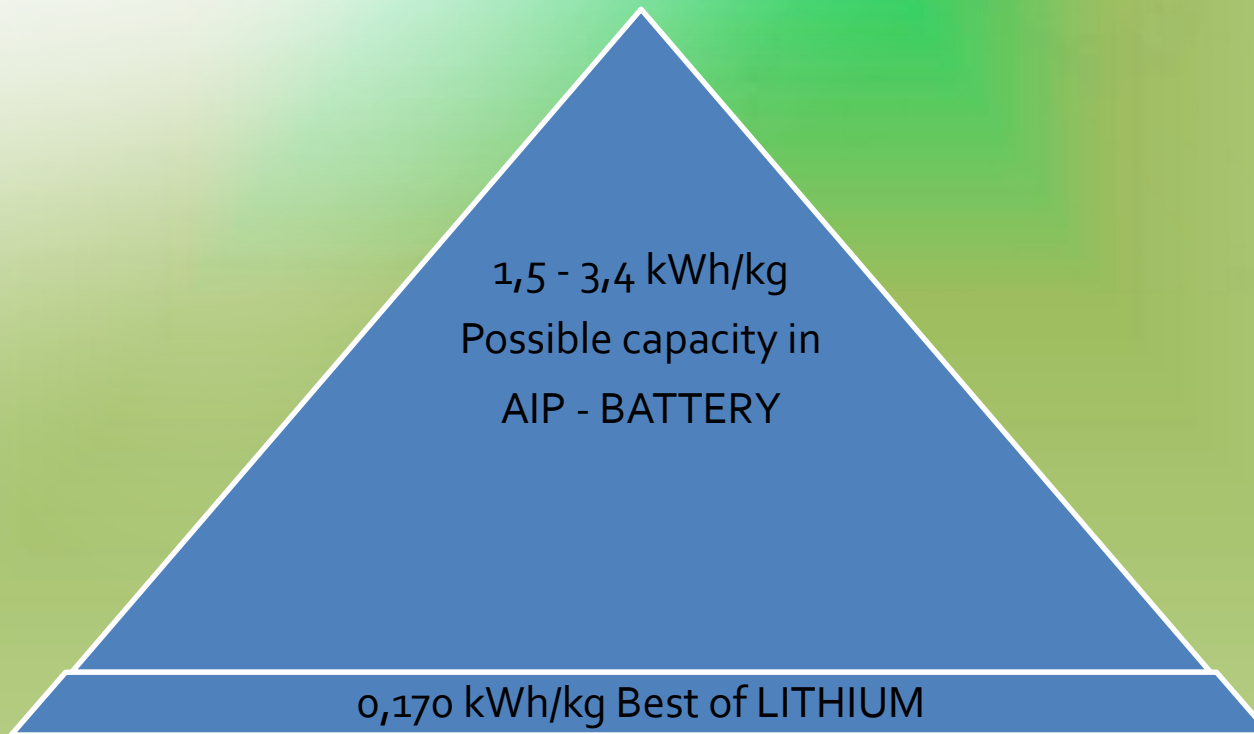
# Potential

- The project is just in time now.
- With the best result of the project, the market can be global and huge.
- The market is worth more than €30 billion, maybe much more.
- The market is growing at least 20 percent per year.
- The growth potential for the electric car market will be very high.

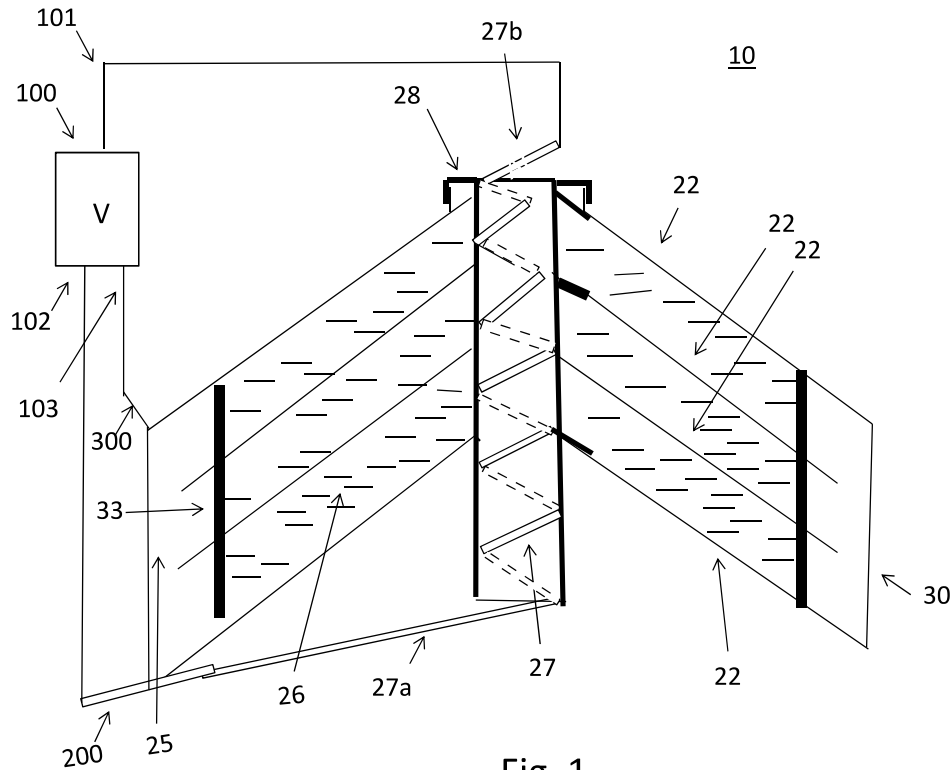
# Background

- Secondary battery development has been going on for 35 years
- The inventor is now 83 years old (date of birth: December 21, 1939).
- He originally worked with stainless metals.
- Interested in electric cars.
- He wanted to research and sold a successful business.
- He produced an idea for a solution that he eventually developed.
- His goal was to find the best solution for generating energy and charging aluminum batteries
- In the end, he found that the most effective solution was consistent.
- He now had complete plans to build two complete systems.
- He used these to check the reduction of aluminum and perform detailed measurements on battery performance.
- The goal was to produce a prototype corresponding to today's 12 V car starter battery and 80 kWh battery for electric cars with an electric control system.
- The development work over the past 20 years has developed as financial resources have allowed.
- KATA-ANA INVEST AB has acquired all trading rights for the invention.
- The prerequisite for the acquisition is development and construction of prototypes, license sales, followed by production and sales.

# Relative capacity for innovation, new AIP battery, compared to lithium battery.



# Battery model: Pyramid



# Function

- Rechargeable aluminum battery - can store, drop, and take in a lot of energy.
- Power cord - needed for proper operation.
- Organic electrolyte and its chemical substances are used with a special method, that is necessary to achieve good function and results.
- The battery's internal electrical system is required for good operation and charging.
- The battery should be used in a special way - which is necessary for good and efficient operation

# Questions and answers

The following information about technology, minimum energy in all parameters and economics is based on calculations, subtests and represents goals.

- Rated voltage approx. 7.5 V and higher
- Charging voltage approx. 10.0-15.0 V
- Induction approx. 10.0-360 V.
- Voltage when the battery is kept approx. 0.5 V, or 0.0 V. discharged energy
- Current electricity 507-1000 Ah / 2kg / dm<sup>3</sup>
- Power window No complete information available
- Capacity alternative, kWh / dm<sup>3</sup>, 1.5- 3.4 kWh / kg
- What does the energy store in the cell? Aluminum loses energy and molecules gain energy.(How this is done and how it works is a secret. We will apply for this in a patent).  
It's a secret and we can not reveal it.  
Secret until the patent is granted.
- How it works in general. More than 3,000 to 10,000 cycles.
- What does the chemical formula look like? Charging is only possible when + is the positive pole and - is negative, according to standard in battery technology.
- How many cycles? Many . None during download and unloading.
- Can the battery recharge? Yes.
- Which gases are released from the cell It can store a lot of energy, the supply is plentiful, cheap and has a relatively small weight.
- Is it a closed cell?
- Why build aluminum?
- What is listed below about technology, energy and economics is based on calculations and there are set goals.



# Comparison of competition

- Lithium-ion batteries are the best available.
- There are no rechargeable aluminum batteries on the market.
- But recently, Cornell University in New York, USA, has made progress in researching rechargeable aluminum batteries.
- They have the same energy content as lithium-ion batteries.
- **Our batteries are estimated to contain twenty times more energy than Lithium-ion batteries.**
- We do not know of any other successful aluminum battery studies other than Cornell University.

# Direct patent application.

## To do list of needs

- First patent application filed in the United States 12/6/2020, no. 16/899, 671. PARTA 1 US.
- Other patent applications se slide 12.
- Prototype unit to be built.
- Control and reinforcement of aluminum reduction has been carried out.
- Battery performance measurements must be supplemented with a prototype.
- Examination of production processes.

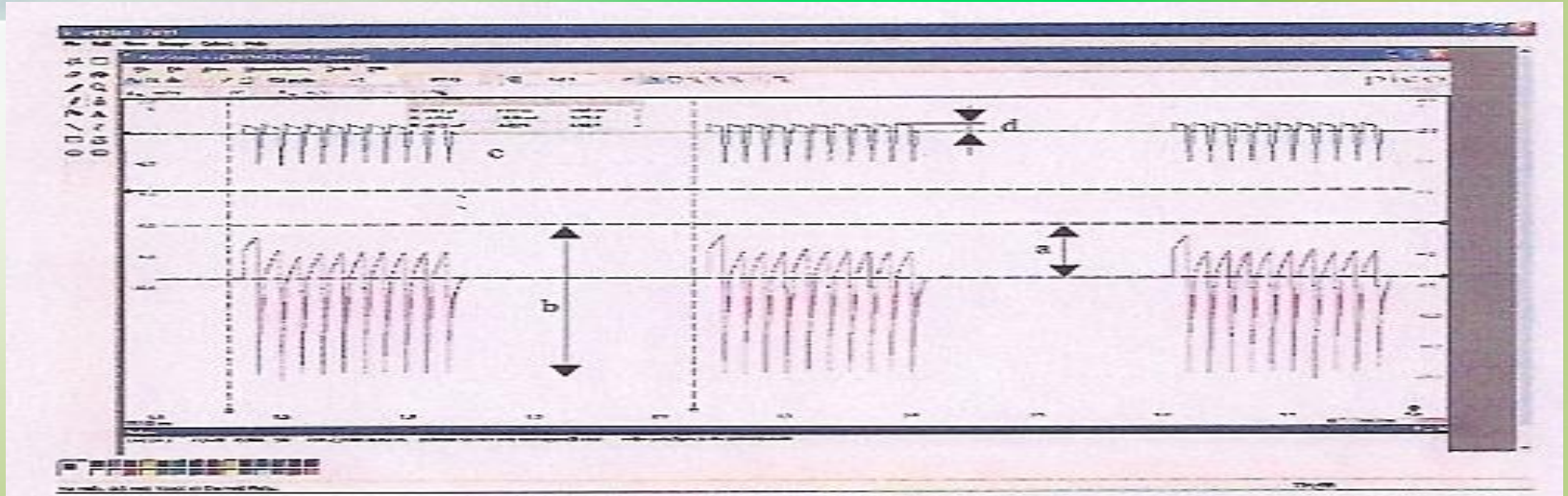
# Practical needs

- Clean room about 215 square meters.
- Workshop / changing room about 540 square meters.
- Office (already acquired) about 108 square meters.
- Various workbenches and tools must be procured, or an external operator can be hired.
- Mixtures and more are purchased from external suppliers.
- Board and administration (already available).
- The CEO / project manager must be appointed.

# Patent and PCT applications and descriptions of functionalities

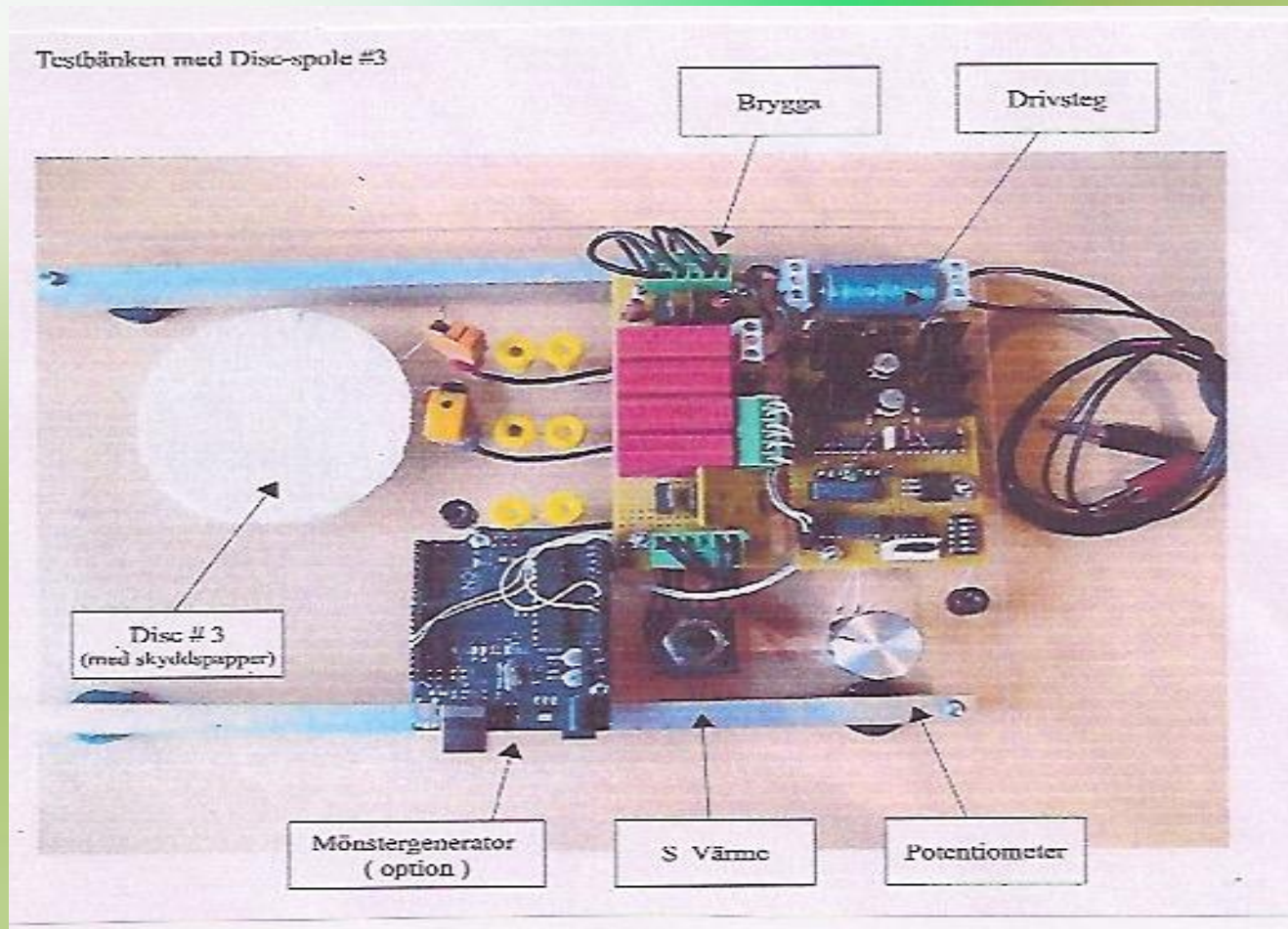
- Patent application filed in the United States 12/6/2020, no. 16/899, 671. PARTA 1 US.
- Patent Application Publication US 16.12. US 2021/ 0391592 A1
- Global patent applications in Finland filed 11/06/2021 PCT / FI2021 / 050437
- In 2022 and 2023, patent applications have been submitted for the countries of Europe, Canada, Japan, and Australia.
- The inventions include Aluminum electrode, which is not passive and does not become passive during operation, which can both release and receive aluminum ions.
- Inductive electrical system and capacitor unit that keeps the battery in active operation in all conditions.
- Organic electrolyte with high electrical capacity and catalytic capacity, which allows the electric current to be obtained from molecules, during charging and discharging of battery unit.

A picture taken of the test bench sample measurement. The disc roller (3) is connected but does not change the load.



- a. Shows the constant voltage level that charges the sensor. Without load, it corresponds to the operating voltage (7-10 Volts).
- b. Note that pulses of approx. 20 V are generated when the magnetic field is active. The heart rate is usually limited by the connected cell if it takes over.
- c. Pulsates over the puck roller. The measurement is made with a 1:10 sensor, so the actual voltage is 10 times.
- d. The pulse across the coil is about 5-6 volts and the peak current is 1.15 amp - 6 watts
- The pattern generator is used to give 10 pulses and then proceed to the charging phase.
- If the coil is preheated, a current of about 1 amp is obtained with a 5–6 volt 5 kHz HW oscillator.

# Electromagnetic induction battery. Picture of a test bench.



# Development time – License sale

- Development time is estimated at 1 – 2 years.
- Only a global manufacturing license for sale: price immediately €3Mill., 1-2 years after €400Mill.+ royalty / kWh.  
Investor or producer.
- License reservation: price immediately €0.3 Mill., 1-2 years after €500 Mill. + royalty / kWh.  
Investor or producer.

# Alternatives to a partner

Firstly; We have for sale a license for the manufacture of a unique super battery invention for a company, which first makes an agreement with us and at the same time negotiates price and payment plans.

Second; in any case, we expect to sell bookings of production licenses in advance.

For the third; You can also become a partner and buy shares in the company.



# Alternatives to a partner

Alt 1. Become a shareholder for €6.0 Mill and get 20 % of the company via a targeted new issue. The liquidity must be used for development work.

Alt 2. Buy the entire invention with all rights for €7 billion, of which €6 million is paid upon signing the contract. A manufacturing license shall accrue to the inventor free of charge.

The buyer is responsible for the further development work and the patent applications, with the help of Kat-Ana and the inventor, which is estimated to take 1 - 2 years.

When the first prototype is operational, 1/3 of the balance will be paid and when commercial production begins, the remaining amount of the €7 billion will be paid.

**THANKS FOR YOUR INTEREST!**