

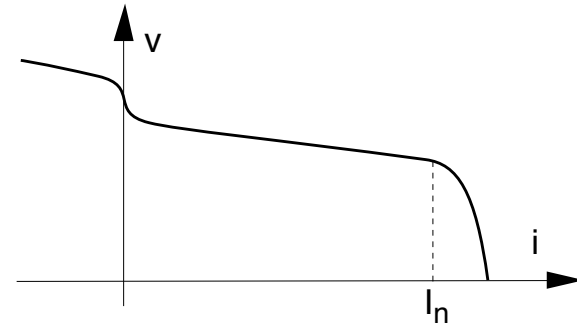
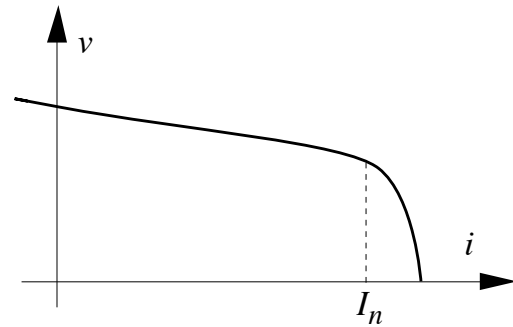
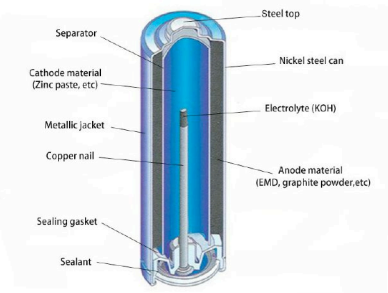
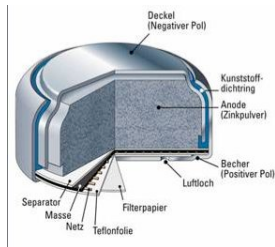
ELETTROTECNICA CIRCUITALE

M. GUARNIERI

GENERATORI ELETTRICI REALI

cap. 7

Generatori reali di potenza elettrochimici



Panasonic NCR18500



Generatori elettrochimici per mobilità – Tesla Motors

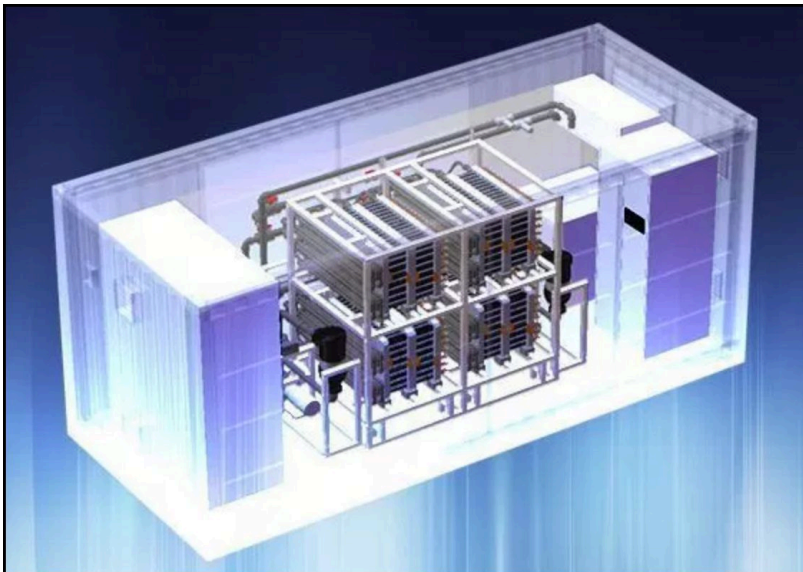


185 kW, 53 kWh → 210 km/h 393 km



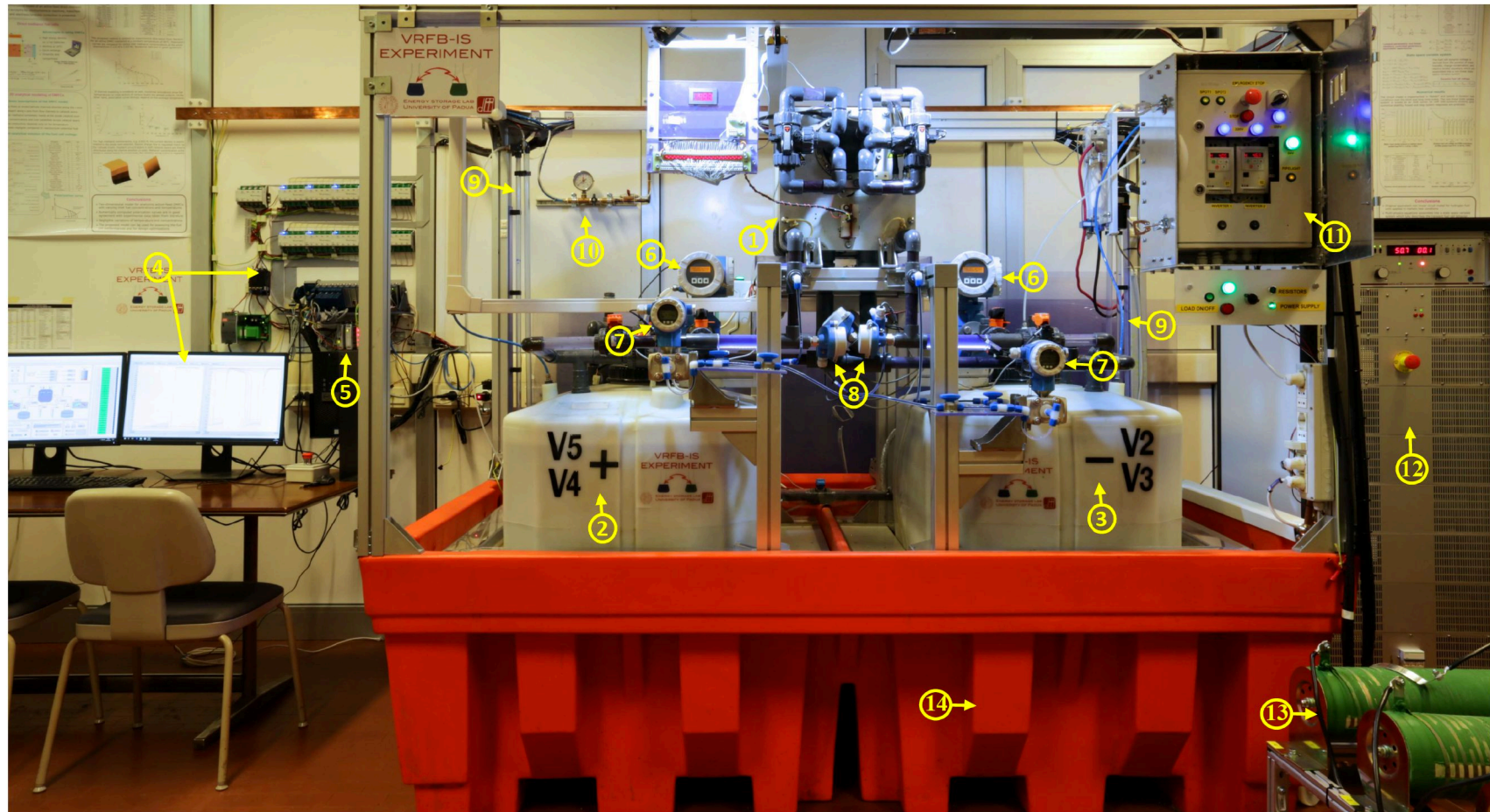
Generatori elettrochimici stazionari

Rongke Power – China



Più grande batteria al mondo:
200 MW – 800 MWh

Batterie a Flusso sperimentale



- 1- Stack
- 2- Positive electrolyte tank
- 3- Negative electrolyte tank
- 4- System supervisor (or BMS)
- 5- Surveillance PLC
- 6- Solution flowmeters
- 7- Solution pressure meters

- 8- Solution temperature meters
- 9- Tank overpressure gauges
- 10- Nitrogen line
- 11- Electric panel
- 12- Bidirectional static converter (or PMS)
- 13- High current passive load
- 14- Containment tank

Curve V-I sperimentali di batteria a flusso

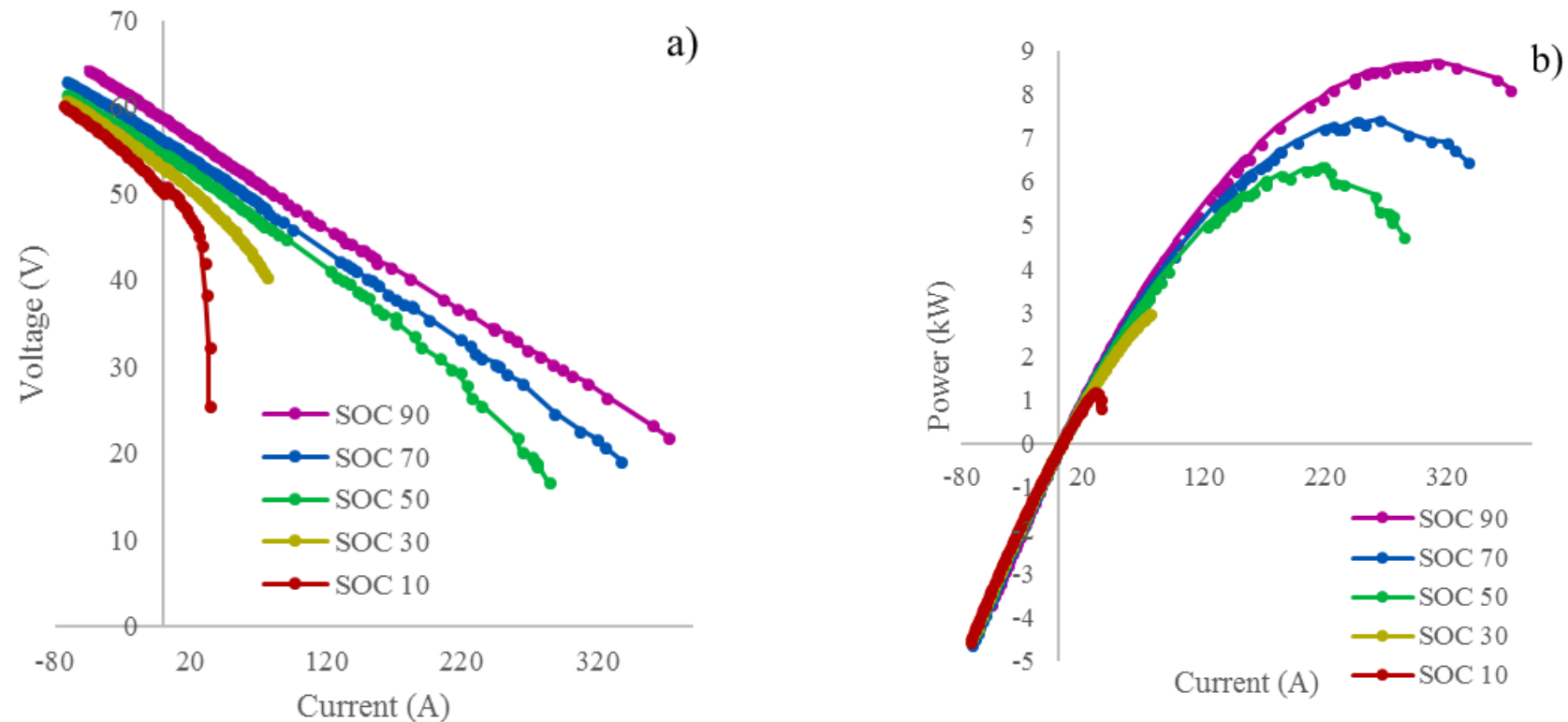


Figure 6 – Fast mode tests. a) polarization curves at different SOC levels with $Q = 29.5 \text{ L min}^{-1}$ ($q = 20.5 \cdot 10^{-3} \text{ cm s}^{-1}$); b) power curves at different SOC levels with $Q = 29.5 \text{ L min}^{-1}$ ($q = 20.5 \cdot 10^{-3} \text{ cm s}^{-1}$).

M. Guarnieri et al. "High current polarization tests on a 9 kW Vanadium Redox Flow Battery" *Journal of Power Sources*, submitted Feb 2019.