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Rapid Processing Techniques Applied to Sintered Nickel Battery Technologies for Utility Scale Applications

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Abstract : Through use of novel modern/rapid processing techniques such as screen printing and Near-Infrared (NIR) radiative curing, process time for the sintering of sintered nickel plaques, applicable to alkaline nickel battery chemistries, has been drastically reduced from in excess of 200 minutes with conventional convection methods to below 2 minutes using NIR curing methods. Steps have also been taken to remove the need for forming gas as a reducing agent by implementing carbon as an in-situ reducing agent, within the ink formulation.

Keywords : batteries, energy, iron, nickel, storage
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