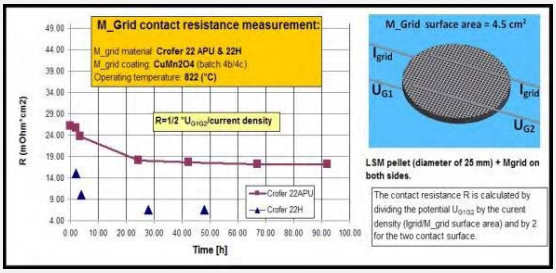
Fiaxell
SOFC Technologies™

Components for
Solid Oxide Fuel Cell development

Crofer 22H & Nickel M_Grid™

Crofer 22H M_Grid™ is used to increase the cathode current collection in ***planar or tubular*** stack. A protective layer of $MnCo_2O_4$ or $CuMn_2O_4$ is applied in order to decrease the chromium evaporation and improve the electrical contact. With the latter, contact resistance less than 10 (mOhm*cm^2) are obtained. Crofer 22H M_Grid™ can also be used as **air diffuser** welded on a Crofer plate.

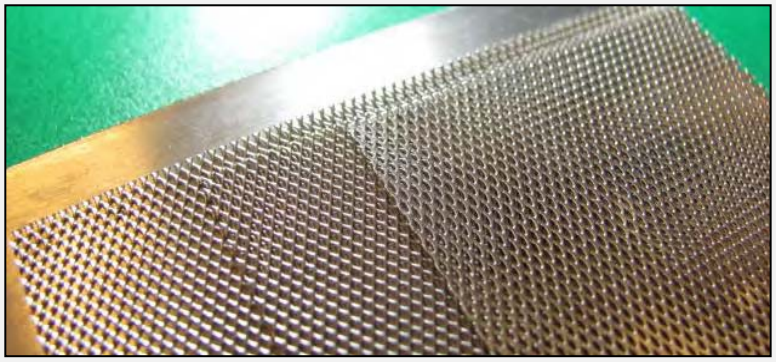


*Contact resistance at 822 (°C), lower than 10 (mOhm*cm^2), is obtained with Crofer 22H and $CuMn_2O_4$ spinel as protective layer.*

Crofer 22H M_Grid™ coated with 5-10 µm of $CuMn_2O_4$ for interconnect improvement.

M_Grid™ for tubular systems. The micro grid is generally waved for stacking bank of tubes.

! New **Nickel M_Grid™** is used both in ***planar or tubular*** stack system to collect the current and also as **gas diffuser**. In this latter case, a calendered Nickel M_Grid™ is welded on a coarser micro grid to ensure fuel diffusion.

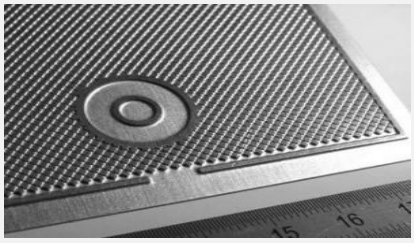


Left: Three layers of M_Grid are welded on the Crofer plate. Two for gas diffusion (0.3 mm/layer) and a smooth one (calendered at 0.2 mm) for current collection

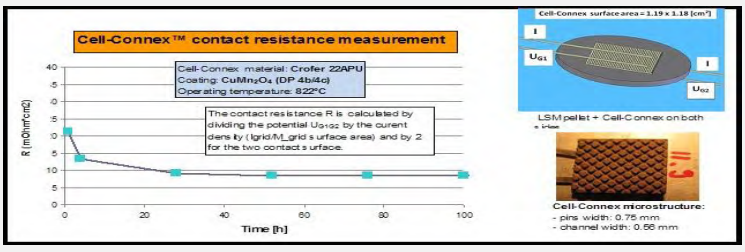
Right: Collection spiral made with Nickel M_Grid for the inside of a tubular system

Cell-Connex™ *for stack prototyping*

Cell-Connex™ has been engineered for low pressure drop and optimal electrical contact



The pattern structure of the Cell-Connex™ is very fine (<1 mm between each pin). It thus provides optimal current collection



*Crofer 22 APU Cell-Connex™ contact resistance measured at 822 (°C) for a hundred of hours. With the $CuMn_2O_4$ spinel protective layer, the contact resistance is lower than 10 (mOhm*cm^2)*

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