$$F(x+y) = \mathrm{ch}(x,y),$$

I still don't understand $\tilde{\delta}$!

$$j(F) \in \mathrm{im}(\tilde{\delta}).$$

$$
\begin{aligned}
(\tilde{\delta}f)(x_1,\ldots,x_{n+1}) \;=\; & f(x_2, x_3, \ldots, x_{n+1}) \\
+\; & \sum_{i=1}^{n}(-1)^i f(x_1,\ldots,\mathrm{ch}(x_i,x_{i+1}),\ldots,x_{n+1}) \\
+\; & (-1)^{n+1} f(x_1,\ldots,x_n).
\end{aligned}
$$

"on lien and tr_n"

Is $\tilde{\delta}$ = " δ in Euler coordinates" ?

No. δ commutes with E.

Is j = " $t-b$ in Euler coordinates" ?