and the form

$$\Omega_{\pi^*L^k\otimes[-E]} = \Omega_{\pi^*L^k} + \Omega_{[-E]}$$
$$= k\,\Omega_{\pi^*L} + \Omega_{[-E]}$$

is positive everywhere in $\tilde{U}_\epsilon$ and $\tilde{M}-\tilde{U}_{2\epsilon}$.

Pf $\Omega_{\pi^*L^k\otimes[-E]} = \frac{i}{2\pi}\,\Theta_{\pi^*L^k\otimes[-E]} = -\frac{i}{2\pi}\partial\bar\partial \log \|s\|^2_{\pi^*L^k}\|\sigma\|^2_{[-E]}$

$= -\frac{i}{2\pi}\partial\bar\partial\log\|s\|^2_{\pi^*L^k} - \frac{i}{2\pi}\partial\bar\partial\log\|\sigma\|^2_{[-E]}$.

$= \frac{i}{2\pi}\,\Theta_{\pi^*L^k} + \frac{i}{2\pi}\,\Theta_{[-E]} = \Omega_{\pi^*L^k} + \Omega_{[-E]}$.

where $s : \tilde{M} \longrightarrow \pi^*L^k$ a section which is nonzero.
$\sigma : \tilde{M} \longrightarrow [-E]$ "

the metric on $\pi^*L^k\otimes[-E]$ is induced as $\langle\ \rangle = \langle\ \rangle_{\pi^*L^k}\cdot\langle\ \rangle_{[-E]}$.

In general, $\Omega_{L_1\otimes L_2} = \Omega_{L_1} + \Omega_{L_2}$ and

$\Theta_{L_1\otimes L_2} = \Theta_{L_1} + \Theta_{L_2}$.

$\Rightarrow \Omega_{\pi^*L^k\otimes[-E]} = \Omega_{\pi^*L^k} + \Omega_{[-E]} = k\,\Omega_{\pi^*L} + \Omega_{[-E]}$

Since Ω_{π^*L} is positive in $\tilde{M}-E$, so Ω_{π^*L} is positive in $\tilde{M}-\tilde{U}_{2\epsilon}$. $\Omega_{[-E]}$ is positive on $T'_x(E)$ and Ω_{π^*L} is positive on $T'_x(\tilde{M})/T'_x(E)$. $\Rightarrow$

① $k\,\Omega_{\pi^*L} + \Omega_{[-E]}$ is positive on $T'_x(\tilde{M})$ for all $x\in E$.

② $k\,\Omega_{\pi^*L}$ is positive on $\tilde{M}-\tilde{U}_{2\epsilon}$ and $\Omega_{[-E]}$ is ≥ 0 on $\tilde{M}-\tilde{U}_{2\epsilon}$.

$\Rightarrow$ From ① & ②, $\Omega_{\pi^*L^k\otimes[-E]}$ is positive everywhere in $\tilde{U}_\epsilon$ and $\tilde{M}-\tilde{U}_{2\epsilon}$.